

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549**

FORM 10-K

- ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the Fiscal Year Ended December 31, 2022
-OR-

- TRANSITION REPORT FILED PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

Commission file number 1-12291



THE AES CORPORATION

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation or organization)

54-1163725

(I.R.S. Employer Identification No.)

4300 Wilson Boulevard

Arlington, Virginia

(Address of principal executive offices)

22203

(Zip Code)

Registrant's telephone number, including area code: **(703) 522-1315**

Securities registered pursuant to Section 12(b) of the Act:

Title of Each Class	Trading Symbol(s)	Name of Each Exchange on Which Registered
Common Stock, par value \$0.01 per share	AES	New York Stock Exchange
Corporate Units	AESC	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the Registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

Indicate by check mark if the Registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer Accelerated filer Smaller reporting company Emerging growth company Non-accelerated filer

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements.

Indicate by check mark whether any of those error corrections are restatement that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b).

Indicate by check mark whether the Registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes No

The aggregate market value of the voting and non-voting common equity held by non-affiliates on June 30, 2022, the last business day of the Registrant's most recently completed second fiscal quarter (based on the closing sale price of \$21.01 of the Registrant's Common Stock, as reported by the New York Stock Exchange on such date) was approximately \$14.03 billion.

The number of shares outstanding of Registrant's Common Stock, par value \$0.01 per share, on February 27, 2023 was 668,824,617.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of Registrant's Proxy Statement for its 2023 annual meeting of stockholders are incorporated by reference in Parts II and III

The AES Corporation Fiscal Year 2022 Form 10-K

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Glossary of Terms

The following is a list of frequently used terms and abbreviations that appear in the text of this report and have the definitions indicated below:

ACED	AES Clean Energy Development, LLC
Adjusted EPS	Adjusted Earnings Per Share, a non-GAAP measure
Adjusted PTC	Adjusted Pre-tax Contribution, a non-GAAP measure of operating performance
AES	The Parent Company and its subsidiaries and affiliates
AES Andes	AES Andes S.A., formerly AES Gener
AES Brasil	AES Brasil Operações S.A., formerly branded as AES Tietê
AES Indiana	Indianapolis Power & Light Company, formerly branded as IPL. AES Indiana is wholly-owned by IPALCO
AES Ohio	The Dayton Power & Light Company, formerly branded as DP&L. AES Ohio is wholly-owned by DPL
AES Renewable Holdings	AES Renewable Holdings, LLC, formerly branded as AES Distributed Energy
AFUDC	Allowance for Funds Used During Construction
AIMCo	Alberta Investment Management Corporation
ANEEL	Brazilian National Electric Energy Agency
AOCL	Accumulated Other Comprehensive Loss
ARO	Asset Retirement Obligations
ASC	Accounting Standards Codification
BACT	Best Available Control Technology
BESS	Battery energy storage system
BOT	Build, Operate and Transfer
CAA	U.S. Clean Air Act
CAMMESA	Wholesale Electric Market Administrator in Argentina
CCEE	Brazilian Chamber of Electric Energy Commercialization
CCGT	Combined Cycle Gas Turbine
CCR	Coal Combustion Residuals, which includes bottom ash, fly ash and air pollution control wastes generated at coal-fired generation plant sites
CDPQ	La Caisse de dépôt et placement du Québec
CECL	Current Expected Credit Loss
CEO	Chief Executive Officer
CFE	Federal Electricity Commission in Mexico
CFO	Chief Financial Officer
CO ₂	Carbon Dioxide
COD	Commercial Operation Date
CSAPR	U.S. Cross-State Air Pollution Rule
CWA	U.S. Clean Water Act
DG Comp	Directorate-General for Competition of the European Commission
DPL	DPL Inc.
DPP	Dominican Power Partners
EPA	U.S. Environmental Protection Agency
EPC	Engineering, Procurement, and Construction
ERCOT	Electric Reliability Council of Texas
ESP	Electric Security Plan
EU	European Union
EURIBOR	Euro Inter Bank Offered Rate
EVN	Electricity of Vietnam
FERC	U.S. Federal Energy Regulatory Commission
Fluence	Fluence Energy, Inc and its subsidiaries, including Fluence Energy, LLC, which was previously our joint venture with Siemens (NASDAQ: FLNC)
FONINVEMEM	Fund for the Investment Needed to Increase the Supply of Electricity in the Wholesale Market in Argentina
FPA	U.S. Federal Power Act
FX	Foreign Exchange
GAAP	Generally Accepted Accounting Principles in the United States
GHG	Greenhouse Gas
GILTI	Global Intangible Low Taxed Income
GSF	Generation Scaling Factor
GW	Gigawatts
GWh	Gigawatt Hours
HLBV	Hypothetical Liquidation Book Value

IPALCO	IPALCO Enterprises, Inc.
IPP	Independent Power Producers
ISO	Independent System Operator
ITC	Investment Tax Credit
IURC	Indiana Utility Regulatory Commission
LIBOR	London Inter Bank Offered Rate
LNG	Liquefied Natural Gas
MISO	Midcontinent Independent System Operator, Inc.
MMBtu	Million British Thermal Units
MRE	Energy Reallocation Mechanism
MW	Megawatts
MWh	Megawatt Hours
NAAQS	U.S. National Ambient Air Quality Standards
NCI	Noncontrolling Interest
NEK	Natsionalna Elektricheska Kompania (state-owned electricity public supplier in Bulgaria)
NERC	North American Electric Reliability Corporation
NM	Not Meaningful
NOV	Notice of Violation
NO _x	Nitrogen Dioxide
NPDES	National Pollutant Discharge Elimination System
NSPS	New Source Performance Standards
O&M	Operations and Maintenance
ONS	National System Operator in Brazil
OPGC	Odisha Power Generation Corporation, Ltd.
OTC Policy	Statewide Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling
OVEC	Ohio Valley Electric Corporation, an electric generating company in which AES Ohio has a 4.9% interest
Parent Company	The AES Corporation
PCU	Performance Cash Units
Pet Coke	Petroleum Coke
PJM	PJM Interconnection, LLC
PPA	Power Purchase Agreement
PREPA	Puerto Rico Electric Power Authority
PSU	Performance Stock Unit
PUCO	The Public Utilities Commission of Ohio
PURPA	U.S. Public Utility Regulatory Policies Act
QF	Qualifying Facility
RSU	Restricted Stock Unit
RTO	Regional Transmission Organization
SADI	Argentine Interconnected System
SBU	Strategic Business Unit
SEC	U.S. Securities and Exchange Commission
SEN	Sistema Electrico Nacional in Chile
SIN	National Interconnected System in Colombia
SIP	State Implementation Plan
SO ₂	Sulfur Dioxide
SWRCB	California State Water Resources Board
TCJA	Tax Cuts and Jobs Act
TDSIC	Transmission, Distribution, and Storage System Improvement Charge
U.S.	United States
USD	United States Dollar
VAT	Value Added Tax
VIE	Variable Interest Entity
Vinacomin	Vietnam National Coal-Mineral Industries Holding Corporation Ltd.

PART I

In this Annual Report the terms "AES," "the Company," "us," or "we" refer to The AES Corporation and all of its subsidiaries and affiliates, collectively. The terms "The AES Corporation" and "Parent Company" refer only to the parent, publicly held holding company, The AES Corporation, excluding its subsidiaries and affiliates.

Forward-Looking Information and Risk Factor Summary

In this filing we make statements concerning our expectations, beliefs, plans, objectives, goals, strategies, and future events or performance. Such statements are "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. Although we believe that these forward-looking statements and the underlying assumptions are reasonable, we cannot assure you that they will prove to be correct.

Forward-looking statements involve a number of risks and uncertainties, and there are factors that could cause actual results to differ materially from those expressed or implied in our forward-looking statements. Some of those factors (in addition to others described elsewhere in this report and in subsequent securities filings) include:

- the economic climate, particularly the state of the economy in the areas in which we operate and the state of the economy in China, which impacts demand for electricity in many of our key markets, including the fact that the global economy faces considerable uncertainty for the foreseeable future, which further increases many of the risks discussed in this Form 10-K;
- changes in the price of electricity at which our generation businesses sell into the wholesale market and our utility businesses purchase to distribute to their customers, and the success of our risk management practices, such as our ability to hedge our exposure to such market price risk;
- changes in the prices and availability of coal, gas and other fuels (including our ability to have fuel transported to our facilities) and the success of our risk management practices, such as our ability to hedge our exposure to such market price risk, and our ability to meet credit support requirements for fuel and power supply contracts;
- changes in and access to the financial markets, particularly changes affecting the availability and cost of capital in order to refinance existing debt and finance capital expenditures, acquisitions, investments and other corporate purposes;
- changes in inflation, demand for power, interest rates and foreign currency exchange rates, including our ability to hedge our interest rate and foreign currency risk;
- our ability to fulfill our obligations, manage liquidity and comply with covenants under our recourse and non-recourse debt, including our ability to manage our significant liquidity needs and to comply with covenants under our revolving credit facility and other existing financing obligations;
- our ability to receive funds from our subsidiaries by way of dividends, fees, interest, loans or otherwise;
- changes in our or any of our subsidiaries' corporate credit ratings or the ratings of our or any of our subsidiaries' debt securities or preferred stock, and changes in the rating agencies' ratings criteria;
- our ability to purchase and sell assets at attractive prices and on other attractive terms;
- our ability to compete in markets where we do business;
- our ability to operate power generation, distribution and transmission facilities, including managing availability, outages and equipment failures;
- our ability to manage our operational and maintenance costs and the performance and reliability of our generating plants, including our ability to reduce unscheduled down times;
- our ability to enter into long-term contracts, which limit volatility in our results of operations and cash flow, such as PPAs, fuel supply, and other agreements and to manage counterparty credit risks in these agreements;
- variations in weather, especially mild winters and cooler summers in the areas in which we operate, the occurrence of difficult hydrological conditions for our hydropower plants, as well as hurricanes and other storms and disasters, wildfires and low levels of wind or sunlight for our wind and solar facilities;
- pandemics, or the future outbreak of any other highly infectious or contagious disease, including COVID-19;
- the performance of our contracts by our contract counterparties, including suppliers or customers;
- severe weather and natural disasters;

- our ability to manage global supply chain disruptions;
- our ability to raise sufficient capital to fund development projects or to successfully execute our development projects;
- the success of our initiatives in renewable energy projects and energy storage projects;
- the availability of government incentives or policies that support the development of renewable energy generation projects;
- our ability to execute on our strategies or achieve expectations related to environmental, social, and governance matters;
- our ability to keep up with advances in technology;
- changes in number of customers or in customer usage;
- the operations of our joint ventures and equity method investments that we do not control;
- our ability to achieve reasonable rate treatment in our utility businesses;
- changes in laws, rules and regulations affecting our international businesses, particularly in developing countries;
- changes in laws, rules and regulations affecting our utilities businesses, including, but not limited to, regulations which may affect competition, the ability to recover net utility assets and other potential stranded costs by our utilities;
- changes in law resulting from new local, state, federal or international energy legislation and changes in political or regulatory oversight or incentives affecting our wind business and solar projects, our other renewables projects and our initiatives in GHG reductions and energy storage, including government policies or tax incentives;
- changes in environmental laws, including requirements for reduced emissions, GHG legislation, regulation, and/or treaties and CCR regulation and remediation;
- changes in tax laws, including U.S. tax reform, and challenges to our tax positions;
- the effects of litigation and government and regulatory investigations;
- the performance of our acquisitions;
- our ability to maintain adequate insurance;
- decreases in the value of pension plan assets, increases in pension plan expenses, and our ability to fund defined benefit pension and other postretirement plans at our subsidiaries;
- losses on the sale or write-down of assets due to impairment events or changes in management intent with regard to either holding or selling certain assets;
- changes in accounting standards, corporate governance and securities law requirements;
- our ability to maintain effective internal controls over financial reporting;
- our ability to attract and retain talented directors, management and other personnel;
- cyber-attacks and information security breaches; and
- data privacy.

These factors, in addition to others described elsewhere in this Form 10-K, including those described under Item 1A.—*Risk Factors* and in subsequent securities filings, should not be construed as a comprehensive listing of factors that could cause results to vary from our forward-looking information.

We undertake no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events, or otherwise. If one or more forward-looking statements are updated, no inference should be drawn that additional updates will be made with respect to those or other forward-looking statements.

ITEM 1. BUSINESS

Item 1.—*Business* is an outline of our strategy and our businesses by SBU, including key financial drivers. Additional items that may have an impact on our businesses are discussed in Item 1A.—*Risk Factors* and Item 3.—*Legal Proceedings*.

Executive Summary

Incorporated in 1981, AES is a global energy company accelerating the future of energy. Together with our many stakeholders, we are improving lives by delivering the greener, smarter energy solutions the world needs. Our diverse workforce is committed to continuous innovation and operational excellence, while partnering with our customers on their strategic energy transitions and continuing to meet their energy needs today.

**MISSION**

Accelerating the future of energy, together.

VALUES

Safety first



Highest standards



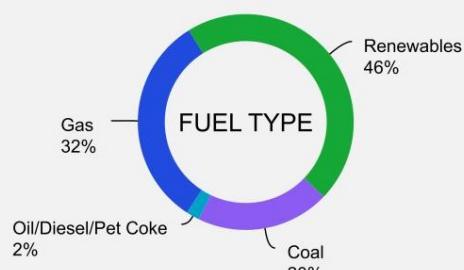
All together

AES IS ENERGIZED BY A GLOBAL WORKFORCE OF APPROXIMATELY

9,100 PEOPLE

4

MARKET-ORIENTED STRATEGIC BUSINESS UNITS



32,326 Gross MW in Operation*

Generation Capacity **5,453 MW** Under Construction

\$12.6B

TOTAL 2022 REVENUES

\$38B

TOTAL ASSETS OWNED & MANAGED

6

UTILITY COMPANIES

AES Serves
2.6M UTILITY CUSTOMERS

*23,494 proportional MW (gross MW multiplied by AES' equity ownership percentage)

Our Strategy

AES is an industry leader in developing and operating the solutions that will enable the transition to zero and low-carbon sources of energy and achievement of the Paris Agreement's goal of net-zero emissions by 2050.

Today we see an enormous business opportunity from the once-in-a-lifetime transformation of the electricity sector driven by decarbonization, electrification, and digitalization. There is a substantial need for more renewable energy as well as an opportunity for innovation to develop new products and solutions that help customers accomplish their individual decarbonization goals.

The focus of our strategy continues to be on partnering with large companies that are looking to transition to carbon-free sources of electricity. As an indication of our success, in 2022 we were recognized by BNEF as the #1 global clean energy developer for corporations.

In 2022, we signed long-term contracts for 5.2 GW of renewable power, bringing our backlog of projects — those with signed contracts, but which are not yet in operation — to 12.2 GW. Our backlog serves as the core component of future growth.

Central to our renewables growth strategy is a focus on customer collaboration and co-creation, which helps us develop unique solutions tailored to a specific customer's needs. This approach not only contributes to customer satisfaction and repeat business, but it also allows AES to work with key customers on a bilateral basis rather than just through participation in bid processes.

This approach has led to the co-creation of several first-of-its-kind industry innovations, including agreements to supply 24/7 carbon-free energy for global data center companies. Our unique capabilities in developing tailored energy solutions, enabled us to partner with Air Products to announce our plans to develop, build, own, and operate the largest green hydrogen production facility to date in the United States.

We are also working with some of the world's largest mining companies in their transition to renewable energy in South America, essentially reducing the emissions of major supply chains. One way in which we are serving the

mining industry is through our Green Blend offering, in which we work to integrate renewable energy with thermal power during select hours of the day, reducing overall thermal generation and lowering emissions.

With our utilities, we are working with a broad range of stakeholders to transition to lower carbon forms of energy while promoting a Just Transition for the workers and communities who may be negatively impacted by the closure of fossil fuel facilities. At AES Indiana, for example, we are working to retire its remaining coal generation by the end of 2025, while adding new renewables and natural gas to the grid.

Our renewable growth strategy includes taking steps to ensure and enable growth in future years. We massively expanded our pipeline of development projects, which grew from 55 GW in January 2022 to 64 GW as of the end of 2022, both through acquisitions and increased investment in development activities, such as securing land or advancing permitting and interconnection processes. For our projects in late-stage development, we worked to secure supplier arrangements to avoid any potential delays in relation to industry shortages, aided by our scale, supplier relationships, and advanced planning measures. A substantial portion of our expected capital expenditures through 2025 will be related to the development of renewable projects.

We are also developing and incubating new technologies that add value today and will drive our business in the future. We understand that the energy industry is changing rapidly, and aim to proactively seek solutions that will give us a continued competitive advantage. At the core of our innovation strategy is AES Next, our business and technology incubator. AES Next works to identify new and innovative technologies and business opportunities that provide or support leading-edge greener energy solutions.

2022 Strategic Highlights

- We signed 5,153 MW of renewables and energy storage under long-term PPAs, including 2,553 MW of solar, wind and energy storage in the United States.
- We completed the construction or acquisition of operating projects totaling 1,943 MW in the United States, Brazil, the Dominican Republic, Chile and Colombia, primarily wind, solar and energy storage.
- Our backlog, which includes projects with signed contracts, but which are not yet operational, is now 12,179 MW, consisting of:
 - 5,453 MW under construction; and
 - 6,726 MW with signed PPAs, but that are not yet under construction.
- We announced a partnership with Air Products to develop, build, own and operate the largest green hydrogen production facility to date in the United States.
 - Includes approximately 1.4 GW of wind and solar generation, along with electrolyzer capacity capable of producing over 200 metric tons per day (MT/D) of green hydrogen.
- The Company expects to announce certain internal management changes which will result in modifications to its financial reporting segments.

Overview

Generation

We currently own and/or operate a generation portfolio of 32,326 MW, including generation from our integrated utility, AES Indiana. Our generation fleet is diversified by fuel type. See discussion below under *Fuel Costs*.

Performance drivers of our generation businesses include types of electricity sales agreements, plant reliability and flexibility, availability of generation capacity to meet contracted sales, fuel costs, seasonality, weather variations, economic activity, fixed-cost management, and competition. The financial performance of our renewables business is also impacted by our ability to complete construction projects and earn U.S. renewable tax credits.

Contract Sales — Most of our generation businesses sell electricity under medium- or long-term contracts ("contract sales") or under short-term agreements in competitive markets ("short-term sales"). Our medium-term contract sales have terms of two to five years, while our long-term contracts have terms of more than five years.

Contracts requiring fuel to generate energy, such as natural gas or coal, are structured to recover variable costs, including fuel and variable O&M costs, either through direct or indexation-based contractual pass-throughs or tolling arrangements. When the contract does not include a fuel pass-through, we typically hedge fuel costs or enter into fuel or energy supply agreements for a similar contract period (see discussion below under *Fuel Costs*). These

contracts also help us to fund a significant portion of the total capital cost of the project through long-term non-recourse project-level financing.

Certain contracts include capacity payments that cover projected fixed costs of the plant, including fixed O&M expenses, debt service, and a return on capital invested. In addition, most of our contracts require that the majority of the capacity payments be denominated in the currency matching our fixed costs.

Contracts that do not have significant fuel cost or do not contain a capacity payment are structured based on long-term spot prices with some negotiated pass-through costs, allowing us to recover expected fixed and variable costs as well as provide a return on investment.

These contracts are intended to reduce exposure to the volatility of fuel and electricity prices by linking the business's revenues and costs. We generally structure our business to eliminate or reduce foreign exchange risk by matching the currency of revenue and expenses, including fixed costs and debt. Our project debt may consist of both fixed and floating rate debt for which we typically hedge a significant portion of our exposure. Some of our contracted businesses also receive a regulated market-based capacity payment, which is discussed in more detail in the *Short-Term Sales* section below.

Thus, these contracts, or other related commercial arrangements, significantly mitigate our exposure to changes in power and, as applicable, fuel prices, currency fluctuations and changes in interest rates. In addition, these contracts generally provide for a recovery of our fixed operating expenses and a return on our investment, as long as we operate the plant to the reliability and efficiency standards required in the contract.

Short-Term Sales — Our other generation businesses sell power and ancillary services under short-term contracts with average terms of less than two years, including spot sales, directly in the short-term market or at regulated prices. The short-term markets are typically administered by a system operator to coordinate dispatch. Short-term markets generally operate on merit order dispatch, where the least expensive generation facilities, based upon variable cost or bid price, are dispatched first and the most expensive facilities are dispatched last. The short-term price is typically set at the marginal cost of energy or bid price (the cost of the last plant required to meet system demand). As a result, the cash flows and earnings associated with these businesses are more sensitive to fluctuations in the market price for electricity. In addition, many of these wholesale markets include markets for ancillary services to support the reliable operation of the transmission system. Across our portfolio, we provide a wide array of ancillary services, including voltage support, frequency regulation and spinning reserves.

Many of the short-term markets in which we operate include regulated capacity markets. These capacity markets are intended to provide additional revenue based upon availability without reliance on the energy margin from the merit order dispatch. Capacity markets are typically priced based on the cost of a new entrant and the system capacity relative to the desired level of reserve margin (generation available in excess of peak demand). Our generating facilities selling in the short-term markets typically receive capacity payments based on their availability in the market.

Plant Reliability and Flexibility — Our contract and short-term sales provide incentives to our generation plants to optimally manage availability, operating efficiency and flexibility. Capacity payments under contract sales are frequently tied to meeting minimum standards. In short-term sales, our plants must be reliable and flexible to capture peak market prices and to maximize market-based revenues. In addition, our flexibility allows us to capture ancillary service revenue while meeting local market needs.

Fuel Costs — For our thermal generation plants, fuel is a significant component of our total cost of generation. For contract sales, we often enter into fuel supply agreements to match the contract period, or we may financially hedge our fuel costs. Some of our contracts include indexation for fuels. In those cases, we seek to match our fuel supply agreements to the indexation. For certain projects, we have tolling arrangements where the power offtaker is responsible for the supply and cost of fuel to our plants.

In short-term sales, we sell power at market prices that are generally reflective of the market cost of fuel at the time, and thus procure fuel supply on a short-term basis, generally designed to match up with our market sales profile. Since fuel price is often the primary determinant for power prices, the economics of projects with short-term sales are often subject to volatility of relative fuel prices. For further information regarding commodity price risk please see Item 7A.—*Quantitative and Qualitative Disclosures about Market Risk* in this Form 10-K.

46% of the capacity of our generation plants are fueled by renewables, including hydro, solar, wind, energy storage, biomass and landfill gas, which do not have significant fuel costs.

32% of the capacity of our generation plants are fueled by natural gas. With the exception of our plants in the Dominican Republic and Panama, where we import LNG to utilize in the local market, we use gas from local suppliers in each market.

20% of the capacity of our generation fleet is coal-fired. In the U.S., most of our coal-fired plants are supplied from domestic coal. At our non-U.S. generation plants, and at our plant in Puerto Rico, we source coal from a mix of sources from the international market and in the local jurisdictions. To the extent possible, we utilize our global sourcing program to maximize the purchasing power of our fuel procurement.

2% of the capacity of our generation fleet utilizes pet coke, diesel or oil for fuel. We source oil and diesel locally at prices linked to international markets. We largely source pet coke from Mexico and the U.S.

Seasonality, Weather Variations and Economic Activity — Our generation businesses are affected by seasonal weather patterns and, therefore, operating margin is not generated evenly throughout the year. Additionally, weather variations, including temperature, solar and wind resources, and hydrological conditions, may also have an impact on generation output at our renewable generation facilities. In competitive markets for power, local economic activity can also have an impact on power demand and short-term prices for power.

Fixed-Cost Management — In our businesses with long-term contracts, the majority of the fixed O&M costs are recovered through the capacity payment. However, for all generation businesses, managing fixed costs and reducing them over time is a driver of business performance.

Competition — For our businesses with medium- or long-term contracts, there is limited competition during the term of the contract. For short-term sales, plant dispatch and the price of electricity are determined by market competition and local dispatch and reliability rules.

Utilities

Our utility businesses consist of AES Indiana and AES Ohio in the U.S. and four utilities in El Salvador. AES' six utility businesses distribute power to 2.6 million customers and AES' two utilities in the U.S. also include generation capacity totaling 3,495 MW.

AES Indiana, our fully integrated utility, and AES Ohio, our transmission and distribution regulated utility, operate as the sole distributors of electricity within their respective jurisdictions. AES Indiana owns and operates all of the facilities necessary to generate, transmit and distribute electricity. AES Ohio owns and operates all of the facilities necessary to transmit and distribute electricity. At our distribution business in El Salvador, we face limited competition due to significant barriers to enter the market. According to El Salvador's regulation, large regulated customers have the option of becoming unregulated users and requesting service directly from generation or commercialization agents.

In general, our utilities sell electricity directly to end-users, such as homes and businesses, and bill customers directly. Key performance drivers for utilities include the regulated rate of return and tariff, seasonality, weather variations, economic activity and reliability of service. Revenue from utilities is classified as regulated on the Consolidated Statements of Operations.

Regulated Rate of Return and Tariff — In exchange for the right to sell or distribute electricity in a service territory, our utility businesses are subject to government regulation. This regulation sets the framework for the prices ("tariffs") that our utilities are allowed to charge customers for electricity and establishes service standards that we are required to meet.

Our utilities are generally permitted to earn a regulated rate of return on assets, determined by the regulator based on the utility's allowed regulatory asset base, capital structure and cost of capital. The asset base on which the utility is permitted a return is determined by the regulator, within the framework of applicable local laws, and is based on the amount of assets that are considered used and useful in serving customers. Both the allowed return and the asset base are important components of the utility's earning power. The allowed rate of return and operating expenses deemed reasonable by the regulator are recovered through the regulated tariff that the utility charges to its customers.

The tariff may be reviewed and reset by the regulator from time to time depending on local regulations, or the utility may seek a change in its tariffs. The tariff is generally based upon usage level and may include a pass-through of costs that are not controlled by the utility, such as the costs of fuel (in the case of integrated utilities) and/or the costs of purchased energy, to the customer. Components of the tariff that are directly passed through to the

customer are usually adjusted through a summary regulatory process or an existing formula-based mechanism. In some regulatory regimes, customers with demand above an established level are unregulated and can choose to contract directly with the utility or with other retail energy suppliers and pay non-bypassable fees, which are fees to the distribution company for use of its distribution system.

The regulated tariff generally recognizes that our utility businesses should recover certain operating and fixed costs, as well as manage uncollectible amounts, quality of service and technical and non-technical losses. Utilities, therefore, need to manage costs to the levels reflected in the tariff, or risk non-recovery of costs or diminished returns.

Seasonality, Weather Variations, and Economic Activity — Our utility businesses are generally affected by seasonal weather patterns and, therefore, operating margin is not generated evenly throughout the year. Additionally, weather variations may also have an impact based on the number of customers, temperature variances from normal conditions, and customers' historic usage levels and patterns. Retail sales, after adjustments for weather variations, are also affected by changes in local economic activity, energy efficiency and distributed generation initiatives, as well as the number of retail customers.

Reliability of Service — Our utility businesses must meet certain reliability standards, such as duration and frequency of outages. Those standards may be explicit, with defined performance incentives or penalties, or implicit, where the utility must operate to meet customer and/or regulator expectations.

Development and Construction

We develop and construct new generation facilities. For our utility business, new plants may be built or existing plants retrofitted in response to customer needs or to comply with regulatory developments. The projects are developed subject to regulatory approval that permits recovery of our capital cost and a return on our investment. For our generation businesses, our priority for development is in key growth markets, where we can leverage our global scale and synergies with our existing businesses by adding renewable energy. We make the decision to invest in new projects by evaluating the strategic fit, project returns and financial profile against a fair risk-adjusted return for the investment and against alternative uses of capital, including corporate debt repayment.

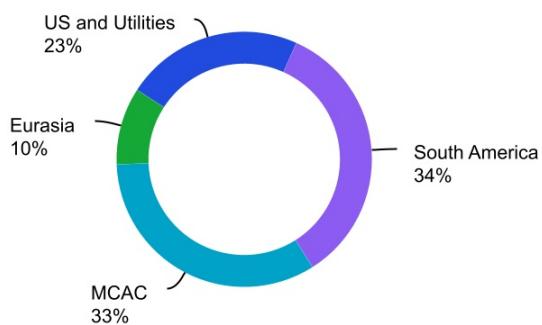
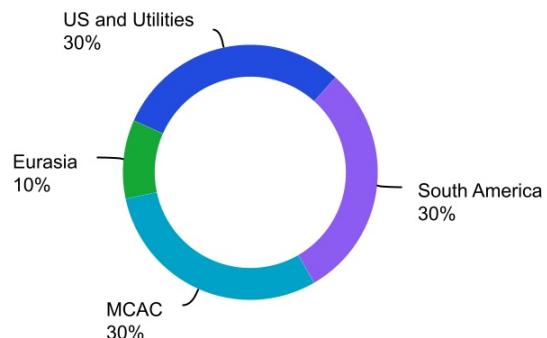
In some cases, we enter into long-term contracts for output from new facilities prior to commencing construction. To limit required equity contributions from The AES Corporation, we also seek non-recourse project debt financing and other sources of capital, including partners, when it is commercially attractive. We typically contract with a third party to manage construction, although our construction management team supervises the construction work and tracks progress against the project's budget and the required safety, efficiency and productivity standards.

Segments

The segment reporting structure uses the Company's management reporting structure as its foundation to reflect how the Company manages the businesses internally and is mainly organized by geographic regions which provides a socio-political-economic understanding of our business.

We are organized into four market-oriented SBUs: **US and Utilities** (United States, Puerto Rico and El Salvador); **South America** (Chile, Colombia, Argentina and Brazil); **MCAC** (Mexico, Central America and the Caribbean); and **Eurasia** (Europe and Asia) — which are led by our SBU Presidents. We have two lines of business: generation and utilities. Each of our SBUs participates in our first business line, generation, in which we own and/or operate power plants to generate and sell power to customers, such as utilities, industrial users, and other intermediaries. Our US and Utilities SBU participates in our second business line, utilities, in which we own and/or operate utilities to generate or purchase, distribute, transmit and sell electricity to end-user customers in the residential, commercial, industrial and governmental sectors within a defined service area. In certain circumstances, our utilities also generate and sell electricity on the wholesale market.

We measure the operating performance of our SBUs using Adjusted PTC, a non-GAAP measure. The Adjusted PTC by SBU for the year ended December 31, 2022 is shown below. The percentages for Adjusted PTC are the contribution by each SBU to the gross metric, i.e., the total Adjusted PTC by SBU, before deductions for Corporate. See Item 7.—*Management's Discussion and Analysis of Financial Condition and Results of Operations—SBU Performance Analysis* of this Form 10-K for reconciliation and definitions of Adjusted PTC.

Operating Margin**Adjusted PTC**

For financial reporting purposes, the Company's corporate activities and certain other investments are reported within "Corporate and Other" because they do not require separate disclosure. See Item 7.—*Management's Discussion and Analysis of Financial Condition and Results of Operations* and Note 18—*Segment and Geographic Information* included in Item 8.—*Financial Statements and Supplementary Data* of this Form 10-K for further discussion of the Company's segment structure.

US and Utilities

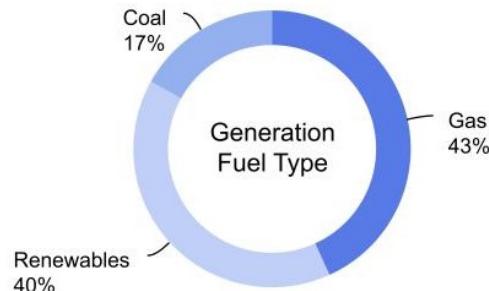
GENERATION FACILITIES & UTILITIES IN
THE UNITED STATES AND EL SALVADOR



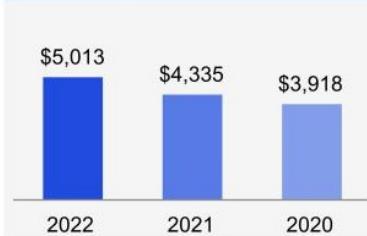
Business Overview



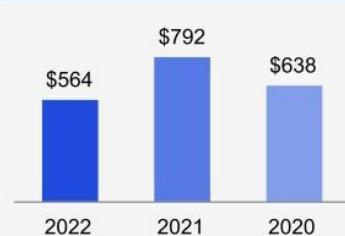
Key Utilities: AES Indiana, AES Ohio, and El Salvador
Key Generation Businesses: AES Clean Energy and Southland



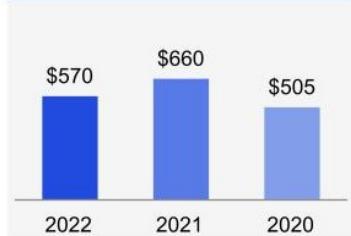
Revenue (in millions)



Operating Margin (in millions)



Adjusted PTC⁽¹⁾ (in millions)



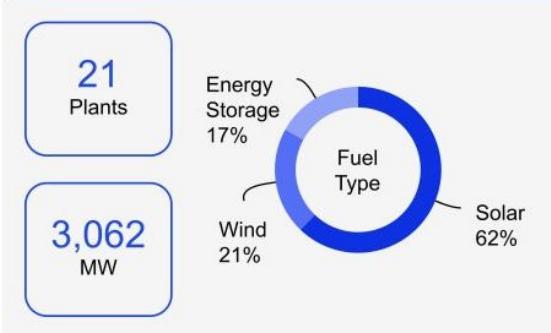
Key events in 2022

- Signed PPAs for 2,553 MW of renewables and completed construction of 954 MW of new renewable projects
- Retired 206 MW of coal-fired generation; expect to sell, retire or convert remaining 2,208 MW of coal-fired generation by year-end 2025
- Announced partnership with Air Products to develop, build, own and operate the largest green hydrogen production facility in the United States

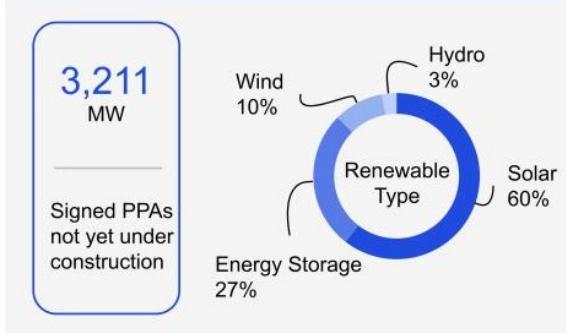
Strategic outlook

- Total backlog of 6,273 MW
- Continued reduction in coal-fired generation
- Develop and begin construction on first green hydrogen project in partnership with Air Products

Under construction



Contracted renewable backlog



⁽¹⁾ Non-GAAP measure. See Item 7.—Management's Discussion and Analysis of Financial Condition and Results of Operations—SBU Performance Analysis—Non-GAAP Measures for reconciliation and definition.

US and Utilities SBU

Our US and Utilities SBU has 47 generation facilities, two utilities in the United States, and four utilities in El Salvador.

Generation — Operating installed capacity of our US and Utilities SBU totals 13,108 MW. IPALCO (AES Indiana's parent), AES Ohio, and DPL Inc. (AES Ohio's parent) are all SEC registrants, and as such, follow the public filing requirements of the Securities Exchange Act of 1934. The following table lists our US and Utilities SBU generation facilities:

Business	Location	Fuel	Gross MW	AES Equity Interest	Year Acquired or Began Operation	Contract Expiration Date	Customer(s)
Bosforo ⁽¹⁾	El Salvador	Solar	100	50 %	2018-2019	2043-2044	CAESS, EEO, CLESA, DEUSEM
Cuscatlan Solar ⁽¹⁾	El Salvador	Solar	10	50 %	2021	2046	CLESA
AES Nejapa	El Salvador	Landfill Gas	6	100 %	2011	2035	CAESS
Opico	El Salvador	Solar	4	100 %	2020	2040	CLESA
Moncagua	El Salvador	Solar	3	100 %	2015	2035	EEO
El Salvador Subtotal			123				
Southland—Alamitos	US-CA	Gas	1,200	100 %	1998	2023	Various
sPower OpCo A ⁽¹⁾	US-Various	Solar Wind	967 140	26 %	2017-2019	2028-2046	Various
Southland—Redondo Beach	US-CA	Gas	876	100 %	1998	2023	Various
Southland Energy—Alamitos ⁽⁵⁾	US-CA	Gas	697	50 %	2020	2040	Southern California Edison
Southland Energy—Huntington Beach ⁽⁵⁾	US-CA	Gas	694	50 %	2020	2040	Southern California Edison
New York Wind ⁽²⁾	US-NY	Wind	612	75 %	2021		NYISO
AES Puerto Rico	US-PR	Coal	524	100 %	2002	2027	LUMA Energy
AES Renewable Holdings ⁽³⁾	US-Various	Solar Energy Storage	400 90	100 %	2015-2022	2029-2042	Utility, Municipality, Education, Non-Profit
Highlander (sPower OpCo B ⁽¹⁾)	US-VA	Solar	485	50 %	2020	2035	Apple, Akami, Etsy, Microsoft
sPower OpCo B ⁽¹⁾	US-Various	Solar	260	50 %	2019	2039-2044	Various
Southland—Huntington Beach	US-CA	Gas	236	100 %	1998	2023	Various
Buffalo Gap II ⁽³⁾	US-TX	Wind	228	100 %	2007		
Warrior Run	US-MD	Coal	205	100 %	2000	2030	Potomac Edison
Prevailing Winds (sPower OpCo B ⁽¹⁾)	US-SD	Wind	200	50 %	2020	2050	Prevailing Winds
Skipjack ⁽²⁾⁽³⁾	US-VA	Solar	175	75 %	2022	2036	Exelon Generation Company
Buffalo Gap III ⁽³⁾	US-TX	Wind	170	100 %	2008		
Lancaster Area Battery ⁽²⁾⁽³⁾	US-CA	Energy Storage	127	75 %	2022		
Buffalo Gap I ⁽³⁾	US-TX	Wind	121	100 %	2006		
Southland Energy—Alamitos Energy Center ⁽⁵⁾	US-CA	Energy Storage	100	50 %	2021	2041	Southern California Edison
East Line Solar (sPower OpCo B ⁽¹⁾)	US-AZ	Solar	100	50 %	2020	2045	Salt River Project
Central Line (sPower OpCo B ⁽¹⁾)	US-AZ	Solar	100	50 %	2022	2039	Salt River Project Agricultural Improvement & Power District
West Line (sPower ⁽¹⁾)	US-AZ	Solar	100	50 %	2022		
Luna ⁽²⁾⁽³⁾	US-CA	Energy Storage	100	75 %	2022		
Laurel Mountain Repowering ⁽²⁾	US-WV	Wind	99	75 %	2022	2037	AES Solutions Management, LLC
Clover Creek (sPower OpCo B ⁽¹⁾)	US-UT	Solar	80	50 %	2021	2046	UMPA
Mountain View Repowering ⁽²⁾⁽³⁾	US-CA	Wind	71	75 %	2022	2042	Southern California Edison
Michigan Consumers ⁽²⁾⁽³⁾	US-MI	Solar	36	75 %	2022		
Big Island Waikoloa ⁽³⁾⁽⁴⁾	US-HI	Solar Energy Storage	25 30	100 %	2022		
Mountain View IV ⁽⁴⁾	US-CA	Wind	49	100 %	2012	2032	Southern California Edison

Lawa'i ⁽³⁾⁽⁴⁾	US-HI	Solar Energy Storage	20 20	100 %	2018	2043	Kaua'i Island Utility Cooperative
sPower OpCo C ⁽¹⁾	US-CA	Solar Energy Storage	30 2	50 %	2021-2022	2041	Various
Kekaha ⁽³⁾⁽⁴⁾	US-HI	Solar Energy Storage	14 14	100 %	2019	2045	Kaua'i Island Utility Cooperative
Na Pua Makani ⁽⁴⁾	US-HI	Wind	24	100 %	2020	2040	HECO
Illumina	US-PR	Solar	24	100 %	2012	2037	LUMA Energy
Laurel Mountain ES	US-WV	Energy Storage	16	100 %	2011		
Community Energy ⁽²⁾	US-Various	Solar	14	75 %	2022	2023-2043	Various
Southland Energy—AES Gilbert (Salt River) ⁽⁵⁾ ⁽⁶⁾	US-AZ	Energy Storage	10	50 %	2019	2039	Salt River Project Agricultural Improvement & Power District
Warrior Run ES	US-MD	Energy Storage	5	100 %	2016		
United States Subtotal			9,490				
			9,613				

⁽¹⁾ Unconsolidated entity, accounted for as an equity affiliate.

⁽²⁾ Owned by AES Clean Energy Development ("ACED").

⁽³⁾ AES owns these assets together with third-party tax equity investors with variable ownership interests. The tax equity investors receive a portion of the economic attributes of the facilities, including tax attributes, that vary over the life of the projects. The proceeds from the issuance of tax equity are recorded as *Noncontrolling interest* or *Redeemable stock of subsidiaries* in the Company's Consolidated Balance Sheets, depending on the partnership rights of the specific project.

⁽⁴⁾ Owned by AES Renewable Holdings.

⁽⁵⁾ On December 1, 2022, Southland Energy sold an additional 14.9% ownership interest in the Southland Energy assets. Following the sale, AES holds 50.1% of Southland Energy's interest and this business continues to be consolidated by AES.

⁽⁶⁾ Facility experienced a fire event in April 2022 which rendered the asset currently inoperable.

Utilities — The following table lists our utilities and their generation facilities.

Business	Location	Approximate Number of Customers Served as of 12/31/2022	GWh Sold in 2022	Fuel	Gross MW	AES Equity Interest	Year Acquired or Began Operation
CAESS	El Salvador	647,000	2,109			75 %	2000
CLESA	El Salvador	461,000	1,072			80 %	1998
DEUSEM	El Salvador	92,000	161			74 %	2000
EEO	El Salvador	348,000	700			89 %	2000
El Salvador Subtotal		1,548,000	4,042				
AES Ohio ⁽¹⁾	US-OH	536,000	13,875			100 %	2011
AES Indiana ⁽²⁾	US-IN	519,000	15,385	Coal/Gas/Oil/Energy Storage	3,495	70 %	2001
United States Subtotal		1,055,000	29,260			3,495	
		2,603,000	33,302				

⁽¹⁾ AES Ohio's GWh sold in 2022 represent total transmission and distribution sales. AES Ohio's wholesale sales and SSO utility sales, which are sales to utility customers who use AES Ohio to source their electricity through a competitive bid process, were 4,676 GWh in 2022. AES Ohio owns a 4.9% equity ownership in OVEC, an electric generating company. OVEC has two plants in Cheshire, Ohio and Madison, Indiana with a combined generation capacity of approximately 2,109 MW. AES Ohio's share of this generation is approximately 103 MW.

⁽²⁾ CDPQ owns direct and indirect interests in IPALCO (AES Indiana's parent) which total approximately 30%. AES owns 85% of AES US Investments and AES US Investments owns 82.35% of IPALCO. AES Indiana plants: Georgetown, Harding Street, Petersburg and Eagle Valley. 20 MW of AES Indiana total is considered a transmission asset. AES Indiana retired the 230 MW Petersburg Unit 1 in May 2021 and has plans to retire the 415 MW Petersburg Unit 2 in June 2023. AES Indiana plans to convert the remaining two coal units at Petersburg to natural gas by the end of 2025. In December 2021, AES Indiana completed the acquisition of the 195 MW Hardy Hills solar project, which is expected to commence operations in 2024. In November 2021, AES Indiana received an order from the IURC approving the acquisition of a 250 MW solar and 180 MWh energy storage facility (Petersburg solar project), which is expected to be completed in 2025.

Under construction — The following table lists our plants under construction in the US and Utilities SBU:

Business	Location	Fuel	Gross MW	AES Equity Interest	Expected Date of Commercial Operations
Cement City ⁽¹⁾	US-MI	Solar	20	75 %	1H 2023
Big Island Waikoloa ⁽²⁾	US-HI	Solar	5	100 %	1H 2023
West Oahu Solar ⁽²⁾	US-HI	Solar Energy Storage	13 13	100 %	1H 2023
High Mesa ⁽¹⁾	US-CO	Solar Energy Storage	10 10	75 %	1H 2023
Meanguera del Golfo	EI Salvador	Solar Energy Storage	1 4	100 %	1H 2023
AES Clean Energy Development	US-Various	Solar	32	75 %	1H-2H 2023
Great Cove 1&2 ⁽¹⁾	US-PA	Solar	220	75 %	2H 2023
Chevelon Butte ⁽¹⁾	US-AZ	Wind	238	75 %	2H 2023
McFarland Phase 1 ⁽¹⁾	US-AZ	Solar Energy Storage	200 100	75 %	2H 2023
Kuihelni ⁽²⁾	US-HI	Solar Energy Storage	60 60	100 %	2H 2023
Oak Ridge ⁽¹⁾	US-LA	Solar	200	75 %	2H 2023
Baldy Mesa ⁽¹⁾	US-CA	Solar Energy Storage	150 75	75 %	2H 2023
Estrella (sPower)	US-CA	Solar Energy Storage	56 28	50 %	2H 2023
Cavalier ⁽¹⁾	US-VA	Solar	155	75 %	2H 2023-1H 2024
Raceway 1 (sPower)	US-CA	Solar Energy Storage	125 80	50 %	2H 2023-1H 2024
Platteview ⁽¹⁾	US-NE	Solar	81	75 %	1H 2024
McFarland Phase 2 ⁽¹⁾	US-AZ	Solar Energy Storage	300 150	75 %	1H 2024
Delta ⁽¹⁾	US-MS	Wind	185	75 %	1H 2024
Hardy Hills (AES Indiana)	US-IN	Solar	195	70 %	1H 2024
Cavalier Solar A2 ⁽¹⁾	US-VA	Solar	81	75 %	2H 2024
Chevelon Butte Phase II ⁽¹⁾	US-AZ	Wind	216	50 %	2H 2024
<u>3,062</u>					

⁽¹⁾ Owned by AES Clean Energy Development ("ACED").

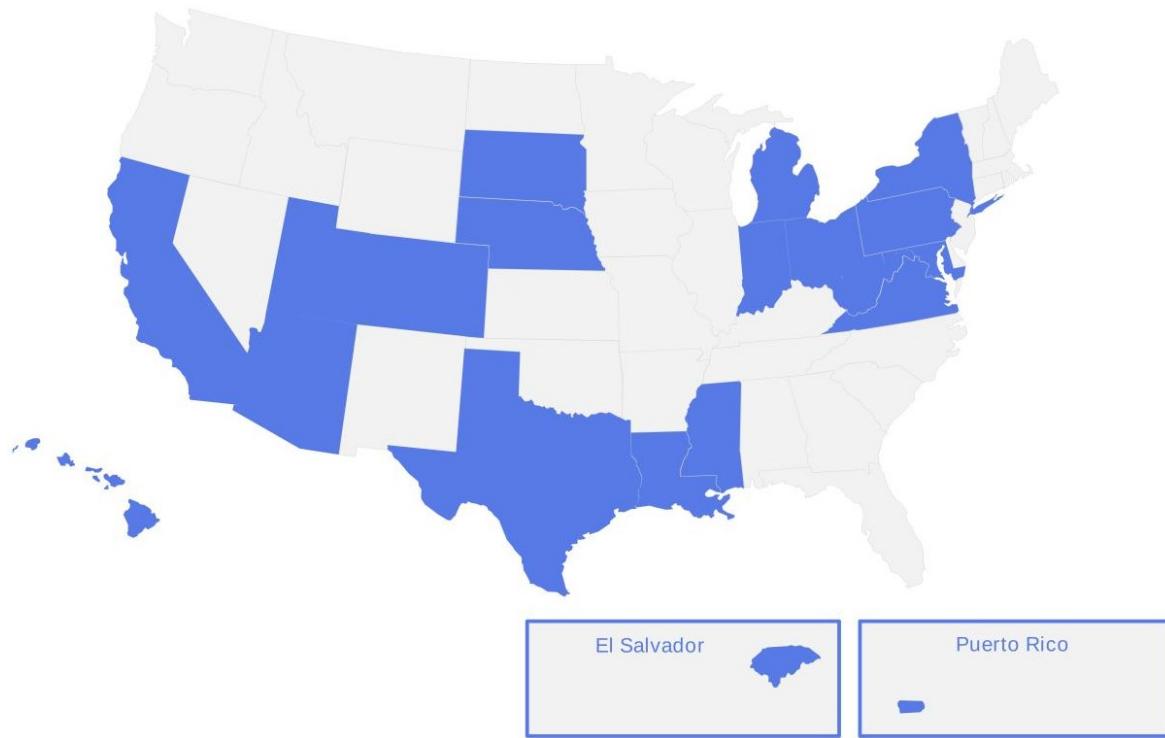
⁽²⁾ Owned by AES Renewable Holdings.

The majority of projects under construction have executed long-term PPAs or, as applicable, have been assigned tariffs through a regulatory process.

In July 2020, the Hawaii State Legislature passed Senate Bill 2629, which prohibited AES Hawaii from generating electricity from coal after December 31, 2022. As a result, AES retired the AES Hawaii facility in September 2022.

The following map illustrates the locations of our US and Utilities facilities:

US and Utilities Businesses



AES Indiana

Business Description — IPALCO is a holding company whose principal subsidiary is AES Indiana. AES Indiana is an integrated utility that is engaged primarily in generating, transmitting, distributing, and selling electric energy to retail customers in the city of Indianapolis and neighboring areas within the state of Indiana and is subject to regulatory authority—see *Regulatory Framework and Market Structure* below. AES Indiana has an exclusive right to provide electric service to the customers in its service area, covering about 528 square miles with an estimated population of approximately 971,000 people. AES Indiana owns and operates four generating stations, all within the state of Indiana. AES Indiana's largest generating station, Petersburg, is coal-fired. AES Indiana retired 230 MW Petersburg Unit 1 on May 31, 2021 and has plans to retire 415 MW Petersburg Unit 2 in 2023, which would result in 630 MW of total retired economic capacity at this station. AES Indiana plans to convert the remaining two coal units at Petersburg to natural gas by the end of 2025 (see *Integrated Resource Plan* below). The second largest station, Harding Street, uses natural gas and fuel oil to power combustion turbines. In addition, AES Indiana operates a 20 MW battery-based energy storage unit at this location, which provides frequency response. The third station, Eagle Valley, is a CCGT natural gas plant. The fourth station, Georgetown, is a small peaking station that uses natural gas to power combustion turbines. In addition, AES Indiana helps meet its customers' energy needs with long-term contracts for the purchase of 300 MW of wind-generated electricity and 94 MW of solar-generated electricity. In July 2021, AES Indiana executed an agreement to acquire a 250 MW solar and 180 MWh energy storage facility (the "Petersburg Solar Project"). As amended in October 2022 and subject to IURC approval, the Petersburg Solar Project is now expected to be completed in 2025. In December 2021, AES Indiana completed the acquisition of Hardy Hills Solar Energy LLC, including the development of a 195 MW solar project (the "Hardy Hills Solar Project"). As amended in December 2022 and subject to IURC approval, the Hardy Hills Solar Project is now expected to be completed in 2024.

Key Financial Drivers — AES Indiana's financial results are driven primarily by retail demand, weather, and maintenance costs. In addition, AES Indiana's financial results are likely to be driven by many other factors including, but not limited to:

- regulatory outcomes and impacts;

- the passage of new legislation, implementation of regulations, or other changes in regulation; and
- timely recovery of capital expenditures.

Regulatory Framework and Market Structure — AES Indiana is subject to comprehensive regulation by the IURC with respect to its services and facilities, retail rates and charges, the issuance of long-term securities, and certain other matters. The regulatory authority of the IURC over AES Indiana's business is typical of regulation generally imposed by state public utility commissions. The IURC sets tariff rates for electric service provided by AES Indiana. The IURC considers all allowable costs for ratemaking purposes, including a fair return on assets used and useful to providing service to customers.

AES Indiana's tariff rates for electric service to retail customers consist of basic rates and approved charges. In addition, AES Indiana's rates include various adjustment mechanisms, including, but not limited to: (i) a rider to reflect changes in fuel and purchased power costs to meet AES Indiana's retail load requirements, referred to as the Fuel Adjustment Charge, (ii) a rider for the timely recovery of costs incurred to comply with environmental laws and regulations, including a return, (iii) a rider to reflect changes in ongoing RTO costs, (iv) riders for passing through to customers wholesale sales margins and capacity sales above and below established annual benchmarks, (v) a rider for a return on, and of, investments for eligible TDSIC improvements, and (vi) a rider for cost recovery, lost margin recoveries and performance incentives from AES Indiana's demand side management energy efficiency programs. Each of these tariff rate components function somewhat independently of one another, but the overall structure of AES Indiana's rates is subject to review at the time of any review of AES Indiana's basic rates and charges. Additionally, AES Indiana's rider recoveries are reviewed through recurring filings.

On October 31, 2018, the IURC issued an order approving an uncontested settlement agreement to increase AES Indiana's annual revenues by \$44 million, or 3% (the "2018 Base Rate Order"). This revenue increase primarily includes recovery through rates of costs associated with the CCGT at Eagle Valley, completed in the first half of 2018, and other construction projects. New base rates and charges became effective on December 5, 2018. The 2018 Base Rate Order was AES Indiana's most recent base rate order and also provided customers with approximately \$50 million in benefits through a rate adjustment mechanism over a two-year period.

AES Indiana is one of many transmission system owner members in MISO, an RTO which maintains functional control over the combined transmission systems of its members and manages one of the largest energy and ancillary services markets in the U.S. MISO dispatches generation assets in economic order considering transmission constraints and other reliability issues to meet the total demand in the MISO region. AES Indiana offers electricity in the MISO day-ahead and real-time markets.

Development Strategy — AES Indiana's construction program is composed of capital expenditures necessary for prudent utility operations and compliance with environmental regulations, along with discretionary investments designed to replace aging equipment or improve overall performance.

Senate Enrolled Act 560, the Transmission, Distribution, and Storage System Improvement Charge ("TDSIC") statute, provides for cost recovery outside of a base rate proceeding for new or replacement electric and gas transmission, distribution, and storage projects that a public utility undertakes for the purposes of safety, reliability, system modernization, or economic development. Provisions of the TDSIC statute require that requests for recovery include a plan of at least five years and not more than seven for eligible investments. Once a plan is approved by the IURC, eighty percent of eligible costs can be recovered using a periodic rate adjustment mechanism, referred to as a TDSIC mechanism. Recoverable costs include a return on, and of, the investment, including AFUDC, post-in-service carrying charges, operation and maintenance expenses, depreciation, and property taxes. The remaining twenty percent of recoverable costs are deferred for future recovery in the public utility's next base rate case. The TDSIC mechanism is capped at an annual increase of two percent of total retail revenues.

On March 4, 2020, the IURC issued an order approving the projects in AES Indiana's seven-year TDSIC Plan for eligible transmission, distribution, and storage system improvements totaling \$1.2 billion from 2020 through 2026. Beginning in June 2020, AES Indiana files an annual TDSIC rate adjustment for a return on, and of, investments through March 31 with rates requested to be effective each November. Annual TDSIC plan update filings are required to be staggered by six months as ordered by the IURC and are filed each December. The total amount of AES Indiana's equipment approved for TDSIC recovery as of December 31, 2022 was \$324 million.

Integrated Resource Plan — In December 2022, AES Indiana filed its Integrated Resource Plan ("IRP"), which describes AES Indiana's Preferred Resource Portfolio for meeting generation capacity needs for serving AES Indiana's retail customers over the next several years. The Preferred Resource Portfolio is AES Indiana's reasonable least cost option and provides a cleaner and more diverse generation mix for customers. The 2022 IRP

short-term action plan includes converting the two remaining coal units at Petersburg to natural gas by the end of 2025. AES Indiana has not yet filed for the necessary regulatory approvals from the IURC to convert Petersburg units 3 and 4, however, AES Indiana expects to do so at the appropriate time. Additionally, AES Indiana plans to add up to 1,300 MW of wind, solar, and battery energy storage by 2027. As new technologies, such as green hydrogen, small modular reactors and carbon capture are developed and cost effective, we will evaluate them in the future planning processes.

AES Indiana's 2019 IRP included the retirement of 230 MW Petersburg Unit 1 on May 31, 2021 and plans to retire 415 MW Petersburg Unit 2 in 2023. In November 2021, AES Indiana received approval from the IURC for approvals and cost recovery associated with the Petersburg retirements, which includes: (1) AES Indiana's creation of regulatory assets for the net book value of Petersburg units 1 and 2 upon retirement; (2) a method for amortization of the regulatory assets; and (3) recovery of the regulatory assets through ongoing amortization in AES Indiana's future rate cases. The order reserves all rights of all the parties with respect to the ratemaking treatment related to the regulatory assets, including the proper rate of return and mechanisms for recovery.

In December 2021, AES Indiana completed the acquisition of the Hardy Hills Solar Project, which is a 195 MW solar project to be developed and expected to commence operations in 2024. AES Indiana received an order from the IURC approving the project in June of 2021. In July 2021, AES Indiana executed an agreement to acquire the Petersburg Solar Project, which is a 250 MW solar and 180 MWh energy storage facility expected to commence operations in 2025. In November 2021, AES Indiana received an order from the IURC approving the project.

In December 2021 and 2022, AES Indiana received equity capital contributions of \$275 million and \$253 million, respectively, from AES and CDPQ on a proportional share basis to be used for funding needs related to AES Indiana's TDSIC and replacement generation projects.

AES Ohio

Business Description — DPL is a holding company whose principal subsidiary is AES Ohio. AES Ohio is a utility company that transmits and distributes electricity to approximately 536,000 retail customers in a 6,000 square mile area of West Central Ohio and is subject to regulatory authority—see *Regulatory Framework and Market Structure* below. AES Ohio has the exclusive right to provide transmission and distribution services to its customers, and procures retail standard service offer ("SSO") electric service on behalf of residential, commercial, industrial, and governmental customers through a competitive bid auction process. In previous years, AES Ohio Generation was also a primary subsidiary, but DPL has systematically exited this generation business. AES Ohio Generation retired and sold its last remaining operating asset in 2020.

Key Financial Drivers — AES Ohio's financial results are driven primarily by retail demand and weather. AES Ohio's financial results are likely to be driven by other factors as well, including, but not limited to:

- regulatory outcomes and impacts;
- the passage of new legislation, implementation of regulations, or other changes in regulations; and
- timely recovery of transmission and distribution expenditures.

Regulatory Framework and Market Structure — AES Ohio is regulated by the PUCO for its distribution services and facilities, retail rates and charges, reliability of service, compliance with renewable energy portfolio requirements, energy efficiency program requirements, and certain other matters. The PUCO maintains jurisdiction over the delivery of electricity, SSO, and other retail electric services.

Electric customers within Ohio are permitted to purchase power under contract from a Competitive Retail Electric Service ("CRES") provider or from their local utility under SSO rates. The SSO generation supply is provided by third parties through a competitive bid process. Ohio utilities have the exclusive right to provide transmission and distribution services in their state-certified territories. While Ohio allows customers to choose retail generation providers, AES Ohio is required to provide retail generation service at SSO rates to any customer that has not signed a contract with a CRES provider or as a provider of last resort in the event of a CRES provider default. SSO rates are subject to rules and regulations of the PUCO and are established through a competitive bid process for the supply of power to SSO customers.

AES Ohio's distribution rates are regulated by the PUCO and are established through a traditional cost-based rate-setting process. AES Ohio is permitted to recover its costs of providing distribution service as well as earn a regulated rate of return on assets, determined by the regulator, based on the utility's allowed regulated asset base, capital structure, and cost of capital. AES Ohio's retail rates include various adjustment mechanisms including, but not limited to, the timely recovery of costs incurred related to power purchased through the competitive bid process,

participation in the PJM RTO, severe storm damage, and energy efficiency. AES Ohio's transmission rates are regulated by FERC.

In March 2020, AES Ohio filed an application for a formula-based rate for its transmission service, which was approved and made effective May 3, 2020. In December 2020, an uncontested settlement was reached regarding these rates and filed with the FERC. It was approved on April 15, 2021.

AES Ohio is a member of PJM, an RTO that operates the transmission systems owned by utilities operating in all or parts of a multi-state region, including Ohio. PJM also administers the day-ahead and real-time energy markets, ancillary services market and forward capacity market for its members.

Ohio law requires utilities to file either an Electric Security Plan ("ESP") or MRO plan to establish SSO rates. On December 18, 2019, the PUCO approved AES Ohio's Notice of Withdrawal and reversion to its prior rate plan (ESP 1). Among other items, the PUCO Order approving the ESP 1 rate plan includes reinstating the non-bypassable RSC Rider, which provides annual revenues of approximately \$79 million. The OCC has appealed to the Ohio Supreme Court, the Commission's decision approving the reversion to ESP 1 as well as argued for a refund of the Rate Stabilization Charge ("RSC") revenues dating back to August 2021. A decision is pending. We are unable to predict the outcome of this appeal, but if this results in terms that are more adverse than AES Ohio's current ESP rate plan, it could have a material adverse effect on our results of operations, financial condition and cash flows.

On September 26, 2022, AES Ohio filed its latest ESP ("ESP 4") with the PUCO. ESP 4 is a comprehensive plan to enhance and upgrade its network and improve service reliability, provide greater safeguards for price stability and continue investments in local economic development. As part of this plan, AES Ohio intends to increase investments in the distribution infrastructure and deploy a proactive vegetation management program. The plan also includes proposals for new customer programs, including renewable options, electric vehicle programs and energy efficiency programs for residential and low-income customers. ESP 4 also seeks to recover outstanding regulatory assets not currently in rates. AES Ohio did not propose that the Rate Stabilization Charge would continue as part of ESP 4. The plan requires PUCO approval, which we anticipate in 2023.

On November 30, 2020, AES Ohio filed a new distribution rate case application with the PUCO to increase AES Ohio's base rates for electric distribution service to address, in part, increased costs of materials and labor and substantial investments to improve distribution structures. On December 14, 2022, the PUCO issued an order on the application. Among other matters, the order (i) establishes a revenue increase of \$76 million for AES Ohio's base rates for electric distribution service and (ii) provides for a return on equity of 9.999% and a cost of long-term debt of 4.4% on a rate base of \$783 million and based on a capital structure of 53.87% equity and 46.13% long-term debt. This increase will go into effect when AES Ohio has a new electric security plan in place, which we anticipate in 2023.

Smart Grid and Comprehensive Settlement — On October 23, 2020, AES Ohio entered into a Stipulation and Recommendation (settlement) with the staff of the PUCO and various customers, and organizations representing customers of AES Ohio and certain other parties with respect to, among other matters, AES Ohio's applications pending at the PUCO for (i) approval of AES Ohio's plan to modernize its distribution grid (the "Smart Grid Plan"), (ii) findings that AES Ohio passed the Significantly Excessive Earnings Test ("SEET") for 2018 and 2019, and (iii) findings that AES Ohio's current ESP 1 satisfies the SEET and the more favorable in the aggregate ("MFA") regulatory test. In June 2021, the PUCO issued their opinion and order accepting the stipulation as filed. With the PUCO's issuance of their opinion and order, AES made cash contributions of \$150 million in 2021 to improve AES Ohio's infrastructure and modernize its grid while maintaining liquidity. Several applications for rehearing of the PUCO's orders relating to the comprehensive settlement were filed and denied on December 1, 2021. The OCC appealed this final PUCO Order to the Ohio Supreme Court on December 6, 2021; this appeal remains pending.

Separate from the ESP process, on January 23, 2020, AES Ohio filed with the PUCO requesting approval to defer its decoupling costs consistent with the methodology approved in its Distribution Rate Case. If approved, deferral would be effective December 18, 2019 and going forward would reduce impacts of weather, energy efficiency programs, and economic changes in customer demand. An evidentiary hearing was held on this matter on May 4, 2021. These amounts were also included in the ESP 4 application and are proposed to be recovered in a new rider.

Development Strategy — Planned construction projects primarily relate to new investments in and upgrades to AES Ohio's transmission and distribution system. Capital projects are subject to continuing review and are revised in light of changes in financial and economic conditions, load forecasts, legislative and regulatory developments, and changing environmental standards, among other factors.

AES Ohio is projecting to spend an estimated \$1.2 billion on capital projects from 2023 through 2025, which includes expected spending under AES Ohio's Smart Grid Plan included in the Stipulation and Recommendation entered into in October 2020 (see *Regulatory Framework and Market Structure* above) as well as other new transmission and distribution projects. The Smart Grid Plan, as approved, provides for a return on and recovery of up to \$249 million of Phase 1 investments and recovery of operational and maintenance expenses through AES Ohio's existing Infrastructure Investment Rider for a term of four years, under an aggregate cap of \$268 million on the amount of such investments and expenses that is recoverable, and an acknowledgement that AES Ohio may file a subsequent application with the PUCO within three years seeking approvals for Phase 2 of the Smart Grid Plan. AES Ohio's spending programs are contingent on successful regulatory outcomes in pending proceedings.

AES Clean Energy

Business Description — AES' U.S. renewables portfolio, referred to as AES Clean Energy, is one of the top U.S. renewables growth platforms. AES Clean Energy aims to solve customers' energy challenges by offering an expanded portfolio of innovative solutions based on cutting-edge technologies that are designed to accelerate their energy futures. The generation capacity of the systems owned and/or operated under AES Clean Energy is 4,919 MW across the U.S., with another 2,862 MW under construction, including 1,707 MW of solar, 639 MW of wind, and 516 MW of energy storage. AES Clean Energy has a 5.2 GW backlog of projects, the majority of which are expected to come online through 2025. The adoption of the Inflation Reduction Act ("IRA") in 2022 is expected to be a significant accelerant to the growth of the U.S. renewables market and AES plans to meet this demand with its 51 GW development pipeline.

AES Clean Energy comprises AES Renewable Holdings, sPower, AES Clean Energy Development ("ACED"), and other renewable assets, as part of its broader investments in the U.S. ACED was formed on February 1, 2021, as specifically identified projects in the sPower and AES Renewable Holdings development platforms were merged. ACED serves as the development vehicle for all future renewable projects in the U.S. Following the merger, ACED expanded through the acquisitions of the Valcour Intermediate Holdings wind platform and Community Energy, a U.S. solar developer. AES Clean Energy has also grown organically at a rapid pace and now has more than 1,000 employees, in contrast to less than 500 employees at the time of its formation in 2021. During the same time period, the development pipeline has also more than doubled.

In line with AES' strategy of using partnerships to promote the effective deployment of capital, in February 2023, the Company sold 49% of its indirect interest in a 1.3 GW portfolio of sPower's operating assets ("OpCo B") that includes 17 solar projects and one wind project, located across six states, to Hannon Armstrong Sustainable Infrastructure Capital, Inc.

Key Financial Drivers — The financial results of AES Clean Energy are primarily driven by the efficient construction and operation of renewable energy facilities across the U.S. under long-term PPAs, through which the energy price on the entire production of these facilities is guaranteed. Tax credits associated with the development of U.S. renewables projects can be substantial and have increased with the adoption of the IRA. In 2022, AES recognized \$246 million of pre-tax contribution related to the allocation of tax credits to tax equity partners of U.S. renewables projects. The financial results of U.S. renewable assets are primarily driven by the amount of wind or solar resource at the facilities, availability of facilities, growth in projects, and by tax credit recognition once placed in service.

A majority of solar projects under AES Clean Energy have been financed with tax equity structures. Under these tax equity structures, the tax equity investors receive a portion of the economic attributes of the facilities, including tax attributes, that vary over the life of the projects. Based on certain liquidation provisions of the tax equity structures, this could result in variability to earnings attributable to AES compared to the earnings reported at the facilities. In 2022, AES Clean Energy largely generated investment tax credits ("ITCs") from its renewable assets. We expect that the extension of the current ITCs and production tax credits ("PTCs"), as well as higher credits available for projects that satisfy wage and apprenticeship requirements under the IRA, will increase demand for our renewable products.

Laurel Mountain, Buffalo Gap I, Buffalo Gap II, and Buffalo Gap III are exposed to the volatility of energy prices and their revenue may change materially as energy prices fluctuate in their respective markets of operations. Laurel Mountain also operates 16 MW of battery energy storage that is sold into the PJM market as regulation energy. For these projects, PJM and ERCOT power prices impact financial results.

Development Strategy — As states, communities, and organizations of all types make commitments and plan to reduce their carbon footprints, renewables are the fastest-growing source of electricity generation in the U.S. AES Clean Energy works with its customers to co-create and deliver the smarter, greener energy solutions that meet

their needs, including 24/7 carbon-free energy. For example, AES has worked with several major technology companies to provide clean energy solutions to power their network of data centers.

In 2022, AES Clean Energy signed or was awarded 1,990 MW of PPAs. As of December 31, 2022, AES Clean Energy's renewable project backlog includes 5.2 GW of projects for which long-term PPAs have been signed or, as applicable, tariffs have been assigned through a regulatory process. The budget for construction of the projects currently under construction and the contracted projects is over \$6 billion. The IRA includes increases, extensions, and/or new tax credits for onshore and offshore wind, solar, storage, and hydrogen projects. These changes in tax policy are supportive of our strategy to grow the AES Clean Energy business through development of our 51 GW U.S. pipeline.

To support this growth and address challenges related to a primarily foreign supply chain for solar panels, AES has spearheaded the creation of a U.S. Solar Buyer Consortium, in cooperation with other leading solar companies, with the intent to support the development of U.S. domestic solar manufacturing.

AES Clean Energy is actively developing new products and renewable sites to serve the current and future needs of its customers. To further this aim, AES Clean Energy matured its pipeline and expanded it to a total of 51 GW during 2022.

[U.S. Conventional Generation](#)

Business Description — In the U.S., we own a conventional generation portfolio. The principal markets and locations where we are engaged in the generation and supply of electricity (energy and capacity) are the California Independent System Operator ("CAISO"), PJM, and Puerto Rico. AES Southland, operating in the CAISO, is our most significant generation business. AES Hawaii previously operated a coal plant under a PPA. The PPA expired and the plant was retired in the third quarter of 2022.

Many of our non-renewable U.S. generation plants provide baseload operations and are required to maintain a guaranteed level of availability. Any change in availability has a direct impact on financial performance. Some plants are eligible for availability bonuses if they meet certain requirements. Coal and natural gas are used as the primary fuels. Coal prices are set by market factors internationally, while natural gas prices are generally set domestically. Recently we have seen international impacts on domestic gas prices (Henry Hub) due to the large amount of U.S. natural gas that can be exported through the liquefaction plants that have come online in recent years. Price variations for these fuels can change the composition of generation costs and energy prices in our generation businesses.

The generation businesses with PPAs have mechanisms to recover fuel costs from the offtaker, including an energy payment partially based on the market price of fuel. When market price fluctuations in fuel are borne by the offtaker, revenue may change as fuel prices fluctuate, but the variable margin or profitability should remain consistent. These businesses often have an opportunity to increase or decrease profitability from payments under their PPAs depending on such items as plant efficiency and availability, heat rate, and fuel flexibility.

Warrior Run currently operates as a QF, as defined under the PURPA. This business entered into a long-term contract with an electric utility that had a mandatory obligation to purchase power from QFs at the utility's avoided cost (i.e. the likely costs for both energy and capital investment that would have been incurred by the purchasing utility if that utility had to provide its own generating capacity or purchase it from another source). To be a QF, a cogeneration facility must produce electricity and useful thermal energy for an industrial or commercial process or heating or cooling application in certain proportions to the facility's total energy output and meet certain efficiency standards. To be a QF, a small power production facility must generally use a renewable resource as its energy input and meet certain size criteria or be a cogeneration facility that simultaneously generates electricity and process heat or steam.

Our non-QF generation businesses in the U.S. currently operate as Exempt Wholesale Generators as defined under the Energy Policy Act of 1992, amending the Public Utility Holding Company Act ("PUHCA"). These businesses, subject to approval of FERC, have the right to sell power at market-based rates, either directly to the wholesale market or to a third-party offtaker such as a power marketer or utility/industrial customer. Under the Energy Policy Act and FERC's regulations, approval from FERC to sell wholesale power at market-based rates is generally dependent upon a showing to FERC that the seller lacks market power in generation and transmission, that the seller and its affiliates cannot erect other barriers to market entry, and that there is no opportunity for abusive transactions involving regulated affiliates of the seller.

The U.S. wholesale electricity market consists of multiple distinct regional markets that are subject to both federal regulation, as implemented by FERC, and regional regulation as defined by rules designed and

implemented by the RTOs, non-profit corporations that operate the regional transmission grid and maintain organized markets for electricity. These rules, for the most part, govern such items as the determination of the market mechanism for setting the system marginal price for energy and the establishment of guidelines and incentives for the addition of new capacity. See Item 1A.—*Risk Factors* for additional discussion on U.S. regulatory matters.

AES Southland

Business Description — AES Southland is one of the largest generation operators in California by aggregate installed capacity, with an installed gross capacity of 3,799 MW at the end of 2022. The five coastal power plants comprising AES Southland are in areas that are critical for local reliability and play an important role in integrating the increasing amounts of renewable generation resources in California. AES Southland is composed of three once-through cooling ("OTC") power plants, two combined cycle gas-fired generation facilities and an interconnected battery-based energy storage facility.

Southland — Southland comprises AES Huntington Beach, LLC, AES Alamitos, LLC, and AES Redondo Beach ("Southland OTC units"). The Southland OTC units are contracted through Resource Adequacy Purchase Agreements ("RAPAs"). Under the RAPAs, as approved by the California Public Utilities Commission, these generating stations provide resource adequacy capacity, and have no obligation to produce or sell any energy to the RAPA counterparty. However, the generating stations are required to bid energy into the California ISO markets. Southland OTC units enter into commodity swap contracts to economically hedge price variability inherent in electricity sales arrangements. Compensation under these RAPAs is dependent on the availability of the Southland OTC units in the California ISO market. Failure to achieve the minimum availability target would result in an assessed penalty.

The SWRCB OTC Policy previously required the shutdown and permanent retirement of all remaining Southland OTC generating units by December 31, 2020, and there is currently no plan to replace the OTC generating units at the AES Redondo Beach generating station following the retirement. On January 23, 2020, the Statewide Advisory Committee on Cooling Water Intake Structures adopted a recommendation to present to the SWRCB to extend OTC compliance dates for the remaining Southland OTC units at AES Huntington Beach and AES Alamitos until December 31, 2023 and AES Redondo Beach until December 31, 2021. On September 1, 2020, in response to a request by the state's energy, utility, and grid operators and regulators, the SWRCB approved amendments to its OTC. The SWRCB public hearing regarding the final decision on the amendment of the OTC policy was held on October 19, 2021 and the Board voted in favor of extending the compliance date for AES Redondo Beach to December 31, 2023. On September 30, 2022, the Statewide Advisory Committee on Cooling Water Intake Structures approved a recommendation to the SWRCB to consider an extension of the OTC compliance dates for AES Huntington Beach and AES Alamitos to December 31, 2026, in support of grid reliability. The SWRCB staff released a draft OTC Policy amendment on January 31, 2023 to be heard by the SWRCB on March 7, 2023. The final decision from SWRCB is expected during the second half of 2023. See *United States Environmental and Land-Use Legislation and Regulations—Cooling Water Intake* for further discussion of AES Southland's plans regarding the OTC Policy.

Southland Energy — AES Huntington Beach Energy, LLC, AES Alamitos Energy, LLC, and AES ES Alamitos, LLC (collectively "Southland Energy") each operate under 20-year tolling agreements with Southern California Edison ("SCE") to provide 1,387 MW of combined cycle gas-fired generation (through 2040) and 100 MW of interconnected battery-based energy storage (through 2041).

The contracts are RAPAs with annual energy tolling put options. If Southland Energy exercises the annual put option, all capacity, energy and ancillary services will be sold to SCE in exchange for a monthly energy and fixed capacity payment that covers fixed operating cost, debt service, and return on capital. In addition, SCE will reimburse variable costs and provide the natural gas. Southland Energy may exercise the annual put option for any contract year by delivering notice of such exercise to SCE at least one year before the start of such contract year, and no more than two years before the start of any contract year. If the annual put options are not exercised, Southland Energy is required to sell the physical output of the combined cycle gas-fired generation units to AES Integrated Energy. AES Integrated Energy is required to bid energy into the California ISO market. Southland Energy continues to receive the monthly fixed capacity payments for periods when the put option is not exercised.

Key Financial Drivers — AES Southland's availability is one of the most important drivers of operations, along with market demand and prices for gas and electricity.

Puerto Rico

Business Description — AES Puerto Rico owns and operates a 524 MW coal-fired cogeneration plant and a 24 MW solar facility representing approximately 8% of the installed capacity in Puerto Rico. Both plants are fully contracted through long-term PPAs with PREPA expiring in 2027 and 2037, respectively. AES Puerto Rico receives a capacity payment based on the plants' twelve month rolling average availability, receiving the full payment when the availability is 90% or higher. See Item 7.—*Management's Discussion and Analysis of Financial Condition and Results of Operations—Key Trends and Uncertainties—Macroeconomic and Political—Puerto Rico* for further discussion of the long-term PPAs with PREPA.

Key Financial Drivers — Financial results are driven by many factors, including, but not limited to, improved operational performance and plant availability.

Regulatory Framework and Market Structure — Puerto Rico has a single electric grid managed by PREPA, a state-owned entity that provides virtually all of the electric power consumed in Puerto Rico and generates, transmits, and distributes electricity to 1.5 million customers. Since June 2021, PREPA has contracted LUMA Energy to manage the transmission, distribution and commercialization activities. The Puerto Rico Energy Bureau is the main regulatory body. The bureau approves wholesale and retail rates, sets efficiency and interconnection standards, and oversees PREPA's compliance with Puerto Rico's renewable portfolio standard.

Puerto Rico's electricity is 98% produced by thermal plants (48% from petroleum, 33% from natural gas, and 17% from coal), while the remaining 2% is supplied by renewable resources (wind, solar, and hydro).

Development Strategy — Puerto Rico has clear goals of supplying its system from renewable resources, with targets of 40% from renewables by 2025 and 100% from renewables by 2050. To achieve the established targets, PREPA intends to issue six requests for proposal for generation from renewable sources in the coming years. The first request for proposal was issued on February 22, 2021. AES Puerto Rico, through AES Clean Flexible Energy, is working to deliver green energy solutions to meet the country's needs, with a long-term strategy to achieve 24/7 carbon-free energy. AES Clean Flexible Energy expects to have a portfolio of solar and storage projects participating. As applicable, tariffs will be assigned through a regulatory process. AES Clean Flexible Energy is actively developing new renewable sites to serve the future needs of Puerto Rico and its communities. On August 26, 2022, AES Clean Flexible Energy and PREPA fully executed six contracts (four power purchase and operating agreements and two energy storage service agreements) for a total installed capacity of 245 MW Solar PV and 200 MW·h Storage. On September 28, 2022, the second auction process was launched by PREPA.

U.S. Environmental Regulation

For information on compliance with environmental regulations see Item 1.—*United States Environmental and Land-Use Legislation and Regulations*.

El Salvador

Business Description — AES El Salvador is the majority owner of four of the five distribution companies operating in El Salvador (CAESS, CLESA, EEO and DEUSEM). AES El Salvador's territory covers 77% of the country and accounted for 4,042 GWh of the market energy sales during 2022. AES El Salvador owns and operates two solar farms, Opico Power and Moncagua with 4 MW and 3 MW capacity, respectively; AES Nejapa, a biomass power plant with 6 MW capacity; and 50% of Bosforo and Cuscatlan Solar, solar farms with 100 MW and 10 MW capacity, respectively. The energy produced by these solar farms is fully contracted by AES' utilities in El Salvador.

In addition, AES El Salvador offers customers non-regulated services such as energy trading, electromechanical construction, O&M of electrical assets, EPC, pole rental, and tax collection for municipalities.

Key Financial Drivers — Financial results are driven by many factors, including, but not limited to:

- improved operational performance;
- regulatory outcomes and impacts;
- variability in energy demand driven by weather; and
- the impact of fuel oil prices on energy tariff prices, which affect cash flow due to a three-month delay in the pass-through of energy costs to the tariffs charged to customers.

Regulatory Framework and Market Structure — El Salvador's national electric market is composed of generation, distribution, transmission, and marketing businesses, a market and system operator, and regulatory agencies. The operation of the transmission system and the wholesale market is based on production costs with a

marginal economic model that rewards efficiency and allows investors to have guaranteed profits, while end users receive affordable rates. The energy sector is governed by the General Electricity Law, which establishes two regulatory entities responsible for monitoring its compliance:

- The National Energy and Hydrocarbons Direction is the highest authority on energy policy and strategy, and the coordinating body for the different energy sectors. One of its main objectives is to promote investment in non-conventional renewable sources to diversify the energy matrix.
- The General Superintendence of Electricity and Telecommunications regulates the market and sets consumer prices, and, jointly with the distribution companies in El Salvador, developed the tariff calculation applicable from 2018 until 2022. The tariff calculation was updated during 2022 and will be effective from 2023 until 2027.

AES El Salvador distribution rates are regulated by SIGET and are established through a traditional cost-based rate-setting process. AES El Salvador is permitted to recover its costs of providing distribution service as well as earn a regulated rate of return on assets, determined by the regulator, based on the utility's allowed regulated asset base, capital structure, and cost of capital. El Salvador has a national electric grid that interconnects directly with Guatemala and Honduras, allowing transactions with all Central American countries. The sector has approximately 2,250 MW of installed capacity, composed of thermal (56%), hydroelectric (25%), solar (9%), biomass (8%), and wind (2%) generation plants.

Development Strategy — In order to explore new business opportunities, AES El Salvador created AES Soluciones, an LED public lighting service provider and the main commercial and industrial solar photovoltaic EPC provider in the country. Electromobility is also being promoted by AES Soluciones through a partnership with Blink Charger in order to design and deploy a private network of electric chargers throughout the country. AES Next, Ltda de. C.V. is the O&M services provider for the Bosforo project, as well as a developer of solar MW in El Salvador. Furthermore, the four distribution companies operated by AES El Salvador started a digitization and modernization initiative as part of the development, sustainability, and growth strategy of the business; all aspects of the initiative are on track and in line with targets.

South America

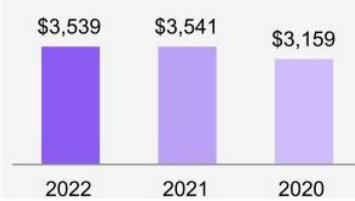
GENERATION FACILITIES IN CHILE,
COLOMBIA, ARGENTINA AND BRAZIL



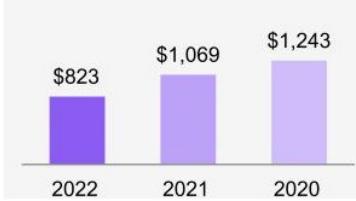
Business Overview



Revenue (in millions)



Operating Margin (in millions)



Adjusted PTC⁽¹⁾ (in millions)



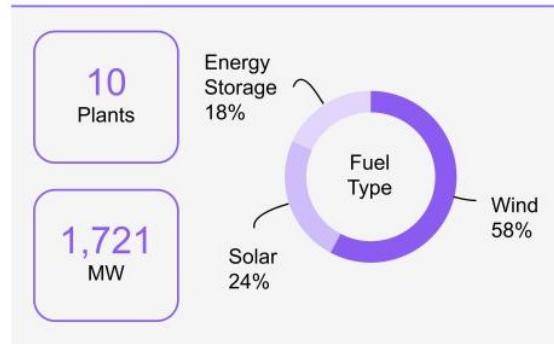
Key events in 2022

- Signed long-term PPAs for 2,299 MW of new renewable energy and completed the construction or acquisition of 645 MW of wind and solar

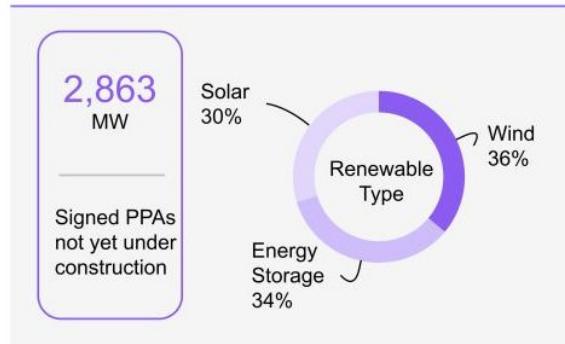
Strategic outlook

- Total backlog of 4,584 MW
- Continue development of renewables pipeline
- Expect to sell or retire remaining 2,479 MW of coal-fired generation by year-end 2025

Under construction



Contracted renewable backlog



⁽¹⁾ Non-GAAP measure. See Item 7.—Management's Discussion and Analysis of Financial Condition and Results of Operations—SBU Performance Analysis—Non-GAAP Measures for reconciliation and definition.

South America SBU

Our South America SBU has generation facilities in four countries — Chile, Colombia, Argentina, and Brazil. AES Andes is a publicly traded company in Chile and owns all of our assets in Chile and Colombia, as well as the TermoAndes in Argentina, as detailed below. AES has a 99% ownership interest in AES Andes and this business is consolidated in our financial statements. AES Brasil is a publicly traded company in Brazil. AES controls and consolidates AES Brasil through its 48% economic interest.

Operating installed capacity of our South America SBU totals 12,950 MW, of which 32%, 26%, 9%, and 33% are located in Argentina, Chile, Colombia, and Brazil, respectively. The following table lists our South America SBU generation facilities:

Business	Location	Fuel	Gross MW	AES Equity Interest	Year Acquired or Began Operation	Contract Expiration Date	Customer(s)
Chivor	Colombia	Hydro	1,000	99 %	2000	2023-2039	Various
San Fernando	Colombia	Solar	61	99 %	2021	2036	Ecopetrol
Brisas	Colombia	Solar	27	99 %	2022	2037	Ecopetrol
Castilla	Colombia	Solar	21	99 %	2019	2034	Ecopetrol
Tunjita	Colombia	Hydro	20	99 %	2016	2023-2039	Various
Colombia Subtotal			1,129				
Ventanas ⁽¹⁾	Chile	Coal	745	99 %	2000, 2010, 2013		
Angamos	Chile	Coal	558	99 %	2011		Various
Cochrane	Chile	Coal	550	57 %	2016	2030-2037	SQM, Sierra Gorda, Quebrada Blanca
Alto Maipo ⁽²⁾	Chile	Hydro	531	99 %	2021	2040	Minera Los Pelambres
Norgener	Chile	Coal	276	99 %	2000	2028	Codelco
Cordillera Hydro Complex ⁽³⁾			240	99 %	2000	2023-2024	Various
Los Olmos	Chile	Wind	110	51 %	2022	2032	Google, Various
Los Cururos	Chile	Wind	109	51 %	2019		Various
Andes Solar 2a	Chile	Solar	81	51 %	2021		Google, Various
Mesamavida	Chile	Wind	63	99 %	2022	2038	Google, Various
Andes Solar 1	Chile	Solar	22	99 %	2016	2036	Quebrada Blanca
Cochrane ES	Chile	Energy Storage	20	57 %	2016		
Angamos ES	Chile	Energy Storage	20	99 %	2011		
Laja	Chile	Biomass	13	99 %	2000	2023	CMPC
Norgener ES (Los Andes)	Chile	Energy Storage	12	99 %	2009		
Alfalfal Virtual Reservoir	Chile	Energy Storage	10	99 %	2020		
PFV Kaufmann	Chile	Solar	1	99 %	2021	2040	Kaufmann
Chile Subtotal			3,361				
TermoAndes ⁽⁴⁾	Argentina	Gas/Diesel	643	99 %	2000	2023-2024	Various
AES Andes Subtotal ⁽⁵⁾			5,133				
Alicura	Argentina	Hydro	1,050	100 %	2000		
Paraná-GT	Argentina	Gas/Diesel	870	100 %	2001		
San Nicolás	Argentina	Coal/Gas/Oil/Energy Storage	691	100 %	1993		
Guillermo Brown ⁽⁶⁾	Argentina	Gas/Diesel	576	— %	2016		
Cabra Corral	Argentina	Hydro	102	100 %	1995		Various
Vientos Bonaerenses	Argentina	Wind	100	100 %	2020	2024-2040	Various
Vientos Neuquinos	Argentina	Wind	100	100 %	2020	2024-2040	Various
Ullum	Argentina	Hydro	45	100 %	1996		Various
Sarmiento	Argentina	Gas/Diesel	33	100 %	1996		
El Tunal	Argentina	Hydro	10	100 %	1995		Various
Argentina Subtotal			3,577				
AES Brasil Operações (Tietê) ⁽⁷⁾	Brazil	Hydro	2,658	48 %	1999	2032	Various
Cubico II	Brazil	Wind	456	48 %	2022	2034-2035	CCEE
Alto Sertão II	Brazil	Wind	386	36 %	2017	2033-2035	Various, CCEE
Ventus	Brazil	Wind	187	36 %	2020	2034	CCEE
Mandacaru and Salinas	Brazil	Wind	159	48 %	2021	2033-2034	CCEE
Guaimbê	Brazil	Solar	150	36 %	2018	2037	CCEE
Tucano ⁽⁸⁾	Brazil	Wind	99	24 %	2022	2042	Unipar
AGV Solar	Brazil	Solar	76	36 %	2019	2039	Various, CCEE
Boa Hora	Brazil	Solar	69	48 %	2019	2035	CCEE
AES Brasil Subtotal			4,240				
			12,950				

⁽¹⁾ In December 2020, AES Andes requested the retirement of Ventanas 2 and is awaiting regulatory approval.

⁽²⁾ In November 2021, Alto Maipo SpA filed a voluntary petition under Chapter 11 of the U.S. Bankruptcy Code. After Chapter 11 filing, the Company no longer has control over Alto Maipo and therefore deconsolidated the business. In May 2022, Alto Maipo emerged from bankruptcy. The restructured business is considered a VIE and the Company continues to account for the business as a deconsolidated entity.

⁽³⁾ Includes: Alfalfal, Queltehués and Volcan.

⁽⁴⁾ TermoAndes is located in Argentina, but is connected to both the SEN in Chile and the SADI in Argentina.

- (5) In 2022, AES' indirect beneficial interest in AES Andes increased from 67% to 99% as result of a tender offer process.
 (6) AES operates this facility through management or O&M agreements and to date owns no equity interest in the business.
 (7) Tietê hydro plants: Água Vermelha, Bariri, Barra Bonita, Caconde, Euclides da Cunha, Ibitinga, Limoeiro, Mog-Guaçu, Nova Avanhandava, Promissão, São Joaquim, and São José.
 (8) Unconsolidated entity, accounted for as an equity affiliate.

Under construction — The following table lists our plants under construction in the South America SBU:

Business	Location	Fuel	Gross MW	AES Equity Interest	Expected Date of Commercial Operations
Mesamávida ⁽¹⁾	Chile	Wind	5	99 %	1H 2023
Andes Solar 2b ⁽¹⁾	Chile	Solar	180	99 %	1H 2023
		Energy Storage	112		
Campo Lindo ⁽¹⁾	Chile	Wind	73	99 %	1H 2023
Virtual Reservoir 2	Chile	Energy Storage	40	99 %	2H 2023
San Matias	Chile	Wind	82	99 %	1H 2024
Andes Solar 4	Chile	Solar	238	99 %	1H 2024
		Energy Storage	147		
AES Andes Subtotal			877		
Tucano Phase 1	Brazil	Wind	56	24 %	1H 2023
Tucano Phase 2	Brazil	Wind	167	48 %	1H 2023
Cajufina	Brazil	Wind	325	48 %	1H 2023
Cajufina	Brazil	Wind	296	36 %	2H 2023
AES Brasil Subtotal			844		
			1,721		

⁽¹⁾ AES Andes has contracted to sell 49% ownership interest in each of these projects to Global Infrastructure Partners ("GIP") once they reach commercial operations. Subsequent to the sales, these projects will continue to be consolidated as AES Andes will retain 51% ownership interest.

The majority of projects under construction have executed mid- to long-term PPAs.

The following map illustrates the location of our South America facilities:

South America Businesses



Chile

Business Description — In Chile, through AES Andes, we are engaged in the generation and supply of electricity (energy and capacity) in the SEN—see *Regulatory Framework and Market Structure* below. AES Andes is the third largest generation operator in Chile in terms of installed capacity with 3,299 MW, excluding energy storage, and has a market share of approximately 11% as of December 31, 2022.

AES Andes owns a diversified generation portfolio in Chile in terms of geography, technology, customers, and energy resources. AES Andes' generation plants are located near the principal electricity consumption centers, including Santiago, Valparaiso, and Antofagasta. AES Andes' diverse generation portfolio provides flexibility for the management of contractual obligations with regulated and unregulated customers, provides backup energy to the spot market and facilitates operations under a variety of market and hydrological conditions.

AES Andes' Green Blend strategy aims to reduce carbon intensity and incorporate renewable energy to extend our existing conventional PPAs. This strategy de-links company's PPAs from legacy fossil resources, grows its renewable energy portfolio, and delivers a competitive, reliable energy solution. In line with the Green Blend strategy, AES Andes has committed to not build additional coal-based power plants and to advance the development of new renewable projects, including the implementation of battery energy storage systems ("BESS") and other technological innovations that will provide greater flexibility and reliability to the system.

AES Andes currently has long-term contracts, with an average remaining term of approximately 10 years, with regulated distribution companies and unregulated customers, such as mining and industrial companies. In general, these long-term contracts include pass-through mechanisms for fuel costs along with price indexations to U.S. Consumer Price Index ("CPI").

In addition to energy payments, AES Andes also receives capacity payments to compensate for availability during periods of peak demand. The grid operator, Coordinador Electrico Nacional ("CEN"), annually determines the

capacity requirements for each power plant. The capacity price is fixed semiannually by the National Energy Commission and indexed to the CPI and other relevant indices.

Key Financial Drivers — Hedging strategies at AES Andes limit volatility to the underlying financial drivers. In addition, financial results are likely to be driven by many factors, including, but not limited to:

- spot market prices (largely impacted by dry hydrology scenarios, forced outages and international fuel prices);
- changes in current regulatory rulings altering the ability to pass through or recover certain costs;
- fluctuations of the Chilean peso;
- tax policy changes; and
- legislation promoting renewable energy and/or more restrictive regulations on thermal generation assets.

Regulatory Framework and Market Structure — The Chilean electricity industry is divided into three business segments: generation, transmission, and distribution. Private companies operate in all three segments, and generators can enter into PPAs to sell energy to regulated and unregulated customers, as well as to other generators in the spot market.

Chile operates in a single power market, referred to as the SEN, which is managed by the grid operator CEN. The SEN has an installed capacity of 31,141 MW, and represents 99% of the installed generation capacity of the country.

CEN coordinates all generation and transmission companies in the SEN. CEN minimizes the operating costs of the electricity system, while maximizing service quality and reliability requirements. CEN dispatches plants in merit order based on their variable cost of production, allowing for electricity to be supplied at the lowest available cost. In the south-central region of the SEN, thermoelectric generation is required to fulfill demand not satisfied by hydroelectric, solar, and wind output and is critical to provide reliable and dependable electricity supply under dry hydrological conditions in the highest demand area of the SEN. In the northern region of the SEN, which includes the Atacama Desert, thermoelectric capacity represents the majority of installed capacity. The fuels used for thermoelectric generation, mainly coal, diesel, and LNG, are indexed to international prices. In 2022, the installed generation capacity in the Chilean market was composed of 42% thermoelectric, 23% hydroelectric, 20% solar, 13% wind, and 2% other fuel sources.

Hydroelectric plants represent a significant portion of the system's installed capacity. Precipitation and snow melt impact hydrological conditions in Chile. Rain occurs principally from June to August and snow melt occurs from September to December. These factors affect dispatch of the system's hydroelectric and thermoelectric generation plants, thereby influencing spot market prices.

The Ministry of Energy has primary responsibility for the Chilean electricity system directly or through the National Energy Commission and the Superintendency of Electricity and Fuels.

All generators can sell energy through contracts with regulated distribution companies or directly to unregulated customers. Unregulated customers are customers whose connected capacity is higher than 5 MW. Customers with connected capacity between 0.5 MW and 5 MW can opt for regulated or unregulated contracts for a minimum period of four years. By law, both regulated and unregulated customers are required to purchase all electricity under contracts. Generators may also sell energy to other power generation companies on a short-term basis at negotiated prices outside the spot market. Electricity prices in Chile are denominated in USD, although payments are made in Chilean pesos.

The Chilean government's decarbonization plan includes the complete retirement of the SEN coal fleet by the end of 2040 and carbon neutrality by 2050. On December 26, 2020, the Ministry of Energy's Supreme Decree Number 42 went into effect, allowing coal plants to enter into Strategic Reserve Status ("SRS") and receive 60% of capacity payments for the 5-year period following its shutdown to remain connected as a backup in case of a system emergency. Following the issuance of this regulation and per the disconnection and termination agreement signed with the Chilean government in June 2019, AES Andes accelerated the retirement plans of its Ventanas 1 and Ventanas 2 coal-fired units. On July 22, 2022, AES Andes was authorized by the CEN to retire, cease operations, and definitively disconnect Ventanas 1 from the SEN as of June 30, 2022. This coal-fired unit had been in SRS since December 29, 2020. Concurrently, AES Andes requested the shutdown of Ventanas 2 as soon as possible. Ventanas 2's shut down and transition into SRS is pending resolution of current system transmission constraints in order to guarantee system stability and ensure a responsible energy transition. The unit's retirement

into SRS has been postponed and is expected to occur during 2023. The definitive cessation of operations of Ventanas 2 is expected by December 29, 2025 as informed by the National Energy Commission on July 22, 2022 through Exempt Resolution No. 555.

In July 2021, AES Andes committed to allow the shutdown of coal-fired operations at its Ventanas 3, Ventanas 4, Angamos 1, and Angamos 2 units as soon as January 1, 2025, once the safety, sufficiency, and competitiveness of the system allows it. These four units together have an installed capacity of 1,095 MW and each unit has publicly announced phase-out plans in line with the Company's decarbonization strategy. In July 2021, the Company also sold its entire ownership interest in Guacolda, a 764 MW coal-fired plant located in Chile. Guacolda, Ventanas, and Angamos represent an aggregate of 2.2 GW of coal-fired capacity, or 72% of AES Andes' legacy coal fleet. AES Andes continues to work under the Green Blend strategy to accelerate the phase-out of the remaining two coal-fired plants.

Environmental Regulation — Chilean law requires all electricity generators to supply a certain portion of their total contractual obligations with non-conventional renewable energy ("NCRE"). Generation companies are able to meet this requirement by building NCRE generation capacity (wind, solar, biomass, geothermal, and small hydroelectric technology) or purchasing NCREs from qualified generators. Non-compliance with the NCRE requirements will result in fines. AES Andes currently fulfills the NCRE requirements by utilizing AES Andes' solar, wind, and biomass power plants.

Since 2017, emissions of particulate matter, SO₂, NO_x, and CO₂ are monitored for plants with an installed capacity over 50 MW; these emissions are taxed. In the case of CO₂, the tax is equivalent to \$5 per ton emitted. Certain PPAs have clauses allowing the Company to pass the green tax costs to unregulated customers, while some distribution PPAs do not allow for the pass through of these costs. During 2021, the Chilean General Water Direction, as part of the Ministry of Public Works, established the obligation to install and maintain effective monitoring systems for water withdrawal. We are currently implementing these systems in the power plants for which they are required.

During 2022, new regulations associated with monitoring requirements were published, including Law 21,455, which is the framework on climate change; the new Ventanas power plant Operational Plan; emission standards for back up generators; and recently enacted Law 21,505, which promotes electric energy storage and electromobility. A Prioritized Program of Standards was published, establishing a set of environmental regulations that will impose new obligations for projects both in operation and under construction, including the regulation of environmental noise, thermoelectric power plant emissions, industrial liquid waste, Green Tax offsets, and environmental quality regulations for the protection of marine waters and sediments of the Quintero-Puchuncaví Bay, among others.

AES Andes and its subsidiaries are undergoing administrative environmental sanctioning processes. The compliance programs associated with the Ventanas power plant and the Mesamávida wind farm are being executed, and the compliance program associated with the Cochrane power plant is under review by the authority. The Angamos power plant is currently undergoing an environmental review process of the Environmental Qualification Resolution (RCA in Chile). See Item 3.—*Legal Proceedings* of this Form 10-K for further discussion.

Development Strategy — AES Andes is committed to reducing the coal intensity of the Chilean power grid and plans to increase the renewable energy capacity in its portfolio. As part of this commitment, there are several projects under construction to supply agreements with its main mining customers in execution of the new Green Blend strategy by integrating renewable energy sources into its portfolio, and by providing contracting options that contain a mix of both renewable and nonrenewable solutions. In total, the pipeline currently has 4.2 GW under development at different stages and diversified geographically.

Within this portfolio, the Company has made significant progress in the development of NCRE projects that are already contracted. In the Biobío region, the Rinconada wind project (258 MW) is being developed, and in Antofagasta, a new expansion of the Andes Solar power plant is being developed, which will include a battery system to optimize solar generation (186 MW + 186 MW-5hr).

In addition, Empresa Eléctrica Angamos, a subsidiary of AES Andes, submitted for environmental processing a worldwide pioneering initiative, referred to as the Alba project, that seeks an alternative for the conversion of thermoelectric plants through the use of molten salts. This project explores the possibility of replacing the current coal-fired generation of units 1 and 2 of the Angamos thermoelectric power plant, located in Mejillones, Antofagasta region, with a molten salt system. With this technology, renewable energy is stored as heat to later be used to provide energy and emission-free capacity to the electrical system.

Empresa Eléctrica Angamos is also promoting the advancement of green hydrogen technology for mass production through the Adelaida project, which involves the installation of a low-scale green hydrogen production plant with a capacity of 1,000 kg/day of green hydrogen, equivalent to 2.5 MW of power.

Colombia

Business Description — We operate in Colombia through AES Colombia, a subsidiary of AES Andes, which owns Chivor, a hydroelectric plant with an installed capacity of 1,000 MW and Tunjita, a 20 MW run-of-river hydroelectric plant, both located approximately 160 km east of Bogota, as well as the solar facilities of Castilla, Brisas, and San Fernando, 21 MW, 27 MW, and 61 MW respectively. AES Colombia's installed capacity accounted for approximately 6% of system capacity at the end of 2022. AES Colombia is dependent on hydrological conditions, which influence generation and spot prices of non-contracted generation in Colombia.

AES Colombia's commercial strategy aims to execute contracts with commercial and industrial customers and bid in public tenders, mainly with distribution companies, in order to reduce margin volatility with proper portfolio risk management. The remaining energy generated by our portfolio is sold to the spot market, including ancillary services. Additionally, AES Colombia receives reliability payments for maintaining the plant's availability and generating firm energy during periods of power scarcity, such as adverse hydrological conditions, in order to prevent power shortages.

Key Financial Drivers — Hydrological conditions largely influence Chivor's power generation. Maintaining the appropriate contract level, while maximizing revenue through the sale of excess generation, is key to AES Colombia's results of operations. In addition to hydrology, financial results are driven by many factors, including, but not limited to:

- forced outages;
- fluctuations of the Colombian peso; and
- spot market prices.

Regulatory Framework and Market Structure — Electricity supply in Colombia is concentrated in one main system, the SIN, which encompasses one-third of Colombia's territory, providing electricity to 97% of the country's population. The SIN's installed capacity, primarily hydroelectric (67%), other renewable (3%) and thermal (30%), totaled 18,771 MW as of December 31, 2022. The marked seasonal variations in Colombia's hydrology result in price volatility in the short-term market. In 2022, 84% of total energy demand was supplied by hydroelectric plants.

The electricity sector in Colombia operates under a competitive market framework for the generation and sale of electricity, and a regulated framework for transmission and distribution of electricity. The distinct activities of the electricity sector are governed by Colombian laws and CREG, the Colombian regulating entity for energy and gas. Other government entities have a role in the electricity industry, including the Ministry of Mines and Energy, which defines the government's policy for the energy sector; the Public Utility Superintendency of Colombia, which is in charge of overseeing utility companies; and the Mining and Energy Planning Unit, which is in charge of expansion planning of the generation and transmission network.

The generation sector is organized on a competitive basis with companies selling their generation in the wholesale market at the short-term price or under bilateral contracts with other participants, including distribution companies, generators and traders, and unregulated customers at freely negotiated prices. The National Dispatch Center dispatches generators in merit order based on bid offers in order to ensure that demand will be satisfied by the lowest cost combination of available generating units.

The expansion of the system is supported by two schemes: i) reliability charge auctions where firm energy commitments are focused on conventional technology power plants, and ii) auctions of long-term energy contracts assigned for periods of 15 years aimed at non-conventional renewable resources.

Environmental Regulation — Decree 1076 of 2015 established the current Environmental Licensing Scheme that defines the scope of the National Environmental Licensing Authority ("ANLA") for granting environmental licenses. In recent years, the Ministry of the Environment has generated regulations in connection with licenses, such as the biotic compensation methodology and guidance for presentation of environmental studies in 2018, and the regulation of minor changes to environmental licenses in 2022. AES Colombia has obtained environmental licenses for 406 MW of wind projects included in its development pipeline.

Development Strategy — AES Colombia is committed to supporting its customers to diversify their energy supply and become more competitive. As part of this commitment, AES Colombia is developing a pipeline of 1.3

GW of solar and wind projects. Six wind projects totaling 1,149 MW are located in La Guajira, one of the windiest spots in the world. Of this 1,149 MW, 255 MW were awarded a 15-year PPA at the renewable auction in 2019.

Argentina

Business Description — AES operates plants in Argentina totaling 4,220 MW, representing 10% of the country's total installed capacity. AES owns a diversified generation portfolio in Argentina in terms of geography, technology, and fuel source. AES Argentina's plants are placed in strategic locations within the country in order to provide energy to the spot market and customers, making use of wind, hydro, and thermal plants.

AES primarily sells its energy in the wholesale electricity market where prices are largely regulated. In 2022, approximately 84% of the energy was sold in the wholesale electricity market and 16% was sold under contract sales made by TermoAndes, Vientos Neuquinos, and Vientos Bonaerenses power plants.

Key Financial Drivers — Financial results are driven by many factors, including, but not limited to:

- forced outages;
- exposure to fluctuations of the Argentine peso;
- changes in hydrology and wind resources;
- timely collection of FONINVEMEM installments and outstanding receivables (see *Regulatory Framework and Market Structure* below);
- natural gas prices and availability for contracted generation at TermoAndes; and
- domestic energy demand and exports.

Regulatory Framework and Market Structure — Argentina has one main power system, the SADI, which serves 96% of the country. As of December 31, 2022, the installed capacity of the SADI totaled 42,927 MW. The SADI's installed capacity is composed primarily of thermoelectric generation (59%) and hydroelectric generation (26%), as well as wind (8%), nuclear (4%), and solar (3%).

Thermoelectric generation in the SADI is primarily natural gas. However, scarcity of natural gas during winter periods (June to August) due to transport constraints result in the use of alternative fuels, such as oil and coal. The SADI is also highly reliant on hydroelectric plants. Hydrological conditions impact reservoir water levels and largely influence the dispatch of the system's hydroelectric and thermoelectric generation plants and, therefore, influence market costs. Precipitation in Argentina occurs principally from May to October.

The Argentine regulatory framework divides the electricity sector into generation, transmission, and distribution. The wholesale electric market is comprised of generation companies, transmission companies, distribution companies, and large customers who are permitted to trade electricity. Generation companies can sell their output in the spot market or under PPAs. CAMMESA manages the electricity market and is responsible for dispatch coordination. The Electricity National Regulatory Agency is in charge of regulating public service activities and the Secretariat of Energy regulates system framework and grants concessions or authorizations for sector activities. In Argentina, there is a tolling scheme in which the regulator establishes prices for electricity and defines fuel reference prices. As a result, our businesses are particularly sensitive to changes in regulation.

The Argentine electric market is an "average cost" system. Generators are compensated for fixed costs and non-fuel variable costs, under prices denominated in Argentine pesos. CAMMESA is in charge of providing the natural gas and liquid fuels required by the generation companies, except for coal.

The expansion of renewable capacity in the system is promoted by allowing the new power plants to sign contracts either with CAMMESA through the RenovAr program or directly by trading energy in the private market.

During 2022, although the government increased prices to the end user, subsidies and the system deficit also increased. By December 2022, distribution companies recovered an average 40% of the total cost of the system.

In past years, AES Argentina contributed certain accounts receivable to fund the construction of three power plants under FONINVEMEM agreements. These receivables accrue interest and are collected in monthly installments over 10 years after commercial operation date of the related plant takes place. In 2020, FONINVEMEM I and II installments were fully repaid and in 2021 the ownership interests in Termoeléctrica San Martín and Termoeléctrica Manuel Belgrano were defined after the incorporation of the National Government as majority shareholder. The transfer of the power plants to these companies has not yet occurred. FONINVEMEM III is related to Termoeléctrica Guillermo Brown, which commenced operations in April 2016, and the installments are still being collected. AES Argentina will receive a pro rata ownership interest in this plant, which shall not be greater than 30%,

once the accounts receivables have been fully repaid. See Item 7.—*Management's Discussion and Analysis of Financial Condition and Results of Operations—Capital Resources and Liquidity—Long-Term Receivables* and Note 7.—*Financing Receivables* in Item 8.—*Financial Statements and Supplementary Data* of this Form 10-K for further discussion of receivables in Argentina.

In 2021 and 2022, the Argentine peso devalued against the USD by approximately 18% and 42%, respectively, and Argentina's economy continued to be highly inflationary. Since September 2019, currency controls have been established to govern the devaluation of the Argentine peso and keep Argentine central bank reserves at acceptable levels.

Environmental Regulation — Argentina has agreed to commitments made by the international community ratified in the Paris Agreement and in Law 27,270 passed in September 2016.

In October 2015, Law 27,191 was passed, seeking to create a successful framework for the development of renewable energy. This law set an objective of 8% renewable energy by 2017 and 20% by 2025 and also introduced tax exemptions for importing equipment used in the construction of renewable energy projects in addition to other tax benefits. This framework fostered AES Argentina's construction of Vientos Bonaerenses and Vientos Neuquinos power plants, which are fully contracted with national and private customers in the long term.

In December 2019, Law 27,520 established a minimum budget to grant adequate actions, instruments, and strategies to mitigate and adapt to global climate change effects in all national territories and created the National Office of Climate Change to designate private and public actors to design policies aiming to reduce greenhouse gases and to provide coordinated responses in sectors that are vulnerable to climate change impacts.

All AES Argentina plants are certified under international standards of Quality (ISO 9001), Safety and Health (ISO 45.001) and Environment (ISO 14001).

Development Strategy — Leveraging existing wind operating facilities in southern Buenos Aires and market opportunities, AES Argentina is developing 890 MW of wind greenfield projects that are in mid-to-late stages of development and could be funded locally. These projects are adjacent or nearby to AES Argentina's operating assets and will be used to participate in future private auctions for renewable PPAs.

Brazil

Business Description — AES Brasil owns a diversified generation portfolio in Brazil and its plants are placed in strategic locations within the country in order to provide energy to customers and the regulated market, making use of hydro, solar, and wind generation.

AES Brasil owns 12 hydroelectric power plants in the state of São Paulo with total installed capacity of 2,658 MW, which represents approximately 11% of the total generation capacity in the state of São Paulo and 2% of the hydropower physical guarantee of the hydrological risk sharing system (Energy Reallocation Mechanism or "MRE", as described below in the topic "*Regulatory Framework and Market Structure*"). These hydroelectric plants operate under a 33-year concession expiring in 2032.

Over the past three years, AES Brasil acquired and developed three solar power plants in the state of São Paulo, which are fully contracted with 20-year PPAs and together account for 295 MW of installed capacity.

AES Brasil has also invested in wind generation which is fully contracted in the regulated market and currently owns the following operational wind complexes:

- Alto Sertão II, located in the state of Bahia with an installed capacity of 386 MW and subject to 20-year PPAs expiring between 2033 and 2035;
- Ventus, located in the state of Rio Grande do Norte with an installed capacity of 187 MW and subject to a 20-year PPA expiring in 2034;
- Mandacaru and Salinas, located in the states of Rio Grande do Norte and Ceará with 159 MW of installed capacity, fully sold in the regulated market for 20 years; and
- Ventos do Araripe, Caetés, and Cassino, acquired in November 2022 and located in the states of Piauí and Pernambuco, in the northeast region of Brazil, and Rio Grande do Sul in the south region, respectively. The complexes have been operational since 2015 with 456 MW of installed capacity, sold in the regulated market for 20 years.

AES Brasil aims to contract most of its physical guarantee requirements and sell the remaining portion in the spot market. The commercial strategy is reassessed periodically according to changes in market conditions, hydrology, and other factors. AES Brasil generally sells available energy through medium-term bilateral contracts.

In the second half of 2020, AES acquired an additional 19.8% ownership in AES Brasil and on December 31, 2020 its economic interest was 44.1%. Through multiple transactions in 2021, AES acquired an additional 1.6% ownership in AES Brasil. Additionally, AES migrated AES Brasil's shares to the Novo Mercado, which is a listing segment of the Brazilian stock exchange with the highest standards of corporate governance in Brazil, requiring equity capital to be composed only of common shares. The reorganization and the exchange of shares was completed on March 26, 2021, and the shares issued by AES Brasil started trading on Novo Mercado on March 29, 2021. The Company maintained majority representation on AES Brasil's board of directors.

In October 2021, as part of the reorganization process, AES Brasil concluded a follow-on offering for the issuance of 93 million newly issued shares to fund its renewable energy portfolio at a cost of \$207 million. As a result, AES' indirect beneficial interest in AES Brasil increased 1%, from 45.7% to 46.7%.

In September 2022, AES Brasil commenced a private placement offering for its existing shareholders to subscribe for up to 116 million newly issued shares. The offering concluded on October 3, 2022 with a total of 107 million shares subscribed at a cost of \$197 million. AES Holding Brazil acquired 54 million shares, thereby increasing AES' indirect beneficial interest in AES Brasil from 46.7% to 47.4%. AES Brasil is reported in the South America SBU reportable segment.

Key Financial Drivers — The electricity market in Brazil is highly dependent on hydroelectric generation, therefore electricity pricing is driven by hydrology. Plant availability is also a significant financial driver as in times of high hydrology, AES is more exposed to the spot market. AES Brasil's financial results are driven by many factors, including, but not limited to:

- hydrology, impacting quantity of energy generated in the MRE (see *Regulatory Framework and Market Structure* below for further information);
- growth in demand for energy;
- market price risk when re-contracting;
- asset management;
- cost management; and
- ability to execute on its growth strategy.

Regulatory Framework and Market Structure — In Brazil, the Ministry of Mines and Energy determines the maximum amount of energy a generation plant can sell, called physical guarantee, representing the long-term average expected energy production of the plant. Under current rules, physical guarantee energy can be sold to distribution companies through long-term regulated auctions or under unregulated bilateral contracts with large consumers or energy trading companies.

Brazil has installed capacity of 191 GW, composed of hydroelectric (58%), thermoelectric (25%), renewable (16%), and nuclear (1%) sources. Operation is centralized and controlled by the national operator, ONS, and regulated by the Brazilian National Electric Energy Agency ("ANEEL"). The ONS dispatches generators based on their marginal cost of production and on the risk of system rationing. Key variables for the dispatch decision are forecasted hydrological conditions, reservoir levels, electricity demand, fuel prices, and thermal generation availability.

In case of unfavorable hydrology, the ONS will reduce hydroelectric dispatch to preserve reservoir levels and increase dispatch of thermal plants to meet demand. The consequences of unfavorable hydrology are (i) higher energy spot prices due to higher energy production costs at thermal plants and (ii) the need for hydro plants to purchase energy in the spot market to fulfill their contractual obligations.

A mechanism known as the MRE (Energy Reallocation Mechanism) was created under ONS to share hydrological risk across MRE hydro generators by using a generation scaling factor ("GSF") to adjust generators' physical guarantee during periods of hydrological scarcity. If the hydro plants generate less than the total MRE physical guarantee, the hydro generators may need to purchase energy in the short-term market. When total hydro generation is higher than the total MRE physical guarantee, the surplus is proportionally shared among its participants and they may sell the excess energy on the spot market.

In September 2020, Law 14.052/2020 published by ANEEL was approved by the President, establishing terms for compensation to MRE hydro generators for the incorrect application of the GSF mechanism from 2013 to 2018, which resulted in higher charges assessed to MRE hydro generators by the regulator. Under the law, compensation was in the form of an offer for a concession extension for each hydro generator in exchange for full payment of billed GSF trade payables, the amount of which was reduced in conjunction with the payment for a concession extension. On August 12, 2021, ANEEL published Resolution number 2.919/2021, establishing an extension for the end of the concession originally granted to AES Brasil's hydroelectric plants, from 2029 to 2032. On April 14, 2022, the amended term was finalized and agreed upon by ANEEL and AES.

Environmental Regulation — In Brazil, the National Environmental Council ("CONAMA") is responsible for environmental licensing procedures. Inspections are performed by authorities at federal, state and municipal levels. The programs developed by AES Brasil are designed to restore and preserve biodiversity and are in compliance with local procedures and the obligations assumed in AES Brasil's concession with the state government. AES Brasil's main environmental projects include a flora management program which guarantees the production of 1 million seedlings of native tree species, a reservoir repopulation program that aims to maintain the ichthyofauna biodiversity and guarantee continuity of fishing activity by riverside communities, a land fauna monitoring and conservation program, and a water quality monitoring program designed to further understand the structure and functioning of aquatic ecosystems.

In addition, the monitoring and control of reservoir edges is carried out through continuous inspections by the technical team of the Center of Monitoring of Reservoirs ("CMR") through a system of detection of changes, satellite images, aerophotogrammetric surveys, and field inspections.

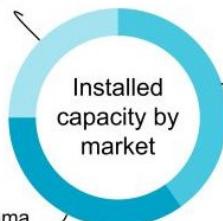
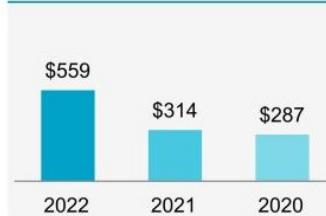
Development Strategy — AES Brasil's strategy is to grow by adding renewable capacity to its generation platform through acquisition or greenfield projects, to focus on client satisfaction and innovation to offer new products and energy solutions, and to be recognized for excellence in asset management.

In 2021, AES Brasil acquired the Cajuína wind complexes, 1,485 MW of installed capacity of greenfield wind power projects. Cajuína is comprised of the Santa Tereza, São Ricardo, and Serra Verde complexes located in the states of Rio Grande do Norte and Ceará. In March 2022, AES Brasil won the competitive process for the acquisition of the Isolated Productive Unit Cordilheira dos Ventos, which consists of parts of the Facheiro II, Facheiro III, and Labocó projects located in the State of Rio Grande do Norte. These projects have a wind power development capacity of up to 305 MW and were added to the Cajuína wind complex pipeline. Part of Cajuína's capacity is committed under long-term PPAs and in 2022, investment agreements were closed with BRF and Unipar to develop projects of 168 MW and 91 MW, respectively, through joint venture partnerships.

In March 2022, AES Brasil acquired Sky Arinos, a solar project with installable capacity of 378 MW in the city of Arinos in the state of Minas Gerais.

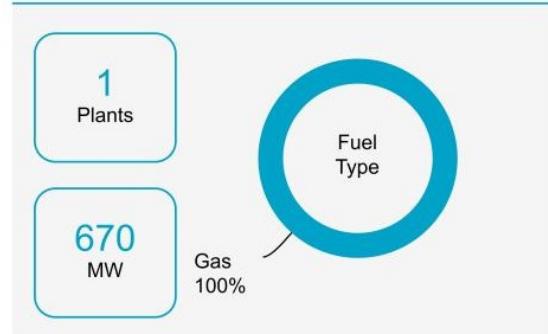
In November 2022, AES Brasil acquired the Ventos do Araripe, Caetés, and Cassino wind complexes, with 456 MW of operational installed capacity located in the states of Piauí and Pernambuco, in the northeast region of Brazil, and Rio Grande do Sul, in the south region.

Under the current terms of the 2018 legal agreement in connection with AES Brasil's concession with the state government, AES Brasil is required to increase its capacity in the state of São Paulo by an additional 81 MW by October 2024. On November 30, 2021 AES Brasil acquired AGV Solar VII Geradora de Energia S.A, a special purpose entity with installable capacity of 33 MW of solar generation. AES Brasil continues to pursue new opportunities to achieve the additional capacity.

MCACGENERATION FACILITIES IN THE DOMINICAN
REPUBLIC, MEXICO AND PANAMA**aes****Business Overview**Dominican
Republic
25%**23**Generation
Facilities**3,390** Gross MWKey Generation
Businesses: **Andres-Los
Mina, Panama, Merida,
and Mesa La Paz**Pet Coke
16%Renewables
38%Generation
Fuel TypeGas
46%**Revenue
(In millions)****Operating Margin
(in millions)****Adjusted PTC⁽¹⁾
(in millions)****Key events in 2022**

- Signed long-term PPAs for 300 MW of new renewable energy and completed the construction or acquisition of 100 MW of solar

- Total backlog of 1,322 MW

Strategic outlook**Under construction****Contracted renewable backlog**

MCAC SBU

Our MCAC SBU has a portfolio of generation facilities, including renewable energy, in three countries, with a total capacity of 3,390 MW.

Generation — The following table lists our MCAC SBU generation facilities:

Business	Location	Fuel	Gross MW	AES Equity Interest	Year Acquired or Began Operation	Contract Expiration Date	Customer(s)
DPP (Los Mina)	Dominican Republic	Gas	358	85 %	1996	2024	Andres, Non-Regulated Users
Andres ⁽¹⁾	Dominican Republic	Gas/Diesel	319	85 %	2003	2023-2024	Ede Norte, Ede Este, Ede Sur, Non-Regulated Users
Bayasol	Dominican Republic	Solar	50	85 %	2021	2036	Ede Sur
Agua Clara	Dominican Republic	Wind	50	85 %	2022	2039	Ede Norte
Santanasol	Dominican Republic	Solar	50	85 %	2022	2038	Ede Sur
Andres ES	Dominican Republic	Energy Storage	10	85 %	2017		
Los Mina DPP ES	Dominican Republic	Energy Storage	10	85 %	2017		
Dominican Republic Subtotal			847				
Merida III	Mexico	Gas/Diesel	505	75 %	2000	2025	Comision Federal de Electricidad
Mesa La Paz ⁽²⁾	Mexico	Wind	306	50 %	2019	2045	Fuentes de Energia Peñoles
Termoelectrica del Golfo (TEG)	Mexico	Pet Coke	275	99 %	2007	2027	CEMEX
Termoelectrica del Peñoles (TEP)	Mexico	Pet Coke	275	99 %	2007	2027	Peñoles
Mexico Subtotal			1,361				
Colon ⁽³⁾	Panama	Gas	381	100 %	2018	2028	ENSA, Edemet, Edechi
Bayano	Panama	Hydro	260	49 %	1999	2030	ENSA, Edemet, Edechi, Other
Changuinola	Panama	Hydro	223	90 %	2011	2030	AES Panama
Chiriqui-Esti	Panama	Hydro	120	49 %	2003	2030	ENSA, Edemet, Edechi, Other
Penonome I	Panama	Wind	55	49 %	2020	2023-2030	Altenergy, ENSA, Edemet, Edechi
Chiriqui-Los Valles	Panama	Hydro	54	49 %	1999	2030	ENSA, Edemet, Edechi, Other
Chiriqui-La Estrella	Panama	Hydro	48	49 %	1999	2030	ENSA, Edemet, Edechi, Other
Pesé Solar	Panama	Solar	10	49 %	2021	2030	ENSA, Edemet, Edechi, Other
Mayorca Solar	Panama	Solar	10	49 %	2021	2030	ENSA, Edemet, Edechi, Other
Cedro	Panama	Solar	10	49 %	2021	2030	ENSA, Edemet, Edechi, Other
Caoba	Panama	Solar	10	49 %	2021	2030	ENSA, Edemet, Edechi, Other
5B Costa Norte	Panama	Solar	1	100 %	2021	2051	Costa Norte LNG Terminal
Panama Subtotal			1,182				
			3,390				

⁽¹⁾ Plant also includes an adjacent regasification facility, as well as 70 TBTU LNG storage tank, or an operating capacity of 160,000 m³.

⁽²⁾ Unconsolidated entity, accounted for as an equity affiliate.

⁽³⁾ Plant also includes an adjacent regasification facility, as well as an 80 TBTU LNG storage tank, or an operating capacity of 180,000 m³.

Under construction — The following table lists our plants under construction in the MCAC SBU¹:

Business	Location	Fuel	Gross MW	AES Equity Interest	Expected Date of Commercial Operations
Gatun	Panama	Gas	670	49 %	
Panama Subtotal			670		
			670		

⁽¹⁾ Through and equity affiliate, a second LNG storage tank with 50 TBTU of capacity is under construction in the Dominican Republic and expected to come online in 1H 2023.

The following map illustrates the location of our MCAC facilities:

MCAC Businesses



Dominican Republic

Business Description — AES Dominicana consists of five operating subsidiaries: Andres, Los Mina, Bayasol, Santanasol and Agua Clara. With a total of 847 MW of installed capacity, AES provides 16% of the country's capacity and supplies approximately 22% of the country's energy demand via these generation facilities. 668 MW was predominantly contracted until 2022 with government-owned distribution companies and large customers, and have been contracted back with the distribution companies in January 2023.

AES has a strategic partnership with the Estrella and Linda Groups ("Estrella-Linda"), a consortium of two leading Dominican industrial groups that manage a diversified business portfolio.

Andres, Los Mina, Bayasol, Santanasol and Agua Clara are owned 85% by AES. Andres owns and operates a combined cycle natural gas turbine and an energy storage facility with combined generation capacity of 329 MW, as well as the only LNG import terminal in the country, with 160,000 cubic meters of storage capacity. Los Mina owns and operates a combined cycle facility with two natural gas turbines and an energy storage facility with combined generation capacity of 368 MW. Bayasol owns and operates a 50 MW solar farm. Santanasol also operates a 50 MW solar farm. Agua Clara operates a 50 MW wind farm.

AES Dominicana has a long-term LNG purchase contract through 1H 2023 for 33.6 trillion btu/year with a price linked to NYMEX Henry Hub. AES Dominicana has entered in a new long-term LNG purchase contract through 1H 2025 to cover the expected dispatch for Andres and Los Mina. Andres has a long-term contract to sell regasified LNG to industrial users and third party power plants within the Dominican Republic, thereby capturing demand from

industrial and commercial customers and for other power generation companies that had switched their operations to natural gas.

Key Financial Drivers — Financial results are driven by many factors, including, but not limited to:

- changes in spot prices due to fluctuations in commodity prices (since fuel is a pass-through cost under the PPAs, any variation in oil prices will impact spot sales for Andres and Los Mina);
- expiring PPAs, lower contracting levels and the extent of capacity awarded; and
- growth in domestic natural gas demand, supported by new infrastructure such as the Eastern Pipeline and second LNG tank.

Regulatory Framework and Market Structure — The Dominican Republic energy market is a decentralized industry consisting of generation, transmission, and distribution businesses. Generation companies can earn revenue through short- and long-term PPAs, ancillary services, and a competitive wholesale generation market. All generation, transmission, and distribution companies are subject to and regulated by the General Electricity Law.

Two main agencies are responsible for monitoring compliance with the General Electricity Law:

- The National Energy Commission drafts and coordinates the legal framework and regulatory legislation. They propose and adopt policies and procedures to implement best practices, support the proper functioning and development of the energy sector, and promote investment.
- The Superintendence of Electricity's main responsibilities include monitoring compliance with legal provisions, rules, and technical procedures governing generation, transmission, distribution, and commercialization of electricity. They monitor behavior in the electricity market in order to prevent monopolistic practices.

In addition to the two agencies responsible for monitoring compliance with the General Electricity Law, the Ministry of Industry and Commerce supervises commercial and industrial activities in the Dominican Republic as well as the fuels and natural gas commercialization to end users.

The Dominican Republic has one main interconnected system with 5,110 MW of installed capacity, composed of thermal (72%), hydroelectric (12%), wind (8%), and solar (8%).

Development Strategy — AES will continue to develop the commercialization of natural gas and incorporate partners directly in gas infrastructure projects. AES partnered with Energas in a joint venture which has been operating the 50 km Eastern Pipeline since February 2020. The joint venture is also developing an expanded LNG facility of 120,000 cubic meters, including additional storage, regasification, and truck loading capacity, for which the COD is expected in 2023. This will allow AES to reach new customers who have converted, or are in the process of converting, to natural gas as a fuel source, and better operational flexibility.

Panama

Business Description — AES owns and operates five hydroelectric plants totaling 705 MW of generation capacity, a natural gas-fired power plant with 381 MW of generation capacity, a wind farm of 55 MW and four solar plants of 10 MW each, which collectively represent 30% of the total installed capacity in Panama. Furthermore, AES operates an LNG regasification facility, a 180,000 cubic meter storage tank, and a truck loading facility.

The majority of our hydroelectric plants in Panama are based on run-of-the-river technology, with the exception of 223 MW Changuinola plant with regulation reservoirs and the 260 MW Bayano plant. Hydrological conditions have an important influence on profitability. Variations in hydrology can result in an excess or a shortfall in energy production relative to our contractual obligations. Hydro generation is generally in a shortfall position during the dry season from January through May, which is offset by thermal and wind generation since its behavior is opposite and complementary to hydro generation.

Our hydro and thermal assets are mainly contracted through medium to long-term PPAs with distribution companies. A small volume of our hydro plants are contracted with unregulated users. Our hydro assets in Panama have PPAs with distribution companies expiring up to December 2030 for a total contracted capacity of 377 MW. Our thermal asset in Panama has PPAs with distribution companies for a total contracted capacity of 350 MW expiring in August 2028, which matches the term of the LNG supply agreement of such thermal assets. The LNG supply contract has enough flexibility to divert volumes to the Dominican Republic, which increases the connectivity of our two onshore terminals and allows to optimize the LNG position of the portfolio. Colon LNG Marketing continues developing the LNG market in Latin America, with clients already established in Panama and Colombia.

Additional efforts deployed in Costa Rica, other Central America regions, and Caribbean islands, mainly focusing on small scale LNG logistics.

Key Financial Drivers — Financial results are driven by many factors, including, but not limited to:

- changes in hydrology, which impacts commodity prices and exposes the business to variability in the cost of replacement power;
- fluctuations in commodity prices, mainly oil and natural gas, which affect the cost of thermal generation and spot prices;
- constraints imposed by the capacity of transmission lines connecting the west side of the country with the load, keeping surplus power trapped during the rainy season; and
- country demand as GDP growth is expected to remain strong over the short and medium term.

Regulatory Framework and Market Structure — The Panamanian power sector is composed of three distinct operating business units: generation, distribution, and transmission. Generators can enter into short-term and long-term PPAs with distributors or unregulated consumers. In addition, generators can enter into backup supply contracts with each other. Outside of PPAs, generators may buy and sell energy in the short-term market. Generators can only contract up to their firm capacity.

Three main agencies are responsible for monitoring compliance with the General Electricity Law:

- The National Secretary of Energy in Panama ("SNE") has the responsibilities of planning, supervising, and controlling policies of the energy sector within Panama. The SNE proposes laws and regulations to the executive agencies that regulate the procurement of energy and hydrocarbons for the country.
- The National Authority of Public Services ("ASEP") is an autonomous agency of the government. ASEP is responsible for the regulations, control and oversight of public services in Panama, including electricity, the transmission and distribution of natural gas utilities, and the companies that provide such services.
- The National Dispatch Center ("CND") is in charge of the operation of the system and the management of the electricity market. They are responsible for implementing the economic dispatch of electricity in the wholesale market. The National Dispatch Center's objectives are to minimize the total cost of generation and maintain the reliability and security of the electric power system. Short-term power prices are determined on an hourly basis by the last dispatched generating unit. Physical generation of energy is determined as a result of the optimization of the economic dispatch regardless of contractual arrangements.

Panama's current total installed capacity is 3,926 MW, composed of hydroelectric (45%), thermal (37%), wind (7%), and solar (11%) generation.

Development Strategy — Given our LNG facility's excess capacity in Panama, the company is developing natural gas supply solutions for third parties such as power generators and industrial and commercial customers. This strategy will support a growing demand for natural gas in the region and will contribute to AES' mission by reducing CO₂ emissions as a result of using LNG.

In addition to investing in LNG infrastructure, AES is investing in renewable projects within the region. This will increase complementary non-hydro renewable assets in the system and contribute to the reduction of hydrological risk in Panama.

Mexico

Business Description — AES has 1,361 MW of installed capacity in Mexico. The TEG and TEP pet coke-fired plants, located in Tamuin, San Luis Potosi, supply power to their offtakers under long-term PPAs expiring in 2027 with a 90% availability guarantee. TEG and TEP secure their fuel under a long-term contract. TEG and TEP are in the migration process from the Legacy market to the New Electric Industry law.

Merida is a CCGT located on Mexico's Yucatan Peninsula. Merida sells power to the CFE under a capacity and energy based long-term PPA through 2025. Additionally, the plant purchases natural gas and diesel fuel under a long-term contract with one of the CFE's subsidiaries, the cost of which is then passed through to the CFE under the terms of the PPA.

Mesa La Paz is a 306 MW wind project developed under a joint venture with Grupo Bal, located in Llera, Tamaulipas. Mesa La Paz sells 82% of its power under long-term PPAs expiring up to 2045.

Key Financial Drivers — Financial results are driven by many factors, including, but not limited to:

- contracting levels, providing additional benefits from improved operational performance, including performance incentives and/or excess energy sales;
- changes in the methodology to calculate spot energy prices or Locational Marginal Prices, which impacts the excess energy sales to the CFE (see *Regulatory Framework and Market Structure* below) in (i) TEG and TEP under self-supply scheme, and (ii) Mesa La Paz under the New Market Rules; and
- improved operational performance and plant availability.

Regulatory Framework and Market Structure — Mexico's main electrical system is called the National Interconnected System ("SIN"), which geographically covers an area from Puerto Peñasco, Sonora to Cozumel, Quintana Roo. Mexico also has three isolated electrical systems: (1) the Baja California Interconnected System, which is interconnected with the western interconnection; (2) the Baja California Sur Interconnected System; and (3) the Mulegé Interconnected System, a very small electrical system. All three are isolated from the SIN and from each other. The Mexican power industry comprises the activities of generation, transmission, distribution, and commercialization segments, considering transmission and distribution to be exclusive state services.

In addition to the Ministry of Energy, three main agencies are responsible for regulating the market agents and their activities, monitoring compliance with the laws and regulations, and the surveillance of operational compliance and management of the wholesale electricity market:

- The Energy Regulatory Commission is responsible for the establishment of directives, orders, methodologies, and standards to regulate the electric and fuel markets, as well as granting permits.
- The National Center for Energy Control, as an ISO, is responsible for managing the wholesale electricity market, transmission and distribution infrastructure, planning network developments, guaranteeing open access to network infrastructure, executing competitive mechanisms to cover regulated demand, and setting transmission charges.
- The Electricity Federal Commission ("CFE") owns the transmission and distribution grids and is also the country's basic supplier. CFE is the offtaker for IPP generators, and together with its own power units has more than 50% of the current generation market share.

Mexico has an installed capacity totaling 86 GW with a generation mix composed of thermal (64%), hydroelectric (15%), wind (8%), solar (7%), and other fuel sources (6%).

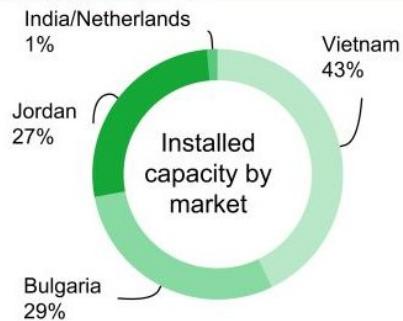
Development Strategy — AES has partnered with Grupo Bal in a joint venture to co-invest in power and related infrastructure projects in Mexico, focusing on renewable generation.



GENERATION FACILITIES IN BULGARIA, INDIA,
JORDAN, THE NETHERLANDS, AND VIETNAM



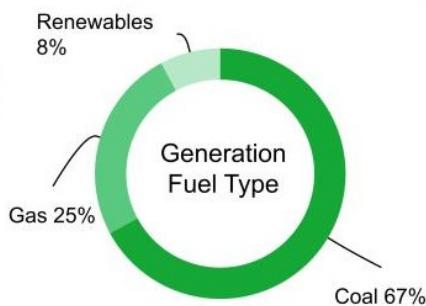
Business Overview



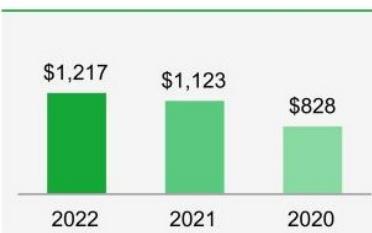
8 Generation Facilities

2,878 Gross MW

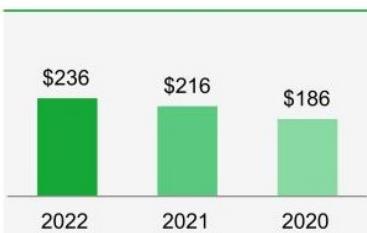
Key Generation Businesses: **Maritza** and
Mong Duong



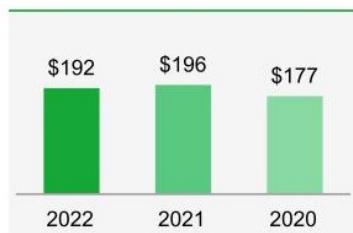
Revenue (In millions)



Operating Margin (in millions)



Adjusted PTC⁽¹⁾ (in millions)



Strategic outlook

- Complete sale of power plants in Jordan and Mong Duong in Vietnam

⁽¹⁾ Non-GAAP measure. See Item 7.—*Management's Discussion and Analysis of Financial Condition and Results of Operations—SBU Performance Analysis—Non-GAAP Measures* for reconciliation and definition.

Eurasia SBU

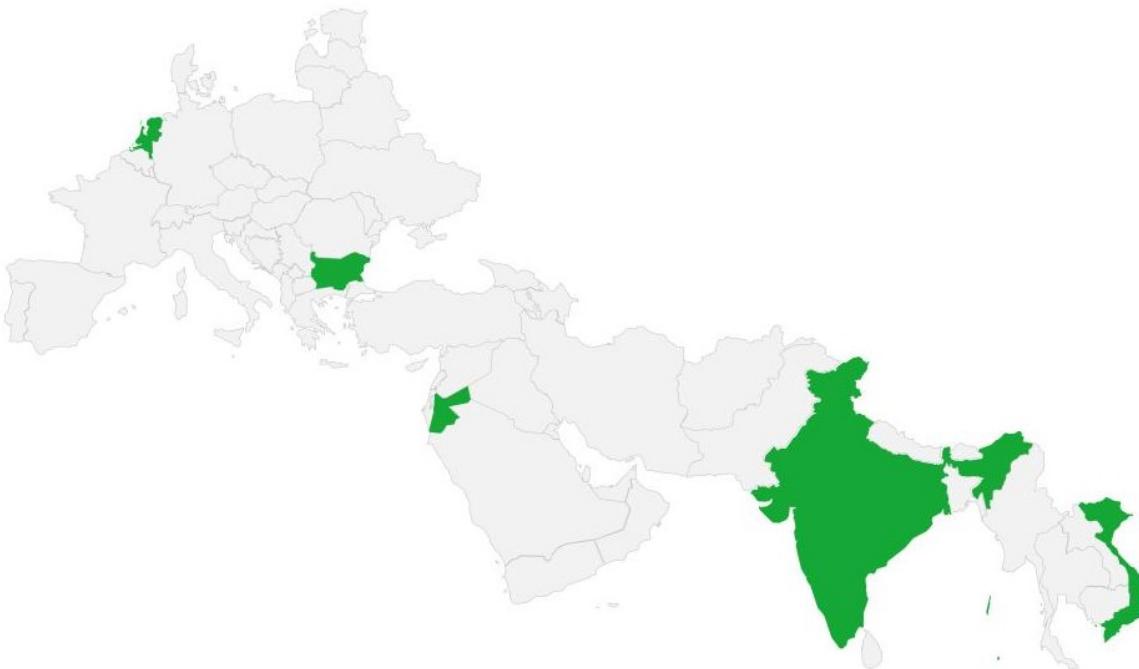
Generation — Our Eurasia SBU has generation facilities in five countries with total operating installed capacity of 2,878 MW. The following table lists our Eurasia SBU generation facilities:

Business	Location	Fuel	Gross MW	AES Equity Interest	Year Acquired or Began Operation	Contract Expiration Date	Customer(s)
Maritza	Bulgaria	Coal	690	100 %	2011	2026	NEK
St. Nikola	Bulgaria	Wind	156	89 %	2010	2025	Electricity Security Fund
Bulgaria Subtotal			846				
Delhi ES	India	Energy Storage	10	60 %	2019		
India Subtotal			10				
Amman East ⁽¹⁾	Jordan	Gas	472	37 %	2009	2033	National Electric Power Company
IPP4 ⁽¹⁾	Jordan	Gas	250	36 %	2014	2039	National Electric Power Company
AM Solar	Jordan	Solar	48	36 %	2019	2039	National Electric Power Company
Jordan Subtotal			770				
Netherlands ES	Netherlands	Energy Storage	10	100 %	2015		
Netherlands Subtotal			10				
Mong Duong 2	Vietnam	Coal	1,242	51 %	2015	2040	EVN
Vietnam Subtotal			1,242				
			2,878				

⁽¹⁾ Entered into an agreement to sell 26% interest in these businesses in November 2020.

The following map illustrates the location of our Eurasia facilities:

Eurasia Businesses



Vietnam

Business Description — Mong Duong 2 is a 1,242 MW gross coal-fired plant located in the Quang Ninh Province of Vietnam and was constructed under a BOT service concession agreement expiring in 2040. This is the first coal-fired BOT plant using pulverized coal-fired boiler technology in Vietnam. The BOT company has a PPA with EVN and a Coal Supply Agreement with Vinacomin, both expiring in 2040.

On December 31, 2020, AES executed an agreement to sell its entire 51% interest in the Mong Duong 2 plant; however, the transaction was not closed by December 31, 2022 and the agreement was terminated by the parties.

Key Financial Drivers — Financial results are driven by many factors, including, but not limited to, the operating performance and availability of the facility.

Regulatory Framework and Market Structure — The Ministry of Industry and Trade in Vietnam is primarily responsible for formulating a program to restructure the power industry, developing the electricity market, and promulgating electricity market regulations. The fuel supply is owned by the government through Vinacomin, a state-owned entity, and PetroVietnam.

The Vietnam power market is divided into three regions (North, Central, and South), with total installed capacity of approximately 79 GW. The fuel mix in Vietnam is composed primarily of coal (33%), hydropower (28%) and renewables, including solar, wind, and biomass (27%). EVN, the national utility, owns 39% of installed generation capacity.

The government is in the process of realigning EVN-owned companies into three different independent operations in order to create a competitive power market. The first stage of this realignment was the implementation of the Competitive Electricity Market, which has been in operation since 2012. The second stage was the introduction of the Electricity Wholesale Market, which has been in operation since the beginning of 2019. The third and final stage impacts the Electricity Retail Market. The reforms are currently in development and pilot implementation is expected around 2024 timeframe. BOT power plants will not directly participate in the power market; alternatively, a single buyer will bid the tariff on the power pool on their behalf.

Development Strategy — In Vietnam, we continue to advance the development of our Son My LNG terminal project, which has a design capacity of up to 9.6 million metric tonnes per annum, and the Son My 2 CCGT project, which has a capacity of about 2,250 MW. In October 2019, we received formal approval as a government-mandated investor in the Son My LNG terminal project in partnership with PetroVietnam Gas and in September 2021, we signed the joint venture agreement with PetroVietnam Gas. In April 2022, we, together with our partner PetroVietnam Gas, established Son My LNG Terminal LLC. In September 2019, we received formal approval as the government-mandated investor with 100% equity ownership in the Son My 2 CCGT project and executed a statutory memorandum of understanding with Vietnam's Ministry of Industry and Trade in November 2019 to continue developing the Son My 2 CCGT project under Vietnam's Build-Operate-Transfer legal framework. The Son My 2 CCGT project will utilize the Son My LNG terminal project and be its anchor customer.

Bulgaria

Business Description — Our AES Maritza plant is a 690 MW lignite fuel thermal power plant. AES Maritza's entire power output is contracted with NEK, the state-owned public electricity supplier, independent energy producer, and trading company. Maritza is contracted under a 15-year PPA that expires in May 2026. AES Maritza is collecting receivables from NEK in a timely manner. However, NEK's liquidity position is subject to political conditions and regulatory changes in Bulgaria.

The DG Comp is reviewing NEK's PPA with AES Maritza pursuant to the European Union's state aid rules. AES Maritza believes that its PPA is legal and in compliance with all applicable laws. For additional details see *Key Trends and Uncertainties* in Item 7.—*Management's Discussion and Analysis of Financial Condition and Results of Operations* in this Form 10-K.

AES also owns an 89% economic interest in the St. Nikola wind farm ("Kavarna") with 156 MW of installed capacity. The power output of St. Nikola is sold to customers operating on the liberalized electricity market and the plant may receive additional revenue per the terms of an October 2018 Contract for Premium with the state-owned Electricity System Security Fund.

Key Financial Drivers — Financial results are driven by many factors, including, but not limited to:

- regulatory changes in the Bulgarian power market;
- results of the DG Comp review;
- availability and load factor of the operating units;
- the level of wind resources for St. Nikola;
- spot market price volatility beyond the level of compensation through the Contract for Premium for St. Nikola; and
- NEK's ability to meet the payment terms of the PPA contract with Maritza.

Regulatory Framework and Market Structure — The electricity sector in Bulgaria allows both regulated and competitive segments. In its capacity as the public provider of electricity, NEK acts as a single buyer and seller for all regulated transactions on the market. Electricity outside the regulated market trades on one of the platforms of the Independent Bulgarian Electricity Exchange day-ahead market, intra-day market, or bilateral contracts market.

Bulgaria's power sector is supported by a diverse generation mix, universal access to the grid, and numerous cross-border connections with neighboring countries. In addition, it plays an important role in the energy balance in the southeast European region.

In December 2022, Bulgaria implemented Regulation 2022/1854, approved by the European Council in October 2022 as an emergency intervention aiming at limiting energy prices in Europe. The main measure of interest to AES in Bulgaria is the limitation of revenues for "infra-marginal" producers, a category that includes renewables and other technologies which are providing electricity to the grid at a cost below the price level set by the more expensive "marginal" producers. While the adoption of this regulation has no impact on Maritza power plant, it essentially captures 90% of the incremental margin of Kavarna wind farm since it is now subject to a mandatory cap of €180/MWh on revenues.

Bulgaria has 13 GW of installed capacity enabling the country to meet and exceed domestic demand and export energy. Installed capacity is primarily thermal (45%), hydro (25%), and nuclear (16%).

Environmental Regulation — In July 2020, the EU approved the Next Generation EU ("NGEU") recovery instrument, which aims at mitigating the economic and social impact of the COVID-19 pandemic and making

European economies and societies more sustainable. The main funding component of NGEU is the EU's Recovery and Resilience Facility ("RRF"). In May 2022, the European Commission approved Bulgaria's Recovery and Resilience Plan ("RRP") that describes the reforms and investments which Bulgaria wishes to make with the support of the RRF. In its RRP, Bulgaria commits to designing a coal phase-out plan aiming at retiring coal-fired power plants by 2038.

The plan includes a 40% reduction in carbon emissions by the end of 2025 and a ceiling on carbon emissions from 2026 onwards. The mechanism to achieve the target is undefined and the potential impact to Maritza's revenues is expected to be limited.

Jordan

Business Description — In Jordan, AES has a 37% controlling interest in Amman East, a 472 MW oil/gas-fired plant fully contracted with the national utility under a 25-year PPA expiring in 2033, a 36% controlling interest in the IPP4 plant, a 250 MW oil/gas-fired peaker plant fully contracted with the national utility until 2039, and a 36% controlling interest in a 52 MW solar plant fully contracted with the national utility under a 20-year PPA expiring in 2039. We consolidate the results in our operations as we have a controlling interest in these businesses.

On November 10, 2020, AES executed a sale and purchase agreement to sell approximately 26% effective ownership interest in both the Amman East and IPP4 plants. The sale is expected to close in 2023 subject to customary approvals, including lender consents.

Regulatory Framework and Market Structure — The Jordan electricity transmission market is a single-buyer model with the state-owned National Electric Power Company ("NEPCO") responsible for transmission. NEPCO generally enters into long-term PPAs with IPPs to fulfill energy procurement requests from distribution utilities.

India

AES owns and operates a 10 MW BESS unit in Delhi city, located inside a substation of Tata Power Delhi Distribution Limited ("TPDDL"). The BESS is integrated with the TPDDL distribution system and provides frequency regulation and peak shifting services.

Other Investments

EQUITY AFFILIATES AND INVESTMENTS
REPORTED AS PART OF CORPORATE AND OTHER



Investing in innovative technologies

Key investments:



Fluence Energy Storage To-Date



Key events in 2022

- Fluence delivered or was awarded 2.8 GW energy storage in 2022

Strategic outlook

- Fluence backlog of 4.3 GW
- Growth in Uplight customer base
- Utilize 5B's technology in select projects across our development pipeline
- Continue to leverage digital capabilities to drive value

Other Investments

Fluence and Uplight are unconsolidated entities and their results are reported as *Net equity in earnings of affiliates* on our Consolidated Statements of Operations. 5B is accounted for using the measurement alternative and AES will record income or loss only when it receives dividends from 5B or when there is a change in the observable price or an impairment of the investment.

Fluence

Business Description — Fluence, created in 2018 as a joint venture by AES and Siemens, is a global energy storage technology and services company aligned with the AES strategy to drive decarbonization of the electric sector. Fluence is a leading global provider of energy storage products and services and artificial intelligence (AI)-enabled digital applications for renewables and storage.

On November 1, 2021, Fluence Energy, Inc. completed its IPO, generating proceeds of approximately \$936 million, after expenses, and is listed on NASDAQ under the symbol "FLNC". AES owns Class B-1 common stock, entitling AES to five votes per share held, and continues to hold its economic interest in the operating subsidiary of Fluence Energy, Inc. AES' economic interest in Fluence is currently 33.5%. The Company continues to account for Fluence as an equity method investment.

Key Financial Drivers — Fluence's financial results are driven by the growth in its product revenue, an efficient cost structure that is expected to benefit from increased scale, and profit margins on customer contracts. Fluence's pipeline of potential projects is global.

Regulatory Framework and Market Structure — The grid-connected energy storage sector is expanding rapidly. By incorporating energy storage across the electric power network, utilities and communities around the world will optimize their infrastructure investments, increase network flexibility and resiliency, and accelerate cost-effective integration of renewable electricity generation. According to the BloombergNEF Global Energy Storage Outlook published in October 2022, global annual energy storage capacity installations, excluding residential, grew from approximately 600 MW a year in 2015 to 13 GW a year in 2022 and are expected to grow to 62 GW a year by 2030. Additional growth opportunities exist in the provision of operational and maintenance services associated with energy storage products, as well as the provision of digital applications and solutions to improve performance and economic output. Fluence is positioned to be a leading participant in this growth, with 1.9 GW of energy storage assets deployed and 4.3 GW of contracted backlog, with a gross global pipeline of 9.7 GW as of December 31, 2022.

Uplight

Business Description — The Company holds an equity interest in Uplight as part of its digitization and growth strategy. Uplight offers a comprehensive digital platform for utility customer engagement. Uplight provides software and services to approximately 80 of the leading electric and gas utilities, principally in the U.S., with the mission of motivating and enabling energy users and providers to transition to a clean energy ecosystem. Uplight's solutions form a unified, end-to-end customer energy experience system that delivers innovative energy efficiency, demand response, and clean energy solutions quickly. Utility and energy company leaders rely on Uplight and its customer-focused digital energy experiences to improve customer satisfaction, reduce service costs, increase revenue, and reduce carbon emissions.

The Company holds a 29.4% ownership interest in Uplight, which continues to be accounted for as an equity method investment and is reported as part of Corporate and Other.

Key Financial Drivers — Uplight's financial results are driven by the rate of growth of new customers and the extension of additional services to existing customers. Revenue growth primarily drives its financial results, given the relative significance of fixed operating costs.

Development Strategy — AES' collaboration with Uplight is designed to create value for Uplight, AES, and their respective customers. AES Indiana and AES Ohio have implemented Uplight's consumer engagement solutions in support of energy efficiency and demand response programs, as well as piloted new solutions with Uplight.

5B

Business Description — The Company made a strategic investment in 5B, a solar technology innovator with the mission to accelerate the transformation of the world to a clean energy future. 5B's technology design enables solar projects to be installed up to three times faster, while allowing for up to two times more energy within the same footprint and can sustain higher wind speeds than traditional solar plants.

Key Financial Drivers — 5B is accounted for under the measurement alternative and AES will record income or loss only when it receives dividends from 5B or when there is a change in the observable price or an impairment of the investment. 5B is at the beginning of its growth and is expanding its ecosystem for global reach.

Development Strategy — In addition to a large global market for third party projects, we believe there is an addressable market of nearly 5 GW across our development pipeline. As of December 31, 2022, 5B has achieved sales orders of 175 MW. AES expects to utilize this technology in conjunction with ongoing automation and digital initiatives to speed up delivery time and lower costs. 5B technology has been deployed at multiple locations in AES including a 2 MW project in Panama and an 11 MW project in Chile, with future deployments expected across markets in the AES portfolio.

Environmental and Land-Use Regulations

The Company faces certain risks and uncertainties related to numerous environmental laws and regulations, including existing and potential GHG legislation or regulations, and actual or potential laws and regulations pertaining to water discharges, waste management (including disposal of coal combustion residuals), and certain air emissions, such as SO₂, NO_x, particulate matter, mercury, and other hazardous air pollutants. Such risks and uncertainties could result in increased capital expenditures or other compliance costs which could have a material adverse effect on certain of our U.S. or international subsidiaries, and our consolidated results of operations. For further information about these risks, see Item 1A.—*Risk Factors—Our operations are subject to significant*

government regulation and could be adversely affected by changes in the law or regulatory schemes; Several of our businesses are subject to potentially significant remediation expenses, enforcement initiatives, private party lawsuits and reputational risk associated with CCR; Our businesses are subject to stringent environmental laws, rules and regulations; and Concerns about GHG emissions and the potential risks associated with climate change have led to increased regulation and other actions that could impact our businesses in this Form 10-K. For a discussion of the laws and regulations of individual countries within each SBU where our subsidiaries operate, see discussion within Item 1.—Business of this Form 10-K under the applicable SBUs.

Many of the countries in which the Company does business have laws and regulations relating to the siting, construction, permitting, ownership, operation, modification, repair and decommissioning of, and power sales from electric power generation or distribution assets. In addition, international projects funded by the International Finance Corporation, the private sector lending arm of the World Bank, or many other international lenders are subject to World Bank environmental standards or similar standards, which tend to be more stringent than local country standards. The Company often has used advanced generation technologies in order to minimize environmental impacts, such as combined fluidized bed boilers and advanced gas turbines, and environmental control devices such as flue gas desulphurization for SO₂ emissions and selective catalytic reduction for NO_x emissions.

Environmental laws and regulations affecting electric power generation and distribution facilities are complex, change frequently, and have become more stringent over time. The Company has incurred and will continue to incur capital costs and other expenditures to comply with these environmental laws and regulations. The Company may be required to make significant capital or other expenditures to comply with these regulations. There can be no assurance that the businesses operated by the subsidiaries of the Company will be able to recover any of these compliance costs from their counterparties or customers such that the Company's consolidated results of operations, financial condition, and cash flows would not be materially affected.

Various licenses, permits, and approvals are required for our operations. Failure to comply with permits or approvals, or with environmental laws, can result in fines, penalties, capital expenditures, interruptions, or changes to our operations. Certain subsidiaries of the Company are subject to litigation or regulatory action relating to environmental permits or approvals. See Item 3.—*Legal Proceedings* in this Form 10-K for more detail with respect to environmental litigation and regulatory action.

United States Environmental and Land-Use Legislation and Regulations

In the United States, the CAA and various state laws and regulations regulate emissions of SO₂, NO_x, particulate matter, GHGs, mercury, and other hazardous air pollutants. Certain applicable rules are discussed in further detail below.

CSAPR — CSAPR addresses the "good neighbor" provision of the CAA, which prohibits sources within each state from emitting any air pollutant in an amount which will contribute significantly to any other state's nonattainment of, or interference with maintenance of, any NAAQS. The CSAPR required significant reductions in SO₂ and NO_x emissions from power plants in many states in which subsidiaries of the Company operate. The Company is currently required to comply with the CSAPR in Indiana and Maryland. The CSAPR is implemented in part through a market-based program under which compliance may be achievable through the acquisition and use of emissions allowances created by the EPA. The Company complies with CSAPR through operation of existing controls and purchases of allowances on the open market, as needed.

In October 2016, the EPA published a final rule to update the CSAPR to address the 2008 ozone NAAQS ("CSAPR Update Rule"). The CSAPR Update Rule found that NO_x ozone season emissions in 22 states (including Indiana and Maryland, and Ohio) affect the ability of downwind states to attain and maintain the 2008 ozone NAAQS, and, accordingly, the EPA issued federal implementation plans that both updated existing CSAPR NO_x ozone season emission budgets for electric generating units within these states and implemented these budgets through modifications to the CSAPR NO_x ozone season allowance trading program. Implementation began in the 2017 ozone season and affected facilities began to receive fewer ozone season NO_x allowances in 2017. Following legal challenges related to the CSAPR Update Rule, on April 30, 2021, EPA issued the Revised CSAPR Update Rule. The Revised CSAPR Update Rule required affected EGUs within certain states (including Indiana and Maryland) to participate in a new trading program, the CSAPR NO_x Ozone Season Group 3 trading program. These affected EGUs received fewer ozone season NO_x Ozone Season allowances beginning in 2021, which may result in the need for AES affected facilities to purchase additional allowances.

On April 6, 2022, the EPA published a proposed Federal Implementation Plan ("FIP") to address air quality impacts with respect to the 2015 Ozone NAAQS. The rule would establish a revised CSAPR NO_x Ozone Season Group 3 trading program for 25 states, including Indiana and Maryland. In addition to other requirements, if finalized, EGUs in these states would begin receiving fewer allowances as soon as 2023, which may result in the need to purchase additional allowances.

While the Company's additional CSAPR compliance costs to date have been immaterial, the future availability of and cost to purchase allowances to meet the emission reduction requirements is uncertain at this time, but it could be material if certain facilities will need to purchase additional allowances based on reduced allocations.

New Source Review ("NSR") — The NSR requirements under the CAA impose certain requirements on major emission sources, such as electric generating stations, if changes are made to the sources that result in a significant increase in air emissions. Certain projects, including power plant modifications, are excluded from these NSR requirements if they meet the routine maintenance, repair, and replacement ("RMRR") exclusion of the CAA. There is ongoing uncertainty and significant litigation regarding which projects fall within the RMRR exclusion. Over the past several years, the EPA has filed suits against coal-fired power plant owners and issued NOVs to a number of power plant owners alleging NSR violations. See Item 3.—*Legal Proceedings* in this Form 10-K for more detail with respect to environmental litigation and regulatory action, including an NOV issued by the EPA against AES Indiana concerning NSR and prevention of significant deterioration issues under the CAA. If NSR requirements are imposed on any of the power plants owned by the Company's subsidiaries, the results could have a material adverse impact on the Company's business, financial condition, and results of operations.

Regional Haze Rule — The EPA's "Regional Haze Rule" established timelines for states to improve visibility in national parks and wilderness areas throughout the United States by establishing reasonable progress goals toward meeting a national goal of natural visibility conditions in Class I areas by the year 2064 through a series of state implementation plans (SIPs), which may result in additional emissions control requirements for electric generating units. SIPs for the first planning period (through 2018) did not result in material impact to AES facilities. For all future SIP planning periods, states must evaluate whether additional emissions reduction measures may be needed to continue making reasonable progress toward natural visibility conditions. The deadline for submittal of the SIP covering the second planning period was July 31, 2021. To date, none of the states in which we operate have submitted plans identifying potential impacts to Company facilities. However, we cannot predict the possible outcome or potential impacts of this matter at this time.

NAAQS — Under the CAA, the EPA sets NAAQS for six principal pollutants considered harmful to public health and the environment, including ozone, particulate matter, NO_x, and SO₂, which result from coal combustion. Areas meeting the NAAQS are designated "attainment areas" while those that do not meet the NAAQS are considered "nonattainment areas." Each state must develop a plan to bring nonattainment areas into compliance with the NAAQS, which may include imposing operating limits on individual plants. The EPA is required to review NAAQS at five-year intervals.

Based on the current and potential future ambient air standards, certain of the states in which the Company's subsidiaries operate have determined or will be required to determine whether certain areas within such states meet the NAAQS. Some of these states may be required to modify their SIPs to detail how the states will attain or maintain their attainment status. As part of this process, it is possible that the applicable state environmental regulatory agency or the EPA may require reductions of emissions from our generating stations to reach attainment status for ozone, fine particulate matter, NO_x, or SO₂. The compliance costs of the Company's U.S. subsidiaries could be material.

Mercury and Air Toxics Standard — In April 2012, the EPA's rule to establish maximum achievable control technology standards for hazardous air pollutants regulated under the CAA emitted from coal and oil-fired electric utilities, known as "MATS", became effective and AES facilities implemented measures to comply, as applicable.

In June 2015, the U.S. Supreme Court remanded MATS to the D.C. Circuit due to the EPA's failure to consider costs before deciding to regulate power plants under Section 112 of the CAA and subsequently remanded MATS to the EPA without vacatur. On May 22, 2020, the EPA published a final finding that it is not "appropriate and necessary" to regulate hazardous air pollutant emissions from coal- and oil-fired electric generating units (EGUs) (reversing its prior 2016 finding), but that the EPA would not remove the source category from the CAA Section 112(c) list of source categories and would not change the MATS requirements. Several petitioners filed for judicial review of the final finding and the D.C. Circuit, on February 16, 2021, granted the EPA's request that the rule be held in abeyance pending the EPA's review. On February 9, 2022, the EPA published a proposed rule to revoke its

May 2020 finding and reaffirm its 2016 finding that it is appropriate and necessary to regulate these emissions. Further rulemakings and/or proceedings are possible; however, in the meantime, MATS remains in effect. We currently cannot predict the outcome of the regulatory or judicial process, or its impact, if any, on our MATS compliance planning or ultimate costs.

Greenhouse Gas Emissions — In January 2011, the EPA began regulating GHG emissions from certain stationary sources, including a pre-construction permitting program for certain new construction or major modifications, known as the Prevention of Significant Deterioration ("PSD"). If future modifications to our U.S.-based businesses' sources become subject to PSD for other pollutants, it may trigger GHG BACT requirements and the cost of compliance with such requirements may be material.

On October 23, 2015, the EPA's rule establishing NSPS for new electric generating units became effective, establishing CO₂ emissions standards for newly constructed coal-fueled electric generating plants, which reflects the partial capture and storage of CO₂ emissions from the plants. The EPA also promulgated NSPS applicable to modified and reconstructed electric generating units, which will serve as a floor for future BACT determinations for such units. The NSPS could have an impact on the Company's plans to construct and/or modify or reconstruct electric generating units in some locations. On December 20, 2018, the EPA published proposed revisions to the final NSPS for new, modified, and reconstructed coal-fired electric utility steam generating units proposing that the best system of emissions reduction for these units is highly efficient generation that would be equivalent to supercritical steam conditions for larger units and sub-critical steam conditions for smaller units, and not partial carbon capture and sequestration, as was finalized in the 2015 final NSPS. The EPA did not include revisions for natural-gas combined cycle or simple cycle units in the December 20, 2018 proposal. In January 2021, the EPA issued a final rule determining when standards are appropriate for GHG emissions from stationary source categories for new source but did not take final action on the 2018 proposal to revise the 2015 final NSPS. On April 5, 2021, the D.C. Circuit vacated and remanded the final January 2021 final rule. Challenges to the GHG NSPS are being held in abeyance at this time.

On August 31, 2018, the EPA published in the Federal Register proposed Emission Guidelines for Greenhouse Gas Emissions from Existing Electric Utility Generating Units, known as the Affordable Clean Energy (ACE) Rule. On July 8, 2019, the EPA published the final ACE Rule along with associated revisions to implementing regulations. The final ACE Rule established CO₂ emission rules for existing power plants under CAA Section 111(d) and replaced the EPA's 2015 Clean Power Plan Rule (CPP). In accordance with the ACE Rule, the EPA determined that heat rate improvement measures are the best system of emissions reductions for existing coal-fired electric generating units. The final rule required states, including Indiana and Maryland, to develop a State Plan to establish CO₂ emission limits for designated facilities, including AES Indiana Petersburg's and AES Warrior Run's coal-fired electric generating units. States had three years to develop their plans under the rule. However, on January 19, 2021, the D.C. Circuit vacated and remanded to the EPA the ACE Rule, but withheld issuance of the mandate that would effectuate its decision. On February 22, 2021, the D.C. Circuit granted EPA's unopposed motion for a partial stay of the issuance of the mandate on vacating the repeal of the CPP. On March 5, 2021, the D.C. Circuit issued the partial mandate effectuating the vacatur of the ACE Rule. In effect, the CPP did not take effect while the EPA is addressing the remand of the ACE rule by promulgating a new Section 111(d) rule to regulate greenhouse gases from existing electric generating units. On October 29, 2021, the U.S. Supreme Court granted petitions to review the decision by the D.C. Circuit to vacate the ACE Rule. On June 30, 2022, Supreme Court reversed the judgment of the D.C. Circuit Court and remanded for further proceedings consistent with its opinion. The opinion held that the "generation shifting" approach in the CPP exceeded the authority granted to EPA by Congress under Section 111(d) of the CAA. As a result of the June 30, 2022 Supreme Court decision, on October 27, 2022, the D.C. Circuit recalled its March 5, 2021 partial mandate and issued a new partial mandate holding pending challenges to the ACE Rule in abeyance while EPA develops a replacement rule. The impact of the results of further proceedings and potential future greenhouse gas emissions regulations remains uncertain, but it could be material. The impact of the results of such litigation and potential future greenhouse gas emissions regulations remains uncertain, but it could be material.

On January 20, 2021, President Biden signed and submitted an instrument for the U.S. to rejoin the Paris Agreement effective February 19, 2021. In addition, in November 2022, the international community gathered in Egypt at the 27th Conference to the Parties on the UN Framework Convention on Climate Change ("COP27"), during which multiple announcements were made, including the establishment of a loss and damage fund to support vulnerable countries dealing with the effects of climate change and certain pledges in the area of climate finance.

As such, there is some uncertainty with respect to the impact of GHG rules. The GHG BACT requirements will not apply at least until we construct a new major source or make a major modification of an existing major source, and the NSPS will not require us to comply with an emissions standard until we construct a new electric generating unit. We do not have any planned major modifications of an existing source or plans to construct a new major source at this time which are expected to be subject to these regulations. Furthermore, the EPA, states, and other utilities are still evaluating potential impacts of the GHG regulations in our industry. In light of these uncertainties, we cannot predict the impact of the EPA's current and future GHG regulations on our consolidated results of operations, cash flows, and financial condition.

Due to the future uncertainty of these regulations and associated litigation, we cannot at this time determine the impact on our operations or consolidated financial results, but we believe the cost to comply with a new Section 111(d) Rule, should it be implemented in a prior or a substantially similar form, could be material. The GHG NSPS remains in effect at this time, and, absent further action from the EPA that rescinds or substantively revises the NSPS, it could impact any Company plans to construct and/or modify or reconstruct electric generating units in some locations, which may have a material impact on our business, financial condition, or results of operations.

Cooling Water Intake — The Company's facilities are subject to a variety of rules governing water use and discharge. In particular, the Company's U.S. facilities are subject to the CWA Section 316(b) rule issued by the EPA effective in 2014 that seeks to protect fish and other aquatic organisms drawn into cooling water systems at power plants and other facilities. These standards require affected facilities to choose among seven BTA options to reduce fish impingement. In addition, certain facilities must conduct studies to assist permitting authorities to determine whether and what site-specific controls, if any, would be required to reduce entrainment of aquatic organisms. It is possible that this process, which includes permitting and public input, could result in the need to install closed-cycle cooling systems (closed-cycle cooling towers), or other technology. Finally, the standards require that new units added to an existing facility to increase generation capacity are required to reduce both impingement and entrainment. It is not yet possible to predict the total impacts of this final rule at this time, including any challenges to such final rule and the outcome of any such challenges. However, if additional capital expenditures are necessary, they could be material.

AES Southland's current plan is to comply with the SWRCB OTC Policy by shutting down and permanently retiring all existing generating units at AES Alamitos, AES Huntington Beach, and AES Redondo Beach that utilize OTC by the compliance dates included in the OTC Policy. The SWRCB reviews the implementation plan and latest information on OTC generating unit retirement dates and new generation availability to evaluate the impact on electrical system reliability and OTC compliance dates for specific units.

The Company's California subsidiaries have signed 20-year term PPAs with Southern California Edison for the new generating capacity, which have been approved by the California Public Utilities Commission. Construction of new generating capacity began in June 2017 at AES Huntington Beach and July 2017 at AES Alamitos. The new air-cooled combined cycle gas turbine generators and battery energy storage systems were constructed at the AES Alamitos and AES Huntington Beach generating stations. The new air-cooled combined cycle gas turbine generators at the AES Alamitos and AES Huntington Beach generating stations began commercial operation in early 2020 and there is currently no plan to replace the OTC generating units at the AES Redondo Beach generating station following the retirement. Certain OTC units were required to be retired in 2019 to provide interconnection capacity and/or emissions credits prior to startup of the new generating units, and the remaining AES OTC generating units in California will be shutdown and permanently retired by the OTC Policy compliance dates for these units. The SWRCB OTC Policy required the shutdown and permanent retirement of all remaining OTC generating units at AES Alamitos, AES Huntington Beach, and AES Redondo Beach by December 31, 2020. The initial amendment extended the deadline for shutdown and retirement of AES Alamitos and AES Huntington Beach's remaining OTC generating units to December 31, 2023 and extended the deadline for shutdown and retirement of AES Redondo Beach's remaining OTC generating units to December 31, 2021 (the "AES Redondo Beach Extension"). In October 2020, the cities of Redondo Beach and Hermosa Beach filed a state court lawsuit challenging the AES Redondo Beach Extension. AES opposed the action and the court granted an order dismissing the matter. The case remains open subject to the resolution of counter claims between parties other than AES. Plaintiffs have initiated an additional challenge to the permit, and the outcome of that lawsuit is unclear. On March 16, 2021 the SACCWIS released their draft 2021 report to SWRCB. The report summarizes the State of California's current electrical grid reliability needs and recommended a two-year extension to the compliance schedule for AES Redondo Beach to address system-wide grid reliability needs. The SWRCB public hearing regarding the final decision on the amendment of the OTC policy was held on October 19, 2021 and the Board voted in favor of extending the compliance date for AES Redondo Beach to December 31, 2023. The AES Redondo Beach NPDES

permit has been administratively extended. On September 30, 2022, the Statewide Advisory Committee on Cooling Water Intake Structures approved a recommendation to the SWRCB to consider an extension of the OTC compliance dates for AES Huntington Beach, LLC and AES Alamitos, LLC, to December 31, 2026, in support of grid reliability. SWRCB released a draft OTC Policy amendment early in 2023 to be heard by the SWRCB on March 7, 2023. The final decision from SWRCB is expected during the second half of 2023.

Power plants are required to comply with the more stringent of state or federal requirements. At present, the California state requirements are more stringent and have earlier compliance dates than the federal EPA requirements, and are therefore applicable to the Company's California assets.

Challenges to the federal EPA's rule were filed and consolidated in the U.S. Court of Appeals for the Second Circuit, although implementation of the rule was not stayed while the challenges proceeded. On July 23, 2018, the U.S. Court of Appeals for the Second Circuit upheld the rule. The Second Circuit later denied a petition by environmental groups for rehearing. The Company anticipates that compliance with CWA Section 316(b) regulations and associated costs could have a material impact on our consolidated financial condition or results of operations.

Water Discharges — In June 2015, the EPA and the U.S. Army Corps of Engineers ("the agencies") published a rule defining federal jurisdiction over waters of the U.S., known as the "Waters of the U.S." (WOTUS) rule. This rule, which initially became effective in August 2015, could expand or otherwise change the number and types of waters or features subject to CWA permitting. However, after repealing the 2015 WOTUS rule on October 22, 2019, the agencies, on April 21, 2020, issued the final "Navigable Waters Protection" (NWP) rule which again revised the definition of waters of the U.S. On August 30, 2021, the U.S. District Court for the District of Arizona issued an order vacating and remanding the NWP Rule. This vacatur of the NWP Rule applies nationwide. As such, the agencies again interpreted waters of the U.S. consistent with the pre-2015 regulatory regime. On January 18, 2023, the Agencies published a final rule to define the scope of waters regulated under the CWA. The rule restores regulations defining WOTUS that were in place prior to 2015, with updates intended to be consistent with relevant Supreme Court decisions. On January 24, 2022, the U.S. Supreme Court granted certiorari on a wetlands case (*Sackett v. EPA*) on the limited question of: "Whether the Ninth Circuit set forth the proper test for determining whether wetlands are 'waters of the United States' under the Clean Water Act." The Ninth Circuit employed Justice Kennedy's "significant nexus" test from the 2006 *Rapanos v. United States* decision; the plurality opinion in *Rapanos* required a water body to have a "continuous surface connection" with a water of the United States in order to be considered a wetland covered by the CWA. In *Sackett v. EPA*, the Court may finally provide clarity on which test from the 2006 *Rapanos* decision controls. It is too early to determine whether the newly promulgated NWP rule or any outcome of litigation may have a material impact on our business, financial condition, or results of operations.

In November 2015, the EPA published its final ELG rule to reduce toxic pollutants discharged into waters of the U.S. by steam-electric power plants through technology applications. These effluent limitations for existing and new sources include dry handling of fly ash, closed-loop or dry handling of bottom ash, and more stringent effluent limitations for flue gas desulfurization wastewater. AES Indiana Petersburg has installed a dry bottom ash handling system in response to the CCR rule and wastewater treatment systems in response to the NPDES permits in advance of the ELG compliance date. Other U.S. businesses already include dry handling of fly ash and bottom ash and do not generate flue gas desulfurization wastewater. However, it is too early to determine whether any outcome of litigation or current or future revisions to the ELG rule might have a material impact on our business, financial condition, and results of operations.

On April 23, 2020, the U.S. Supreme Court issued a decision in the *Hawaii Wildlife Fund v. County of Maui* case related to whether a CWA permit is required when pollutants originate from a point source but are conveyed to navigable waters through a nonpoint source, such as groundwater. The Court held that discharges to groundwater require a permit if the addition of the pollutants through groundwater is the functional equivalent of a direct discharge from the point source into navigable waters. A number of legal cases relevant to determination of "functional equivalent" are ongoing in various jurisdictions. It is too early to determine whether the Supreme Court decision or the result of litigation to "functional equivalent" may have a material impact on our business, financial condition, or results of operations.

Selenium Rule — In June 2016, the EPA published the final national chronic aquatic life criterion for the pollutant selenium in fresh water. NPDES permits may be updated to include selenium water quality-based effluent limits based on a site-specific evaluation process, which includes determining if there is a reasonable potential to exceed the revised final selenium water quality standards for the specific receiving water body utilizing actual and/or project discharge information for the generating facilities. As a result, it is not yet possible to predict the total impacts of this final rule at this time, including any challenges to such final rule and the outcome of any such challenges.

However, if additional capital expenditures are necessary, they could be material. AES Indiana would seek recovery of these capital expenditures; however, there is no guarantee it would be successful in this regard.

Waste Management — On October 19, 2015, an EPA rule regulating CCR under the Resource Conservation and Recovery Act as nonhazardous solid waste became effective. The rule established nationally applicable minimum criteria for the disposal of CCR in new and currently operating landfills and surface impoundments, including location restrictions, design and operating criteria, groundwater monitoring, corrective action and closure requirements, and post-closure care. The 2016 Water Infrastructure Improvements for the Nation Act ("WIN Act") includes provisions to implement the CCR rule through a state permitting program, or if the state chooses not to participate, a possible federal permit program. On February 20, 2020, the EPA published a proposed rule to establish a federal CCR permit program that would operate in states without approved CCR permit programs. If this rule is finalized before Indiana or Puerto Rico establishes a state-level CCR permit program, AES CCR units in those locations could eventually be required to apply for a federal CCR permit from the EPA. On December 21, 2022, the Indiana Department of Environmental Management published in the Indiana Register a Second Notice of Comment Period for its proposed CCR rulemaking which would include regulation of CCR through a state permitting program.

The EPA has indicated that it will implement a phased approach to amending the CCR Rule, which is ongoing. On August 28, 2020, the EPA published the CCR Part A Rule, that, among other amendments, required certain CCR units to cease waste receipt and initiate closure by April 11, 2021. The CCR Part A Rule also allowed for extensions of the April 11, 2021 deadline if the EPA determines certain criteria are met. Facilities seeking such an extension were required to submit a demonstration to the EPA by November 30, 2020. On January 11, 2022, the EPA released its first in a series of proposed and final determinations regarding nine CCR Part A Rule demonstrations. On April 8, 2022, petitions for review were filed challenging these EPA actions. The petitions are consolidated in *Electric Energy, Inc. v. EPA*. Also on January 11, 2022,, the EPA issued four compliance-related letters notifying certain other facilities of their compliance obligations under the federal CCR regulations. The determinations and letters include interpretations regarding implementation of the CCR Rule. It is too early to determine the direct or indirect impact of these letters or any determinations that may be made.

On January 2, 2020, Puerto Rico Senate Bill 1221 was signed by the Puerto Rico Governor into law and became effective as Act 5-2020. Act 5-2020 prohibits the disposal and unencapsulated beneficial use of CCR and places restrictions on storage of CCR in Puerto Rico. Puerto Rico Department of Natural and Environmental Resources developed implementation regulations which became effective on June 10, 2021. Prior to Act 5-2020's approval, the Company had put in place arrangements to dispose or beneficially use its coal ash and combustion residual outside of Puerto Rico. It is too early to determine whether this might have a material impact on our business, financial condition, and results of operations.

The CCR rule, current or proposed amendments to the federal CCR rule or state/territory CCR regulations, the results of groundwater monitoring data, or the outcome of CCR-related litigation could have a material impact on our business, financial condition, and results of operations. AES Indiana would seek recovery of any resulting expenditures; however, there is no guarantee we would be successful in this regard.

International Environmental Regulations

For a discussion of the material environmental regulations applicable to the Company's businesses located outside of the U.S., see *Environmental Regulation* under the discussion of the various countries in which the Company's subsidiaries operate in Item 1.—*Business*, under the applicable SBUs.

Customers

We sell to a wide variety of customers. No individual customer accounted for 10% or more of our 2022 total revenue. In our generation business, we own and/or operate power plants to generate and sell power to wholesale customers such as utilities and other intermediaries. Our utilities sell to end-user customers in the residential, commercial, industrial, and governmental sectors in a defined service area.

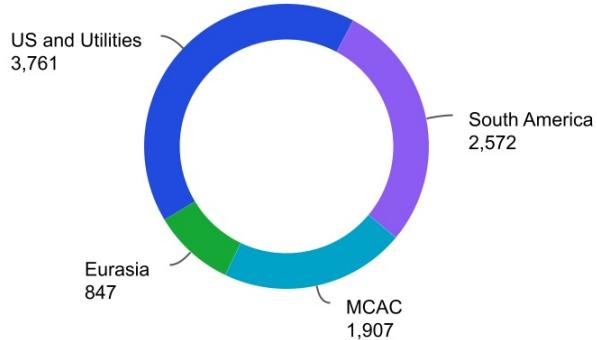
Human Capital Management

At AES, our people are instrumental to helping us meet the world's energy needs. Supporting our people is a foundational value for AES. All of our actions are grounded in the shared values that shape AES' culture: Safety

First, Highest Standards, and All Together. The AES Corporation is led and managed by our Chief Executive Officer and the Executive Leadership Team with the guidance and oversight of our Board of Directors.

As of December 31, 2022, the Company and its subsidiaries had approximately 9,100 full time/permanent employees. The following chart lists our full time/permanent employees by SBU:

Full Time/Permanent Employees



As of December 31, 2022, approximately 32% of our U.S. employees were subject to collective bargaining agreements. Collective bargaining agreements between us and these labor unions expire at various dates ranging from 2023 to 2026. In addition, certain employees in non-U.S. locations were subject to collective bargaining agreements, representing approximately 60% of the non-U.S. workforce. Management believes that the Company's employee relations are favorable.

Safety

At AES, safety is one of our core values. Conducting safe operations at our facilities around the world, so that each person can return home safely, is the cornerstone of our daily activities and decisions. Safety efforts are led by our Chief Operating Officer and supported by safety committees that operate at the local site level. Hazards in the workplace are actively identified and management tracks incidents so remedial actions can be taken to improve workplace safety.

AES has established a Safety Management System ("SMS") Global Safety Standard that applies to all AES employees, as well as contractors working in AES facilities and construction projects. The SMS requires continuous safety performance monitoring, risk assessment, and performance of periodic integrated environmental, health, and safety audits. The SMS provides a consistent framework for all AES operational businesses and construction projects to set expectations for risk identification and reduction, measure performance, and drive continuous improvements. The SMS standard is consistent with the OHSAS 18001/ISO 45001 standard, and during 2022 approximately 52% of our locations have elected to formally certify their SMS to the OHSAS 18001/ISO 45001 international standard. AES calculates lost time incident ("LTI") rates for our employees and contractors based on OSHA standards, based on 200,000 labor hours, which equates to 100 workers who work 40 hours per week and 50 weeks per year. In 2022, there was a 10% decrease in LTI cases. In 2022, AES' LTI Rate was 0.162 for AES People, 0.018 for operational contractors, and 0.055 for construction contractors. In 2022, the Company had two contractor work-related fatalities.

Talent

We believe AES' success depends on its ability to attract, develop, and retain key personnel. The skills, experience, and industry knowledge of key employees significantly benefit our operations and performance. We have a comprehensive approach to managing our talent and developing our leaders in order to ensure our people have the right skills for today and tomorrow, whether that requires us to build new business models or leverage leading technologies.

We emphasize employee development and training. To empower employees, we provide a range of development programs and opportunities, skills, and resources they need to be successful by focusing on experience and exposure, as well as formal programs including our Trainee Program.

At AES, we believe that our individual differences make us stronger. Our Diversity and Inclusion Program is led by our Diversity and Inclusion Officer. Governance and standards are guided by the Chief Human Resources Officer, with input from members of the Executive Leadership Team.

Compensation

AES' executive compensation philosophy emphasizes pay-for-performance. Our incentive plans are designed to reward strong performance, with greater compensation paid when performance exceeds expectations and less compensation paid when performance falls below expectations. We invest significant time and resources to ensure our compensation programs are competitive and reward the performance of our people. Every year, AES people who are not part of a collective bargaining agreement are eligible for an annual merit-based salary increase. In addition, individuals are eligible for a salary increase if they receive a significant promotion. For non-collectively bargained employees at certain levels in the organization, we offer annual incentives (bonus) and long-term compensation to reinforce the alignment between AES' employees and AES.

Executive Officers

The following individuals are our executive officers:

Stephen Coughlin, 51 years old, has served as Executive Vice President and Chief Financial Officer since October 2021. Prior to assuming his current position, he led AES' Corporate Strategy and Financial Planning teams, and served as the Chair of the Company's Investment Committee. Prior to that role, he served as the Chief Executive Officer of Fluence. Mr. Coughlin joined AES in 2007 and spent his early years with the company leading Financial Planning & Analysis for AES's renewables portfolio. Mr. Coughlin is a member of the boards of AES U.S. Investments, Inc., AES U.S. Generation, LLC, and IPALCO. Mr. Coughlin received a bachelor's degree in commerce and finance from the University of Virginia and a Master of Business Administration degree from the University of California at Berkeley.

Bernard Da Santos, 59 years old, has served as Executive Vice President and Chief Operating Officer since December 2017. Previously, Mr. Da Santos held several positions at AES, including Chief Operating Officer and Senior Vice President from 2014 to 2017, Chief Financial Officer, Global Finance Operations from 2012 to 2014, Chief Financial Officer of Global Utilities from 2011 to 2012, Chief Financial Officer of Latin America and Africa from 2009 to 2011, Chief Financial Officer of Latin America from 2007 to 2009, Managing Director of Finance for Latin America from 2005 to 2007, and VP and Controller of La Electricidad de Caracas ("EDC") (Venezuela). Prior to joining AES in 2000, Mr. Da Santos held a number of financial leadership positions at EDC. Mr. Da Santos is a member of the boards of AES Brasil Energia S.A., AES Mong Duong Power Co. Ltd., AES Andes, IPALCO, Son My LNG Terminal LLC, AES Renewable Holdings, LLC. Mr. Da Santos holds a bachelor's degree with Cum Laude distinction in Business Administration and Public Administration from Universidad José María Vargas, a bachelor's degree with Cum Laude distinction in Business Management and Finance, and an MBA with Cum Laude distinction from Universidad José María Vargas.

Paul L. Freedman, 52 years old, has served as Executive Vice President, General Counsel, and Corporate Secretary since February 2021. Prior to assuming his current position, Mr. Freedman was Senior Vice President and General Counsel from February 2018, Corporate Secretary from October 2018, Chief of Staff to the Chief Executive Officer from April 2016 to February 2018, Assistant General Counsel from 2014 to 2016, and from 2007 to 2014 he held a variety of other positions in the AES legal group. Mr. Freedman is a member of the Boards of, AES U.S. Investments, Inc., IPALCO, AES Ohio, AES Southland Energy Holdings, LLC, Business Council for International Understanding, and the Coalition for Integrity. Prior to joining AES, Mr. Freedman was Chief Counsel for credit programs at the U.S. Agency for International Development and he previously worked as an associate at the law firms of White & Case and Freshfields. Mr. Freedman received a B.A. from Columbia University and a J.D. from the Georgetown University Law Center.

Andrés R. Gluski, 65 years old, has been President, Chief Executive Officer and a member of our Board of Directors since September 2011 and is a member of the Innovation and Technology Committee. Under his leadership, AES has become a world leader in implementing clean technologies, including energy storage and renewable power. Prior to assuming his current position, Mr. Gluski served as Executive Vice President and Chief

Operating Officer of the Company from 2007 to 2011. Prior to that role, he served in a number of senior roles at AES, including as Regional President of Latin America and was Senior Vice President for the Caribbean and Central America. He is a member of the Board of Waste Management and serves as Chairman of the Americas Society/Council of the Americas. Mr. Gluski is a magna cum laude graduate of Wake Forest University and holds an M.A. and a Ph.D. in Economics from the University of Virginia.

Tish Mendoza, 47 years old, has served as Executive Vice President and Chief Human Resources Officer since February 2021. Prior to assuming her current position, Ms. Mendoza was Senior Vice President, Global Human Resources and Internal Communications and Chief Human Resources Officer from 2012, Vice President of Human Resources, Global Utilities from 2011 to 2012, Vice President of Global Compensation, Benefits and HRIS, including Executive Compensation, from 2008 to 2011, and acted in the same capacity as the Director of the function from 2006 to 2008. Ms. Mendoza is a member of the boards of IPALCO, Fluence Energy, Inc. and AES Ohio, and sits on AES' compensation and benefits committees. Prior to joining AES, Ms. Mendoza was Vice President of Human Resources for a product company in the Treasury Services division of JP Morgan Chase and Vice President of Human Resources and Compensation and Benefits at Vastera, Inc, a former technology and managed services company. Ms. Mendoza earned certificates in Leadership and Human Resource Management, and a bachelor's degree in Business Administration and Human Resources.

Juan Ignacio Rubiolo, 45 years old, has served as Executive Vice President and President of International Businesses since January 2022. Prior to assuming his current position, Mr. Rubiolo served as Senior Vice President and President of the MCAC SBU from March 2018 to January 2022, as the Chief Executive Officer of AES Mexico from 2014 to March 2018, and as a Vice President of the Commercial team of the MCAC SBU from 2013 to 2014. Mr. Rubiolo joined AES in 2001 and has worked in AES businesses in the Philippines, Argentina, Mexico, Panama, and the Dominican Republic. Mr. Rubiolo serves on the boards of AES Andes, AES Brasil Energia, and AES Colombia & Cia S.C.A. E.S.P. Mr. Rubiolo has a Science Degree in Business from the Universidad Austral of Argentina, a Master of Project Management from the Quebec University in Canada and has completed the executive business and leadership program at the University of Virginia.

How to Contact AES and Sources of Other Information

Our principal offices are located at 4300 Wilson Boulevard, Arlington, Virginia 22203. Our telephone number is (703) 522-1315. Our website address is <http://www.aes.com>. Our annual reports on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K and any amendments to such reports filed pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934 (the "Exchange Act") are posted on our website. After the reports are filed with, or furnished to the SEC, they are available from us free of charge. Material contained on our website is not part of and is not incorporated by reference in this Form 10-K. The SEC maintains an internet website that contains the reports, proxy and information statements and other information that we file electronically with the SEC at www.sec.gov.

Our CEO and our CFO have provided certifications to the SEC as required by Section 302 of the Sarbanes-Oxley Act of 2002. These certifications are included as exhibits to this Annual Report on Form 10-K.

Our CEO provided a certification pursuant to Section 303A of the New York Stock Exchange Listed Company Manual on April 28, 2022.

Our Code of Business Conduct ("Code of Conduct") and Corporate Governance Guidelines have been adopted by our Board of Directors. The Code of Conduct is intended to govern, as a requirement of employment, the actions of everyone who works at AES, including employees of our subsidiaries and affiliates. Our Ethics and Compliance Department provides training, information, and certification programs for AES employees related to the Code of Conduct. The Ethics and Compliance Department also has programs in place to prevent and detect criminal conduct, promote an organizational culture that encourages ethical behavior and a commitment to compliance with the law, and to monitor and enforce AES policies on corruption, bribery, money laundering and associations with terrorists groups. The Code of Conduct and the Corporate Governance Guidelines are located in their entirety on our website. Any person may obtain a copy of the Code of Conduct or the Corporate Governance Guidelines without charge by making a written request to: Corporate Secretary, The AES Corporation, 4300 Wilson Boulevard, Arlington, VA 22203. If any amendments to, or waivers from, the Code of Conduct or the Corporate Governance Guidelines are made, we will disclose such amendments or waivers on our website.

ITEM 1A. RISK FACTORS

You should consider carefully the following risks, along with the other information contained in or incorporated by reference in this Form 10-K. Additional risks and uncertainties also may adversely affect our business and operations. We routinely encounter and address risks, some of which may cause our future results to be materially different than we presently anticipate. The categories of risk we have identified in Item 1A.—*Risk Factors* include risks associated with our operations, governmental regulation and laws, our indebtedness and financial condition. These risk factors should be read in conjunction with Item 7.—*Management's Discussion and Analysis of Financial Condition and Results of Operations* in this Form 10-K and the Consolidated Financial Statements and related notes included elsewhere in this Form 10-K. If any of the following events actually occur, our business, financial results and financial condition could be materially adversely affected.

Risks Associated with our Operations

The operation of power generation, distribution and transmission facilities involves significant risks.

We are in the business of generating and distributing electricity, which involves certain risks that can adversely affect financial and operating performance, including:

- changes in the availability of our generation facilities or distribution systems due to increases in scheduled and unscheduled plant outages, equipment failure, failure of transmission systems, labor disputes, disruptions in fuel supply, poor hydrologic and wind conditions, inability to comply with regulatory or permit requirements, or catastrophic events such as fires, floods, storms, hurricanes, earthquakes, dam failures, tsunamis, explosions, terrorist acts, vandalism, cyber-attacks or other similar occurrences; and
- changes in our operating cost structure, including, but not limited to, increases in costs relating to gas, coal, oil and other fuel; fuel transportation; purchased electricity; operations, maintenance and repair; environmental compliance, including the cost of purchasing emissions offsets and capital expenditures to install environmental emission equipment; transmission access; and insurance.

Our businesses require reliable transportation sources (including related infrastructure such as roads, ports and rail), power sources and water sources to access and conduct operations. The availability and cost of this infrastructure affects capital and operating costs and levels of production and sales. Limitations or interruptions in this infrastructure or at the facilities of our subsidiaries, including as a result of third parties intentionally or unintentionally disrupting this infrastructure or the facilities of our subsidiaries, could impede their ability to produce electricity.

In addition, a portion of our generation facilities were constructed many years ago and may require significant capital expenditures for maintenance. The equipment at our plants requires periodic upgrading, improvement or repair and replacement equipment or parts may be difficult to obtain in circumstances where we rely on a single supplier or a small number of suppliers. The inability to obtain replacement equipment or parts, due to disruption of the supply chain or other factors, may impact the ability of our plants to perform. Breakdown or failure of one of our operating facilities may prevent the facility from performing under applicable power sales agreements which, in certain situations, could result in termination of a power purchase or other agreement or incurrence of a liability for liquidated damages and/or other penalties.

Power generation involves hazardous activities, including acquiring, transporting and unloading fuel, operating large pieces of rotating equipment and delivering electricity to transmission and distribution systems. In addition to natural risks, such as earthquakes, floods, lightning, hurricanes and wind, hazards, such as fire, explosion, collapse and machinery failure, are inherent risks in our operations which may occur as a result of inadequate internal processes, technological flaws, human error or actions of third parties or other external events. The control and management of these risks depend upon adequate development and training of personnel and on operational procedures, preventative maintenance plans, and specific programs supported by quality control systems, which may not prevent the occurrence and impact of these risks.

In addition, our battery storage operations also involve risks associated with lithium-ion batteries. On rare occasions, lithium-ion batteries can rapidly release the energy they contain by venting smoke and flames in a manner that can ignite nearby materials as well as other lithium-ion batteries. While more recent design developments for our storage projects seek to minimize the impact of such events, these events are inherent risks of our battery storage operations.

The hazards described above, along with other safety hazards associated with our operations, can cause significant personal injury or loss of life, severe damage to and destruction of property, plant and equipment, contamination of, or damage to, the environment and suspension of operations. The occurrence of any one of these events may result in our being named as a defendant in lawsuits asserting claims for substantial damages, environmental cleanup costs, personal injury and fines and/or penalties.

Furthermore, we and our affiliates are parties to material litigation and regulatory proceedings. See Item 3.— *Legal Proceedings* below. There can be no assurance that the outcomes of such matters will not have a material adverse effect on our consolidated financial position.

We do a significant amount of business outside the U.S., including in developing countries.

A significant amount of our revenue is generated in developing countries and we intend to expand our business in certain developing countries in which AES or its customers have an existing presence. International operations, particularly in developing countries, entail significant risks and uncertainties, including:

- economic, social and political instability in any particular country or region;
- adverse changes in currency exchange rates;
- government restrictions on converting currencies or repatriating funds;
- unexpected changes in foreign laws and regulations or in trade, monetary, fiscal or environmental policies;
- high inflation and monetary fluctuations;
- restrictions on imports of solar panels, wind turbines, coal, oil, gas or other raw materials;
- threatened or consummated expropriation or nationalization of our assets by foreign governments;
- unexpected delays in permitting and governmental approvals;
- unexpected changes or instability affecting our strategic partners in developing countries;
- failure to comply with the U.S. Foreign Corrupt Practices Act, or other applicable anti-bribery regulations;
- unwillingness of governments, agencies, similar organizations or other counterparties to honor contracts;
- unwillingness of governments, government agencies, courts or similar bodies to enforce contracts that are economically advantageous to AES and less beneficial to government or private party counterparties, against those counterparties;
- inability to obtain access to fair and equitable political, regulatory, administrative and legal systems;
- adverse changes in government tax policy and tax consequences of operating in multiple jurisdictions;
- difficulties in enforcing our contractual rights or enforcing judgments or obtaining a favorable result in local jurisdictions; and
- inability to attract and retain qualified personnel.

Developing projects in less developed economies also entails greater financing risks and such financing may only be available from multilateral or bilateral international financial institutions or agencies that require governmental guarantees for certain project and sovereign-related risks. There can be no assurance that project financing will be available or that, once secured, will provide similar terms or flexibility as would be expected from a commercial lender.

Further, our operations may experience volatility in revenues and operating margin caused by regulatory and economic difficulties, political instability and currency devaluations, which may increase the uncertainty of cash flows from these businesses.

Any of these factors could have a material, adverse effect on our business, results of operations and financial condition.

Our businesses may incur substantial costs and liabilities and be exposed to price volatility as a result of risks associated with the wholesale electricity markets.

Some of our businesses sell or buy electricity in the spot markets when they operate at levels that differ from their power sales agreements or retail load obligations or when they do not have any powers sales agreements. Our businesses may also buy electricity in the wholesale spot markets. As a result, we are exposed to the risks of rising and falling prices in those markets. The open market wholesale prices for electricity can be volatile and generally reflect the variable cost of the source generation which could include renewable sources at near zero pricing or

thermal sources subject to fluctuating cost of fuels such as coal, natural gas or oil derivative fuels in addition to other factors described below. Consequently, any changes in the generation supply stack and cost of coal, natural gas, or oil derivative fuels may impact the open market wholesale price of electricity.

Volatility in market prices for fuel and electricity may result from, among other things:

- plant availability in the markets generally;
- availability and effectiveness of transmission facilities owned and operated by third parties;
- competition and new entrants;
- seasonality, hydrology and other weather conditions;
- illiquid markets;
- transmission, transportation constraints, inefficiencies and/or availability;
- renewables source contribution to the supply stack;
- increased adoption of distributed generation;
- energy efficiency and demand side resources;
- available supplies of coal, natural gas, and crude oil and refined products;
- generating unit performance;
- natural disasters, terrorism, wars, embargoes, pandemics and other catastrophic events;
- energy, market and environmental regulation, legislation and policies;
- general economic conditions that impact demand and energy consumption; and
- bidding behavior and market bidding rules.

Wholesale power prices may experience significant volatility in our markets which could impact our operations and opportunities for future growth.

The wholesale prices offered for electricity have been volatile in the markets in which we operate due to a variety of factors, including the increased penetration of renewable generation resources, low-priced natural gas and demand side management. The leveled cost of electricity from new solar and wind generation sources has decreased substantially in recent years as solar panel costs and wind turbine costs have declined, while wind and solar capacity factors have increased. These renewable resources have no fuel costs and very low operational costs, while only operating during certain periods of time (daylight) or weather conditions (higher winds). This, combined with changes in oil, gas, and coal pricing, has led to increasingly volatile electricity markets across our markets. Also, in many markets, new PPAs have been awarded for renewable generation at prices significantly lower than those awarded just a few years ago.

This trend of volatility in wholesale prices could continue and could have a material adverse impact on the financial performance of our existing generation assets to the extent they currently sell or buy power into the spot market to serve our contracts or will seek to sell power into the spot market once our contracts expire.

Adverse economic developments in China could have a negative impact on demand for electricity in many of our markets.

The Chinese market has been driving global materials demand and pricing for commodities over the past decade. Many of these commodities are produced in our key electricity markets. After experiencing rapid growth for more than a decade, China's economy has experienced decreasing foreign and domestic demand, weak investment, factory overcapacity and oversupply in the property market, and has experienced a significant slowdown in recent years. U.S. tariffs have also had a negative impact on China's economic growth. Further, China's Zero COVID strategy contributed to a significant decrease in GDP growth in 2022. The impact of the recent loosening of that strategy is uncertain at this time. Continued slowing in China's economic growth, demand for commodities and/or material changes in policy could result in lower economic growth and lower demand for electricity in our key markets, which could have a material adverse effect on our results of operations, financial condition and prospects.

We may not have adequate risk mitigation or insurance coverage for liabilities.

Power generation, distribution and transmission involves hazardous activities. We may become exposed to significant liabilities for which we may not have adequate risk mitigation and/or insurance coverage. Furthermore,

through AGIC, AES' captive insurance company, we take certain insurance risk on our businesses. We maintain an amount of insurance protection that we believe is customary, but there can be no assurance it will be sufficient or effective in light of all circumstances, hazards or liabilities to which we may be subject. Our insurance does not cover every potential risk associated with our operations. Adequate coverage at reasonable rates is not always obtainable. In particular, the availability of insurance for coal-fired generation assets has decreased as certain insurers have opted to discontinue or limit offering insurance for such assets. Certain insurers have also withdrawn from insuring hydroelectric assets. We cannot provide assurance that insurance coverage will continue to be available in the amounts or on terms similar to our current policies. In addition, insurance may not fully cover the liability or the consequences of any business interruptions such as natural catastrophes, equipment failure or labor dispute. The occurrence of a significant adverse event not adequately covered by insurance could have a material adverse effect on our business, results or operations, financial condition, and prospects.

We may not be able to enter into long-term contracts that reduce volatility in our results.

Many of our generation plants conduct business under long-term sales and supply contracts, which helps these businesses to manage risks by reducing the volatility associated with power and input costs and providing a stable revenue and cost structure. In these instances, we rely on power sales contracts with one or a limited number of customers for the majority of, and in some cases all of, the relevant plant's output and revenues over the term of the power sales contract. The remaining terms of the power sales contracts of our generation plants range from one to more than 20 years. In many cases, we also limit our exposure to fluctuations in fuel prices by entering into long-term contracts for fuel with a limited number of suppliers. In these instances, the cash flows and results of operations are dependent on the continued ability of customers and suppliers to meet their obligations under the relevant power sales contract or fuel supply contract, respectively. Some of our long-term power sales agreements are at prices above current spot market prices and some of our long-term fuel supply contracts are at prices below current market prices. The loss of significant power sales contracts or fuel supply contracts, or the failure by any of the parties to such contracts that prevents us from fulfilling our obligations thereunder, could adversely impact our strategy by resulting in costs that exceed revenue, which could have a material adverse impact on our business, results of operations and financial condition. In addition, depending on market conditions and regulatory regimes, it may be difficult for us to secure long-term contracts, either where our current contracts are expiring or for new development projects. The inability to enter into long-term contracts could require many of our businesses to purchase inputs at market prices and sell electricity into spot markets, which may not be favorable.

We have sought to reduce counterparty credit risk under our long-term contracts by entering into power sales contracts with utilities or other customers of strong credit quality and by obtaining guarantees from certain sovereign governments of the customer's obligations; however, many of our customers do not have or have not maintained, investment-grade credit ratings. Our generation businesses cannot always obtain government guarantees and if they do, the government may not have an investment grade credit rating. We have also located our plants in different geographic areas in order to mitigate the effects of regional economic downturns; however, there can be no assurance that our efforts will be effective.

Our renewable energy projects and other initiatives face considerable uncertainties.

Wind, solar, and energy storage projects are subject to substantial risks. Some of these business lines are dependent upon favorable regulatory incentives to support continued investment, and there is significant uncertainty about the extent to which such favorable regulatory incentives will be available in the future. In particular, in the U.S., AES' renewable energy generation growth strategy depends in part on federal, state and local government policies and incentives that support the development, financing, ownership and operation of renewable energy generation projects, including investment tax credits, production tax credits, accelerated depreciation, renewable portfolio standards, feed-in-tariffs and similar programs, renewable energy credit mechanisms, and tax exemptions. If these policies and incentives are changed or eliminated, or AES is unable to use them, there could be a material adverse impact on AES' U.S. renewable growth opportunities, including fewer future PPAs or lower prices in future PPAs, decreased revenues, reduced economic returns on certain project company investments, increased financing costs, and/or difficulty obtaining financing.

In addition, the U.S. Department of Commerce's investigation into the antidumping and countervailing duties circumvention claim on solar cells and panels supplied from Malaysia, Vietnam, Thailand, and Cambodia has reached a preliminary determination that circumvention occurred. Additionally, Commerce issued a preliminary determination that circumvention would not be deemed to occur for any solar cells and panels imported from the four countries if the wafers were manufactured outside of China or if no more than two out of six specifically

identified components were produced in China. These preliminary determinations could be modified and final determinations from Commerce are expected in May 2023.

If the final determinations result in additional taxes, tariffs, duties, or other assessments on renewable energy or the equipment necessary to generate or deliver it, such as antidumping and countervailing duty rates, such developments could impede the realization of our U.S. renewables strategy by resulting in, among other items, lack of a satisfactory market for the development and/or financing of our U.S. renewable energy projects, abandoning the development of certain U.S. renewable energy projects, a loss of our investments in the projects, and/or reduced project returns.

Furthermore, production levels for our wind and solar projects may be dependent upon adequate wind or sunlight resulting in volatility in production levels and profitability. For our wind projects, wind resource estimates are based on historical experience when available and on wind resource studies conducted by an independent engineer. These wind resource estimates are not expected to reflect actual wind energy production in any given year, but long-term averages of a resource.

As a result, these types of projects face considerable risk, including that favorable regulatory regimes expire or are adversely modified. At the development or acquisition stage, our ability to predict actual performance results may be hindered and the projects may not perform as predicted. There are also risks associated with the fact that some of these projects exist in markets where long-term fixed-price contracts for the major cost and revenue components may be unavailable, which in turn may result in these projects having relatively high levels of volatility. These projects can be capital-intensive and generally are designed with a view to obtaining third-party financing, which may be difficult to obtain. As a result, these capital constraints may reduce our ability to develop or obtain third-party financing for these projects.

Further, in the U.S., the tax credits associated with certain renewables projects are earned when the project is placed in service. Delays in executing our renewables projects can result in delays in recognizing those tax credits and adversely impact our short-term financial results.

Any of the above factors could have a material adverse effect on our business, financial condition, results of operations and prospects.

Our development projects are subject to substantial uncertainties.

We are in various stages of developing and constructing renewables projects and power plants. Certain of these projects have signed long-term contracts or made similar arrangements for the sale of electricity. Successful completion of the development of these projects depends upon overcoming substantial risks, including risks relating to siting, financing, engineering and construction, permitting, interconnection and transmission, governmental approvals, commissioning delays, supply chain related disruptions to our access to materials, or the potential for termination of the power sales contract as a result of a failure to meet certain milestones. Objections of or challenges by local communities or interest groups may delay or impede permitting for our development projects.

In certain cases, our subsidiaries may enter into obligations in the development process even though they have not yet secured financing, PPAs, or other important elements for a successful project. For example, our subsidiaries may instruct contractors to begin the construction process or seek to procure equipment without having financing, a PPA or critical permits in place (or enter into a PPA, procurement agreement or other agreement without agreed financing).

If the project does not proceed, our subsidiaries may retain certain liabilities. Furthermore, we may undertake significant development costs and subsequently not proceed with a particular project. We believe that capitalized costs for projects under development are recoverable; however, there can be no assurance that any individual project will reach commercial operation. If development efforts are not successful, we may abandon certain projects, resulting in, writing off the costs incurred, expensing related capitalized development costs incurred and incurring additional losses associated with any related contingent liabilities.

Our acquisitions may not perform as expected.

Acquisitions have been a significant part of our growth strategy historically and more recently as we grow our renewables business. Although acquired businesses may have significant operating histories, we may have limited or no history of owning and operating certain of these businesses, and possibly limited or no experience operating in the country or region where these businesses are located. We also may encounter challenges in integrating and realizing the expected benefits of these acquisitions as well as integration or other one-time costs that are greater

than expected. Such businesses may not generate sufficient cash flow to support the indebtedness incurred to acquire them or the capital expenditures needed to develop them; and the rate of return from such businesses may not justify our investment of capital to acquire them. In addition, some of these businesses may have been government owned and some may be operated as part of a larger integrated utility prior to their acquisition. If we were to acquire any of these types of businesses, there can be no assurance that we will be successful in transitioning them to private ownership or that we will not incur unforeseen obligations or liabilities.

The COVID-19 pandemic, or the future outbreak of any other highly infectious or contagious diseases, could impact our business and operations.

The COVID-19 pandemic has severely impacted global economic activity in recent years, including electricity and energy consumption. COVID-19 or another pandemic could have material and adverse effects on our results of operations, financial condition and cash flows due to, among other factors:

- further decline in customer demand as a result of general decline in business activity;
- further destabilization of the markets and decline in business activity negatively impacting customers' ability to pay for our services when due or at all, including downstream impacts, whereby the utilities' customers are unable to pay monthly bills or receiving a moratorium from payment obligations, resulting in inability on the part of utilities to make payments for power supplied by our generation companies;
- decline in business activity causing our commercial and industrial customers to experience declining revenues and liquidity difficulties that impede their ability to pay for power that we supply;
- government moratoriums or other regulatory or legislative actions that limit changes in pricing, delay or suspend customers' payment obligations or permit extended payment terms applicable to customers of our utilities or to our offtakers under power purchase agreements, in particular, to the extent that such measures are not mitigated by associated government subsidies or other support to address any shortfall or deficiencies in payments;
- claims by our PPA counterparties for delay or relief from payment obligations or other adjustments, including claims based on force majeure or other legal grounds;
- further decline in spot electricity prices;
- the destabilization of the markets and decline in business activity negatively impacting our customer growth in our service territories at our utilities;
- negative impacts on the health of our essential personnel and on our operations as a result of implementing stay-at-home, quarantine, curfew and other social distancing measures;
- delays or inability to access, transport and deliver fuel to our generation facilities due to restrictions on business operations or other factors affecting us and our third-party suppliers;
- delays or inability to access equipment or the availability of personnel to perform planned and unplanned maintenance or disruptions in supply chain, which can, in turn, lead to disruption in operations;
- a deterioration in our ability to ensure business continuity, including increased cybersecurity attacks related to the work-from-home environment;
- further delays to our construction projects, including at our renewables projects, and the timing of the completion of renewables projects;
- delay or inability to receive the necessary permits for our development projects due to delays or shutdowns of government operations;
- delays in achieving our financial goals, strategy and digital transformation;
- deterioration of the credit profile of The AES Corporation and/or its subsidiaries and difficulty accessing the capital and credit markets on favorable terms, or at all, and a severe disruption and instability in the global financial markets, or deterioration in credit and financing conditions, which could affect our access to capital necessary to fund business operations or address maturing liabilities on a timely basis;
- delays or inability to complete asset sales on anticipated terms or to redeploy capital as set forth in our capital allocation plans;
- increased volatility in foreign exchange and commodity markets;
- deterioration of economic conditions, demand and other related factors resulting in impairments to long-lived assets; and

- delay or inability in obtaining regulatory actions and outcomes that could be material to our business, including for recovery of COVID-19 related losses and the review and approval of our rates at our U.S. regulated utilities.

The impact of the COVID-19 pandemic also depends on factors, including the effectiveness and timing of updated vaccines to address new variants, the development of more virulent COVID-19 variants as well as third-party actions taken to contain its spread and mitigate its public health effects. A resurgence or material worsening of the COVID-19 pandemic could present material uncertainty that could adversely affect our generation facilities, transmission and distribution systems, development projects, energy storage sales by Fluence, and results of operations, financial condition and cash flows. The COVID-19 pandemic may also heighten many of the other risks described in this section.

Competition is increasing and could adversely affect us.

The power production markets in which we operate are characterized by numerous strong and capable competitors, many of whom may have extensive and diversified developmental or operating experience (including both domestic and international) and financial resources similar to, or greater than, ours. Further, in recent years, the power production industry has been characterized by strong and increasing competition with respect to both obtaining power sales agreements and acquiring existing power generation assets. In certain markets, these factors have caused reductions in prices contained in new power sales agreements and, in many cases, have caused higher acquisition prices for existing assets through competitive bidding practices. The evolution of competitive electricity markets and the development of highly efficient gas-fired power plants and renewables such as wind and solar have also caused, and could continue to cause, price pressure in certain power markets where we sell or intend to sell power. In addition, the introduction of low-cost disruptive technologies or the entry of non-traditional competitors into our sector and markets could adversely affect our ability to compete, which could have a material adverse effect on our businesses, operating results and financial condition.

Supplier and/or customer concentration may expose us to significant financial credit or performance risks.

We often rely on a single contracted supplier or a small number of suppliers for the provision of fuel, transportation of fuel and other services required for the operation of some of our facilities. If these suppliers cannot perform, we would seek to meet our fuel requirements by purchasing fuel at market prices, exposing us to market price volatility and the risk that fuel and transportation may not be available during certain periods at any price, which could adversely impact the profitability of the affected business and our results of operations, and could result in a breach of agreements with other counterparties, including, without limitation, offtakers or lenders. Further, our suppliers may source certain materials from areas impacted by the COVID-19 pandemic, which may cause delays and/or disruptions to our development projects or operations.

The financial performance of our facilities is dependent on the credit quality of, and continued performance by, suppliers and customers. At times, we rely on a single customer or a few customers to purchase all or a significant portion of a facility's output, in some cases under long-term agreements that account for a substantial percentage of the anticipated revenue from a given facility. Counterparties to these agreements may breach or may be unable to perform their obligations, due to bankruptcy, insolvency, financial distress or other factors. Furthermore, in the event of a bankruptcy or similar insolvency-type proceeding, our counterparty can seek to reject our existing PPA under the U.S. Bankruptcy Code or similar bankruptcy laws, including those in Puerto Rico. We may not be able to enter into replacement agreements on terms as favorable as our existing agreements, and may have to sell power at market prices. A counterparty's breach by of a PPA or other agreement could also result in the breach of other agreements, including the affected businesses debt agreements. Any failure of a supplier or customer to fulfill its contractual obligations could have a material adverse effect on our financial results.

We may incur significant expenditures to adapt to our businesses to technological changes.

Emerging technologies may be superior to, or may not be compatible with, some of our existing technologies, investments and infrastructure, and may require us to make significant expenditures to remain competitive, or may result in the obsolescence of certain of our operating assets. Our future success will depend, in part, on our ability to anticipate and successfully adapt to technological changes, to offer services and products that meet customer demands and evolving industry standards. Technological changes that could impact our businesses include:

- technologies that change the utilization of electric generation, transmission and distribution assets, including the expanded cost-effective utilization of distributed generation (e.g., rooftop solar and community solar projects), and energy storage technology;
- advances in distributed and local power generation and energy storage that reduce demand for large-scale renewable electricity generation or impact our customers' performance of long-term agreements; and
- more cost-effective batteries for energy storage, advances in solar or wind technology, and advances in alternative fuels and other alternative energy sources.

Emerging technologies may also allow new competitors to more effectively compete in our markets or disintermediate the services we provide our customers, including traditional utility and centralized generation services. If we incur significant expenditures in adapting to technological changes, fail to adapt to significant technological changes, fail to obtain access to important new technologies, fail to recover a significant portion of any remaining investment in obsolete assets, or if implemented technology fails to operate as intended, our businesses, operating results and financial condition could be materially adversely affected.

Cyber-attacks and data security breaches could harm our business.

Our business relies on electronic systems and network technologies to operate our generation, transmission and distribution infrastructure. We also use various financial, accounting and other infrastructure systems. Our infrastructure may be targeted by nation states, hacktivists, criminals, insiders or terrorist groups. In particular, there has been an increased focus on the U.S. energy grid believed to be related to the Russia/Ukraine conflict. Such an attack, by hacking, malware or other means, may interrupt our operations, cause property damage, affect our ability to control our infrastructure assets, cause the release of sensitive customer information or limit communications with third parties. Any loss or corruption of confidential or proprietary data through a breach may:

- impact our operations, revenue, strategic objectives, customer and vendor relationships;
- expose us to legal claims and/or regulatory investigations and proceedings;
- require extensive repair and restoration costs for additional security measures to avert future attacks;
- impair our reputation and limit our competitiveness for future opportunities; and
- impact our financial and accounting systems and, subsequently, our ability to correctly record, process and report financial information.

We have implemented measures to help prevent unauthorized access to our systems and facilities, including certain measures to comply with mandatory regulatory reliability standards. To date, cyber-attacks have not had a material impact on our operations or financial results. We continue to assess potential threats and vulnerabilities and make investments to address them, including global monitoring of networks and systems, identifying and implementing new technology, improving user awareness through employee security training, and updating our security policies as well as those for third-party providers. We cannot guarantee the extent to which our security measures will prevent future cyber-attacks and security breaches or that our insurance coverage will adequately cover any losses we may experience. Further, we do not control certain of joint ventures or our equity method investments and cannot guarantee that their efforts will be effective.

Certain of our businesses are sensitive to variations in weather and hydrology.

Our businesses are affected by variations in general weather patterns and unusually severe weather. Our businesses forecast electric sales based on best available information and expectations for weather, which represents a long-term historical average. While we also consider possible variations in normal weather patterns and potential impacts on our facilities and our businesses, there can be no assurance that such planning can prevent these impacts, which can adversely affect our business. Generally, demand for electricity peaks in winter and summer. Typically, when winters are warmer than expected and summers are cooler than expected, demand for energy is lower, resulting in less demand for electricity than forecasted. Significant variations from normal weather where our businesses are located could have a material impact on our results of operations.

Changes in weather can also affect the production of electricity at power generation facilities, including, but not limited to, our wind and solar facilities. For example, the level of wind resource affects the revenue produced by wind generation facilities. Because the levels of wind and solar resources are variable and difficult to predict, our results of operations for individual wind and solar facilities specifically, and our results of operations generally, may vary significantly from period to period, depending on the level of available resources. To the extent that resources are not available at planned levels, the financial results from these facilities may be less than expected. In addition,

we are dependent upon hydrological conditions prevailing from time to time in the broad geographic regions in which our hydroelectric generation facilities are located. Changes in temperature, precipitation and snow pack conditions also could affect the amount and timing of hydroelectric generation.

To the extent that hydrological conditions result in droughts or other conditions negatively affect our hydroelectric generation business, such as has happened in Panama in 2019 and Brazil in 2021, our results of operations can be materially adversely affected. Additionally, our contracts in certain markets where hydroelectric facilities are prevalent may require us to purchase power in the spot markets when our facilities are unable to operate at anticipated levels and the price of such spot power may increase substantially in times of low hydrology.

Severe weather and natural disasters may present significant risks to our business.

Weather conditions directly influence the demand for electricity and natural gas and other fuels and affect the price of energy and energy-related commodities. In addition, severe weather and natural disasters, such as hurricanes, floods, tornadoes, icing events, earthquakes, dam failures and tsunamis can be destructive and could prevent us from operating our business in the normal course by causing power outages and property damage, reducing revenue, affecting the availability of fuel and water, causing injuries and loss of life, and requiring us to incur additional costs, for example, to restore service and repair damaged facilities, to obtain replacement power and to access available financing sources. Our power plants could be placed at greater risk of damage should changes in the global climate produce unusual variations in temperature and weather patterns, resulting in more intense, frequent and extreme weather events, including heatwaves, fewer cold temperature extremes, abnormal levels of precipitation resulting in river and coastal urban floods in North America or reduced water availability and increased flooding across Central and South America, and changes in coast lines due to sea level change.

Depending on the nature and location of the facilities and infrastructure affected, any such incident also could cause catastrophic fires; releases of natural gas, natural gas odorant, or other greenhouse gases; explosions, spills or other significant damage to natural resources or property belonging to third parties; personal injuries, health impacts or fatalities; or present a nuisance to impacted communities. Such incidents may also impact our business partners, supply chains and transportation, which could negatively impact construction projects and our ability to provide electricity and natural gas to our customers.

A disruption or failure of electric generation, transmission or distribution systems or natural gas production, transmission, storage or distribution systems in the event of a hurricane, tornado or other severe weather event, or otherwise, could prevent us from operating our business in the normal course and could result in any of the adverse consequences described above. At our businesses where cost recovery is available, recovery of costs to restore service and repair damaged facilities is or may be subject to regulatory approval, and any determination by the regulator not to permit timely and full recovery of the costs incurred. Any of the foregoing could have a material adverse effect on our business, financial condition, results of operations, reputation and prospects.

We do not control certain aspects of our joint ventures or our equity method investments.

We have invested in some joint ventures in which our subsidiaries share operational, management, investment and/or other control rights with our joint venture partners. In many cases, we may exert influence over the joint venture pursuant to a management contract, by holding positions on the board of the joint venture company or on management committees and/or through certain limited governance rights, such as rights to veto significant actions. However, we do not always have this type of influence over the project or business and we may be dependent on our joint venture partners or the management team of the joint venture to operate, manage, invest or otherwise control such projects or businesses. Our joint venture partners or the management team of our joint ventures may not have the level of experience, technical expertise, human resources, management and other attributes necessary to operate these projects or businesses optimally, and they may not share our business priorities. In some joint venture agreements in which we do have majority control of the voting securities, we have entered into shareholder agreements granting minority rights to the other shareholders.

The approval of joint venture partners also may be required for us to receive distributions of funds from jointly owned entities or to transfer our interest in projects or businesses. The control or influence exerted by our joint venture partners may result in operational management and/or investment decisions that are different from the decisions we would make and could impact the profitability and value of these joint ventures. In addition, if a joint venture partner becomes insolvent or bankrupt or is otherwise unable to meet its obligations to or share of liabilities for the joint venture, we may be responsible for meeting certain obligations of the joint ventures to the extent provided for in our governing documents or applicable law.

Further, we have a significant equity method investment in Fluence. As a publicly listed company, Fluence is governed by its own Board of Directors, whose members have fiduciary duties to the Fluence shareholders. While we have certain rights to appoint representatives to the Fluence Board of Directors, the interests of the Fluence shareholders, as represented by the Fluence Board of Directors, may not align with our interests or the interests of our securityholders. As of December 31, 2022, Fluence continues to report that a material weakness in its internal control over revenue recognition and related inventory has not yet been remediated. Such material weakness can impact the reliability of the Fluence financial information that we may include as part of our financial information.

In addition, we are generally dependent on the management team of our equity method investments to operate and control such projects or businesses. While we may exert influence pursuant to having positions on the boards of such investments and/or through certain limited governance rights, such as rights to veto significant actions, we do not always have this type of influence and the scope and impact of such influence may be limited. The management teams of our equity method investments may not have the level of experience, technical expertise, human resources, management and other attributes necessary to operate these projects or businesses optimally, and they may not share our business priorities, which could have a material adverse effect on value of such investments as well as our growth, business, financial condition, results of operations and prospects.

Fluctuations in currency exchange rates may impact our financial results and position.

Our exposure to currency exchange rate fluctuations results primarily from the translation exposure associated with the preparation of the Consolidated Financial Statements, as well as from transaction exposure associated with transactions in currencies other than an entity's functional currency. While the Consolidated Financial Statements are reported in U.S. dollars, the financial statements of several of our subsidiaries outside the U.S. are prepared using the local currency as the functional currency and translated into U.S. dollars by applying appropriate exchange rates. As a result, fluctuations in the exchange rate of the U.S. dollar relative to the local currencies where our foreign subsidiaries report could cause significant fluctuations in our results. In addition, while our foreign operations expenses are generally denominated in the same currency as corresponding sales, we have transaction exposure to the extent receipts and expenditures are not denominated in the subsidiary's functional currency. Moreover, the costs of doing business abroad may increase as a result of adverse exchange rate fluctuations.

We may not be adequately hedged against our exposure to changes in commodity prices or interest rates.

We routinely enter into contracts to hedge a portion of our purchase and sale commitments for electricity, fuel requirements and other commodities to lower our financial exposure related to commodity price fluctuations. As part of this strategy, we routinely utilize fixed price or indexed forward physical purchase and sales contracts, futures, financial swaps, and option contracts traded in the over-the-counter markets or on exchanges. We also enter into contracts which help us manage our interest rate exposure. However, we may not cover the entire exposure of our assets or positions to market price or interest rate volatility, and the coverage will vary over time. Furthermore, the risk management practices we have in place may not always perform as planned. In particular, if prices of commodities or interest rates significantly deviate from historical prices or interest rates or if the price or interest rate volatility or distribution of these changes deviates from historical norms, our risk management practices may not protect us from significant losses. As a result, fluctuating commodity prices or interest rates may negatively impact our financial results to the extent we have unhedged or inadequately hedged positions. In addition, certain types of economic hedging activities may not qualify for hedge accounting under U.S. GAAP, resulting in increased volatility in our net income. The Company may also suffer losses associated with "basis risk," which is the difference in performance between the hedge instrument and the underlying exposure (usually the pricing node of the generation facility). Furthermore, there is a risk that the current counterparties to these arrangements may fail or are unable to perform part or all of their obligations under these arrangements, while we seek to protect against that by utilizing strong credit requirements and exchange trades, these protections may not fully cover the exposure in the event of a counterparty default. For our businesses with PPA pricing that does not completely pass through our fuel costs, the businesses attempt to manage the exposure through flexible fuel purchasing and timing of entry and terms of our fuel supply agreements; however, these risk management efforts may not be successful and the resulting commodity exposure could have a material impact on these businesses and/or our results of operations.

Our utilities businesses may experience slower growth in customers or in customer usage.

Customer growth and customer usage in our utilities businesses are affected by external factors, including mandated energy efficiency measures, demand side management requirements, and economic and demographic

conditions, such as population changes, job and income growth, housing starts, new business formation and the overall level of economic activity. A lack of growth, or a decline, in the number of customers or in customer demand for electricity may cause us to not realize the anticipated benefits from significant investments and expenditures and have a material adverse effect on our business, financial condition, results of operations and prospects.

Some of our subsidiaries participate in defined benefit pension plans and their net pension plan obligations may require additional significant contributions.

We have 28 defined benefit plans, five at U.S. subsidiaries and the remaining plans at foreign subsidiaries, which cover substantially all of the employees at these subsidiaries. Pension costs are based upon a number of actuarial assumptions, including an expected long-term rate of return on pension plan assets, the expected life span of pension plan beneficiaries and the discount rate used to determine the present value of future pension obligations. Any of these assumptions could prove to be incorrect, resulting in a shortfall of pension plan assets compared to pension obligations under the pension plan. We periodically evaluate the value of the pension plan assets to ensure that they will be sufficient to fund the respective pension obligations. Downturns in the debt and/or equity markets, or the inaccuracy of any of our significant assumptions underlying the estimates of our subsidiaries' pension plan obligations, could result in a material increase in pension expense and future funding requirements. Our subsidiaries that participate in these plans are responsible for satisfying the funding requirements required by law in their respective jurisdictions for any shortfall of pension plan assets as compared to pension obligations under the pension plan, which may necessitate additional cash contributions to the pension plans that could adversely affect our and our subsidiaries' liquidity. See Item 7.—*Management's Discussion and Analysis—Critical Accounting Policies and Estimates—Pension and Other Postretirement Plans* and Note 15—*Benefit Plans* included in Item 8.—*Financial Statements and Supplementary Data*.

Impairment of long-lived assets would negatively impact our consolidated results of operations and net worth.

Long-lived assets are initially recorded at cost or fair value, are depreciated over their estimated useful lives, and are evaluated for impairment only when impairment indicators are present, such as deterioration in general economic conditions or our operating or regulatory environment; increased competitive environment; lower forecasted revenue; increase in fuel costs, particularly costs that we are unable to pass through to customers; increase in environmental compliance costs; negative or declining cash flows; loss of a key contract or customer, particularly when we are unable to replace it on equally favorable terms; developments in our strategy; divestiture of a significant component of our business; or adverse actions or assessments by a regulator. Any impairment of long-lived assets could have a material adverse effect on our business, financial condition, results of operations, and prospects.

Risks associated with Governmental Regulation and Laws

Our operations are subject to significant government regulation and could be adversely affected by changes in the law or regulatory schemes.

Our ability to predict, influence or respond appropriately to changes in law or regulatory schemes, including obtaining expected or contracted increases in electricity tariff or contract rates or tariff adjustments for increased expenses, could adversely impact our results of operations. Furthermore, changes in laws or regulations or changes in the application or interpretation of regulatory provisions in jurisdictions where we operate, particularly at our utilities where electricity tariffs are subject to regulatory review or approval, could adversely affect our business, including:

- changes in the determination, definition or classification of costs to be included as reimbursable or pass-through costs to be included in the rates we charge our customers, including but not limited to costs incurred to upgrade our power plants to comply with more stringent environmental regulations;
- changes in the determination of an appropriate rate of return on invested capital or that a utility's operating income or the rates it charges customers are too high, resulting in a rate reduction or consumer rebates;
- changes in the definition or determination of controllable or non-controllable costs;
- changes in tax law;
- changes in law or regulation that limit or otherwise affect the ability of our counterparties (including sovereign or private parties) to fulfill their obligations (including payment obligations) to us;

- changes in environmental law that impose additional costs or limit the dispatch of our generating facilities;
- changes in the definition of events that qualify as changes in economic equilibrium;
- changes in the timing of tariff increases;
- other changes in the regulatory determinations under the relevant concessions;
- other changes related to licensing or permitting which affect our ability to conduct business; or
- other changes that impact the short- or long-term price-setting mechanism in the our markets.

Furthermore, in many countries where we conduct business, the regulatory environment is constantly changing and it may be difficult to predict the impact of the regulations on our businesses. The impacts described above could also result from our efforts to comply with European Market Infrastructure Regulation, which includes regulations related to the trading, reporting and clearing of derivatives and similar regulations may be passed in other jurisdictions where we conduct business. Any of the above events may result in lower operating margins and financial results for the affected businesses.

Several of our businesses are subject to potentially significant remediation expenses, enforcement initiatives, private party lawsuits and reputational risk associated with CCR.

CCR generated at our current and former coal-fired generation plant sites, is currently handled and/or has been handled by: placement in onsite CCR ponds; disposal and beneficial use in onsite and offsite permitted, engineered landfills; use in various beneficial use applications, including encapsulated uses and structural fill; and used in permitted offsite mine reclamation. CCR currently remains onsite at several of our facilities, including in CCR ponds. The EPA's final CCR rule provides that enforcement actions can be commenced by the EPA, states, or territories, and private lawsuits. Compliance with the U.S. federal CCR rule; amendments to the federal CCR rule; or federal, state, territory, or foreign rules or programs addressing CCR may require us to incur substantial costs. In addition, the Company and our businesses may face CCR-related lawsuits in the United States and/or internationally that may expose us to unexpected potential liabilities. Furthermore, CCR-related litigation may also expose us to unexpected costs. In addition, CCR, and its production at several of our facilities, have been the subject of significant interest from environmental non-governmental organizations and have received national and local media attention. The direct and indirect effects of such media attention, and the demands of responding to and addressing it, may divert management time and attention. Any of the foregoing could have a material adverse effect on our business, financial condition, results of operations, reputation and prospects.

Some of our U.S. businesses are subject to the provisions of various laws and regulations administered by FERC, NERC and by state utility commissions that can have a material effect on our operations.

The AES Corporation is a registered electric holding company under the PUHCA 2005 as enacted as part of the EPAct 2005. PUHCA 2005 eliminated many of the restrictions that had been in place under the U.S. Public Utility Holding Company Act of 1935, while continuing to provide FERC and state utility commissions with enhanced access to the books and records of certain utility holding companies. PUHCA 2005 also creates additional potential challenges and opportunities. By removing some barriers to mergers and other potential combinations, the creation of large, geographically dispersed utility holding companies is more likely. These entities may have enhanced financial strength and therefore an increased ability to compete with us in the U.S.

Other parts of the EPAct 2005 allow FERC to remove the PURPA purchase/sale obligations from utilities if there are adequate opportunities to sell into competitive markets. FERC has exercised this power with a rebuttable presumption that utilities located within the control areas of MISO, PJM, ISO New England, Inc., the New York Independent System Operator, Inc., and ERCOT are not required to purchase or sell power from or to QFs above a certain size. Additionally, FERC has the power to remove the purchase/sale obligations of individual utilities on a case-by-case basis. While these changes do not affect existing contracts, certain of our QFs that have had sales contracts expire are now facing a more difficult market environment and that is likely to continue for other AES QFs with existing contracts that will expire over time.

FERC strongly encourages competition in wholesale electric markets. Increased competition may have the effect of lowering our operating margins. Among other steps, FERC has encouraged RTOs and ISOs to develop demand response bidding programs as a mechanism for responding to peak electric demand. These programs may reduce the value of generation assets. Similarly, FERC is encouraging the construction of new transmission

infrastructure in accordance with provisions of EPAct 2005. Although new transmission lines may increase market opportunities, they may also increase the competition in our existing markets.

FERC has civil penalty authority over violations of any provision of Part II of the FPA, which concerns wholesale generation or transmission, as well as any rule or order issued thereunder. The FPA also provides for the assessment of criminal fines and imprisonment for violations under the FPA. This penalty authority was enhanced in EPAct 2005. As a result, FERC is authorized to assess a maximum penalty authority established by statute and such penalty authority has been and will continue to be adjusted periodically to account for inflation. With this expanded enforcement authority, violations of the FPA and FERC's regulations could potentially have more serious consequences than in the past.

Pursuant to EPAct 2005, the NERC has been certified by FERC as the ERO to develop mandatory and enforceable electric system reliability standards applicable throughout the U.S. to improve the overall reliability of the electric grid. These standards are subject to FERC review and approval. Once approved, the reliability standards may be enforced by FERC independently, or, alternatively, by the ERO and regional reliability organizations with responsibility for auditing, investigating and otherwise ensuring compliance with reliability standards, subject to FERC oversight. Violations of NERC reliability standards are subject to FERC's penalty authority under the FPA and EPAct 2005.

Our U.S. utility businesses face significant regulation by their respective state utility commissions. The regulatory discretion is reasonably broad in both Indiana and Ohio and includes regulation as to services and facilities, the valuation of property, the construction, purchase, or lease of electric generating facilities, the classification of accounts, rates of depreciation, the increase or decrease in retail rates and charges, the issuance of certain securities, the acquisition and sale of some public utility properties or securities and certain other matters. These businesses face the risk of unexpected or adverse regulatory action which could have a material adverse effect on our results of operations, financial condition, and cash flows. See Item 1.—*Business—US and Utilities SBU*.

Our businesses are subject to stringent environmental laws, rules and regulations.

Our businesses are subject to stringent environmental laws and regulations by many federal, regional, state and local authorities, international treaties and foreign governmental authorities. These laws and regulations generally concern emissions into the air, effluents into the water, use of water, wetlands preservation, remediation of contamination, waste disposal, endangered species and noise regulation. Failure to comply with such laws and regulations or to obtain or comply with any associated environmental permits could result in fines or other sanctions. For example, in recent years, the EPA has issued NOVs to a number of coal-fired generating plants alleging wide-spread violations of the new source review and prevention of significant deterioration provisions of the CAA. The EPA has brought suit against and obtained settlements with many companies for allegedly making major modifications to a coal-fired generating units without proper permit approvals and without installing best available control technology. The primary focus of these NOVs has been emissions of SO₂ and NO_x and the EPA has imposed fines and required companies to install improved pollution control technologies to reduce such emissions. In addition, state regulatory agencies and non-governmental environmental organizations have pursued civil lawsuits against power plants in situations that have resulted in judgments and/or settlements requiring the installation of expensive pollution controls or the accelerated retirement of certain electric generating units.

Furthermore, Congress and other domestic and foreign governmental authorities have either considered or implemented various laws and regulations to restrict or tax certain emissions, particularly those involving air emissions and water discharges. These laws and regulations have imposed, and proposed laws and regulations could impose in the future, additional costs on the operation of our power plants. See Item 1.—*Business—Environmental and Land-Use Regulations*.

We have incurred and will continue to incur significant capital and other expenditures to comply with these and other environmental laws and regulations. Changes in, or new development of, environmental restrictions may force us to incur significant expenses or expenses that may exceed our estimates. There can be no assurance that we would be able to recover all or any increased environmental costs from our customers or that our business, financial condition, including recorded asset values or results of operations, would not be materially and adversely affected.

Concerns about GHG emissions and the potential risks associated with climate change have led to increased regulation and other actions that could impact our businesses.

International, federal and various regional and state authorities regulate GHG emissions and have created financial incentives to reduce them. In 2022, the Company's subsidiaries operated businesses that had total CO₂ emissions of approximately 40 million metric tonnes, approximately 15 million of which were emitted by our U.S. businesses (both figures are ownership adjusted). The Company uses CO₂ emission estimation methodologies supported by "The Greenhouse Gas Protocol" reporting standard on GHG emissions. For existing power generation plants, CO₂ emissions data are either obtained directly from plant continuous emission monitoring systems or calculated from actual fuel heat inputs and fuel type CO₂ emission factors. This estimate is based on a number of projections and assumptions that may prove to be incorrect, such as the forecasted dispatch, anticipated plant efficiency, fuel type, CO₂ emissions rates and our subsidiaries' achieving completion of such construction and development projects. While actual emissions may vary substantially; the projects under construction or development when completed will increase emissions of our portfolio and therefore could increase the risks associated with regulation of GHG emissions.

There currently is no U.S. federal legislation imposing mandatory GHG emission reductions (including for CO₂) that affects our electric power generation facilities; however, in 2015, the EPA promulgated a rule establishing New Source Performance Standards for CO₂ emissions for newly constructed and modified/reconstructed fossil-fueled electric utility steam generating units larger than 25 MW and in 2018 proposed revisions to the rule. In 2019, the EPA promulgated the Affordable Clean Energy (ACE) Rule which establishes heat rate improvement measures as the best system of emissions reductions for existing coal-fired electric generating units. On January 19, 2021, the D.C. Circuit vacated and remanded to the EPA the ACE Rule, but withheld issuance of the mandate that would effectuate its decision. On February 22, 2021, the D.C. Circuit granted EPA's unopposed motion for a partial stay of the issuance of the mandate on vacating the repeal of the CPP. On March 5, 2021, the D.C. Circuit issued the partial mandate effectuating the vacatur of the ACE Rule. In effect, the CPP did not take effect while the EPA is addressing the remand of the ACE rule by promulgating a new Section 111(d) rule to regulate greenhouse gases from existing electric generating units. On October 29, 2021, the U.S. Supreme Court granted petitions to review the decision by the D.C. Circuit to vacate the ACE Rule. On June 30, 2022, Supreme Court reversed the judgment of the D.C. Circuit Court and remanded for further proceedings consistent with its opinion. The opinion held that the "generation shifting" approach in the CPP exceeded the authority granted to EPA by Congress under Section 111(d) of the CAA. As a result of the June 30, 2022 Supreme Court decision, on October 27, 2022, the D.C. Circuit recalled its March 5, 2021 partial mandate and issued a new partial mandate holding pending challenges to the ACE Rule in abeyance while EPA develops a replacement rule. The impact of the results of further proceedings and potential future greenhouse gas emissions regulations remains uncertain, but it could be material. The impact of the results of such litigation and potential future greenhouse gas emissions regulations remains uncertain, but it could be material.

In 2010, the EPA adopted regulations pertaining to GHG emissions that require new and existing sources of GHG emissions to potentially obtain new source review permits from the EPA prior to construction or modification. In 2016, the U.S. Supreme Court ruled that such permitting would only be required if such sources also must obtain a new source review permit for increases in other regulated pollutants. For further discussion of the regulation of GHG emissions, see Item 1.—Business—Environmental and Land-Use Regulations—U.S. Environmental and Land-Use Legislation and Regulations—Greenhouse Gas Emissions above. The Parties to the United Nations Framework Convention on Climate Change's Paris Agreement established a long-term goal of keeping the increase in global average temperature well below 2°C above pre-industrial levels. We anticipate that the Paris Agreement will continue the trend toward efforts to decarbonize the global economy and to further limit GHG emissions. The impact of GHG regulation on our operations will depend on a number of factors, including the degree and timing of GHG emissions reductions required under any such legislation or regulation, the cost of emissions reduction equipment and the price and availability of offsets, the extent to which market based compliance options are available, the extent to which our subsidiaries would be entitled to receive GHG emissions allowances without having to purchase them in an auction or on the open market and the impact of such legislation or regulation on the ability of our subsidiaries to recover costs incurred through rate increases or otherwise. The costs of compliance could be substantial.

Our non-utility, generation subsidiaries seek to pass on any costs arising from CO₂ emissions to contract counterparties. Likewise, our utility subsidiaries seek to pass on any costs arising from CO₂ emissions to customers. However, there can be no assurance that we will effectively pass such costs onto the contract counterparties or

customers, respectively, or that the cost and burden associated with any dispute over which party bears such costs would not be burdensome and costly.

Furthermore, according to the Intergovernmental Panel on Climate Change, physical risks from climate change could include, but are not limited to, increased runoff and earlier spring peak discharge in many glacier and snow-fed rivers, warming of lakes and rivers, an increase in sea level, and changes and variability in precipitation and in the intensity and frequency of extreme weather events. Physical impacts may have the potential to significantly affect our business and operations. For example, extreme weather events could result in increased downtime and operation and maintenance costs at our electric power transmission and distribution assets and facilities. Variations in weather conditions, primarily temperature and humidity, would also be expected to affect the energy needs of customers. A decrease in energy consumption could decrease our revenues. In addition, while revenues would be expected to increase if the energy consumption of customers increased, such increase could prompt the need for additional investment in generation capacity.

In addition to government regulators, many groups, including politicians, environmentalists, the investor community and other private parties have expressed increasing concern about GHG emissions. New regulation, such as the initiatives in Chile, Hawaii, and the Puerto Rico Energy Public Policy Act, may adversely affect our operations. See Item 7.—*Management's Discussion and Analysis—Key Trends and Uncertainties—Decarbonization Initiatives*. Responding to these decarbonization initiatives, including developments in our strategy in line with these initiatives may present challenges to our business. We may be unable to develop our renewables platform as quickly as anticipated. Further, we may be unable to dispose of coal-fired generation assets at anticipated prices, the estimated useful lives of these assets may decrease, and the value of such assets may be impaired. These initiatives could also result in the early retirement of coal-fired generation facilities, which could result in stranded costs if regulators disallow full recovery of investments.

Negative public perception of our GHG emissions could have an adverse effect on our relationships with third parties, our ability to attract additional customers, our business development opportunities, and our ability to access finance and insurance for our coal-fired generation assets.

In addition, plaintiffs previously brought tort lawsuits that were dismissed against the Company because of its subsidiaries' GHG emissions. Future similar lawsuits may prevail or result in damages awards or other relief. We may also be subject to risks associated with the impact on weather conditions. See *Certain of our businesses are sensitive to variations in weather and hydrology* and *Severe weather and natural disasters may present significant risks to our business and adversely affect our financial results* within this section for more information. If any of the foregoing risks materialize, costs may increase or revenues may decrease and there could be a material adverse effect on our results of operations, financial condition, cash flows and reputation.

Concerns about data privacy have led to increased regulation and other actions that could impact our businesses.

In the ordinary course of business, we collect and retain sensitive information, including personal identifiable information about customers, employees, customer energy usage and other information as well as information regarding business partners and other third parties, some of which may constitute confidential information. The theft, damage or improper disclosure of sensitive electronic data collected by us can subject us to penalties for violation of applicable privacy laws, subject us to claims from third parties, require compliance with notification and monitoring regulations, and harm our reputation. Although we maintain technical and organizational measures to protect personal identifiable information and other confidential information, breaches of, or disruptions to, our information technology systems could result in legal claims, liability or penalties under privacy laws or damage to operations or to the company's reputation, which could adversely affect our business.

We are also subject to various data privacy and security laws and regulations globally, as well as contractual requirements, as a result of having access to and processing confidential and personal identifiable information in the course of business. If we are unable to comply with applicable laws and regulations or with our contractual commitments, as well as maintain reliable information technology systems and appropriate controls with respect to privacy and security requirements, we may suffer regulatory consequences that could be costly or otherwise adversely affect our business. In addition, any actual or perceived failure on the part of one of our equity affiliates could have a material adverse impact on our results of operations and prospects.

Tax legislation initiatives or challenges to our tax positions could adversely affect us.

We operate in the U.S. and various non-U.S. jurisdictions and are subject to the tax laws and regulations of the U.S. federal, state and local governments and of many non-U.S. jurisdictions. From time to time, legislative measures may be enacted that could adversely impact our overall tax positions regarding income or other taxes, our effective tax rate or tax payments. For example, in the third quarter of 2022, the Inflation Reduction Act (the "IRA") was signed into law in the United States. The IRA includes provisions that are expected to benefit the U.S. clean energy industry, including increases, extensions and/or new tax credits for onshore and offshore wind, solar, storage and hydrogen projects. We expect that the extension of the current solar investment tax credits ("ITCs"), as well as higher credits available for projects that satisfy wage and apprenticeship requirements, will increase demand for our renewables products. In the U.S., the IRA includes a 15% corporate alternative minimum tax based on adjusted financial statement income. We are currently evaluating the applicability and effect of the new law and additional guidance issued in the fourth quarter of 2022.

With respect to international tax reform, in the fourth quarter of 2022, the European Commission adopted an amended Directive on Pillar 2 establishing a global minimum tax at a 15% rate. The adoption requires EU Member States to transpose the Directive into their respective national laws by December 31, 2023, for the rules to come into effect as of January 1, 2024. We will continue to monitor issuance of draft legislation in Bulgaria and other relevant EU Member States. The Impact to the Company remains unknown but may be material.

Risks Related to our Indebtedness and Financial Condition

We have a significant amount of debt.

As of December 31, 2022, we had approximately \$23 billion of outstanding indebtedness on a consolidated basis. All outstanding borrowings under The AES Corporation's revolving credit facility are unsecured. Most of the debt of The AES Corporation's subsidiaries, however, is secured by substantially all of the assets of those subsidiaries. A substantial portion of cash flow from operations must be used to make payments on our debt. Furthermore, since a significant percentage of our assets are used to secure this debt, this reduces the amount of collateral available for future secured debt or credit support and reduces our flexibility in operating these secured assets. This level of indebtedness and related security could have other consequences, including:

- making it more difficult to satisfy debt service and other obligations;
- increasing our vulnerability to general adverse industry and economic conditions, including adverse changes in foreign exchange rates, interest rates and commodity prices;
- reducing available cash flow to fund other corporate purposes and grow our business;
- limiting our flexibility in planning for, or reacting to, changes in our business and the industry;
- placing us at a competitive disadvantage to our competitors that are not as highly leveraged; and
- limiting, along with financial and other restrictive covenants relating to such indebtedness, our ability to borrow additional funds, pay cash dividends or repurchase common stock.

The agreements governing our indebtedness, including the indebtedness of our subsidiaries, limit, but do not prohibit the incurrence of additional indebtedness. If we were to become more leveraged, the risks described above would increase. Further, our actual cash requirements may be greater than expected and our cash flows may not be sufficient to repay all of the outstanding debt as it becomes due. In that event, we may not be able to borrow money, sell assets, raise equity or otherwise raise funds on acceptable terms to refinance our debt as it becomes due. In addition, our ability to refinance existing or future indebtedness will depend on the capital markets and our financial condition at that time. Any refinancing of our debt could result in higher interest rates or more onerous covenants that restrict our business operations. See Note 11—Debt included in Item 8.—*Financial Statements and Supplementary Data* for a schedule of our debt maturities.

The AES Corporation's ability to make payments on its outstanding indebtedness is dependent upon the receipt of funds from our subsidiaries.

The AES Corporation is a holding company with no material assets other than the stock of its subsidiaries. Almost all of The AES Corporation's cash flow is generated by the operating activities of its subsidiaries. Therefore, The AES Corporation's ability to make payments on its indebtedness and to fund its other obligations is dependent not only on the ability of its subsidiaries to generate cash, but also on the ability of the subsidiaries to distribute cash to it in the form of dividends, fees, interest, tax sharing payments, loans or otherwise. Our subsidiaries face various

restrictions in their ability to distribute cash. Most of the subsidiaries are obligated, pursuant to loan agreements, indentures or non-recourse financing arrangements, to satisfy certain restricted payment covenants or other conditions before they may make distributions. Business performance and local accounting and tax rules may also limit dividend distributions. Subsidiaries in foreign countries may also be prevented from distributing funds as a result of foreign governments restricting the repatriation of funds or the conversion of currencies. Our subsidiaries are separate and distinct legal entities and, unless they have expressly guaranteed The AES Corporation's indebtedness, have no obligation, contingent or otherwise, to pay any amounts due pursuant to such debt or to make any funds available whether by dividends, fees, loans or other payments.

Existing and potential future defaults by subsidiaries or affiliates could adversely affect us.

We attempt to finance our domestic and foreign projects through non-recourse debt or "non-recourse financing" that requires the loans to be repaid solely from the project's revenues and provide that the repayment of the loans (and interest thereon) is secured solely by the capital stock, physical assets, contracts and cash flow of that project subsidiary or affiliate. As of December 31, 2022, we had approximately \$23 billion of outstanding indebtedness on a consolidated basis, of which approximately \$3.9 billion was recourse debt of the Parent Company and approximately \$19.4 billion was non-recourse debt. In some non-recourse financings, the Parent Company has explicitly agreed, in the form of guarantees, indemnities, letters of credit, letter of credit reimbursement agreements and agreements to pay, to undertake certain limited obligations and contingent liabilities, most of which will only be effective or will be terminated upon the occurrence of future events.

Certain of our subsidiaries are in default with respect to all or a portion of their outstanding indebtedness. The total debt classified as current in our Consolidated Balance Sheets related to such defaults was \$177 million as of December 31, 2022. While the lenders under our non-recourse financings generally do not have direct recourse to the Parent Company, such defaults under non-recourse financings can:

- reduce the Parent Company's receipt of subsidiary dividends, fees, interest payments, loans and other sources of cash because a subsidiary will typically be prohibited from distributing cash to the Parent Company during the pendency of any default;
- trigger The AES Corporation's obligation to make payments under any financial guarantee, letter of credit or other credit support provided to or on behalf of such subsidiary;
- trigger defaults in the Parent Company's outstanding debt. For example, The AES Corporation's revolving credit facility and outstanding senior notes include events of default for certain bankruptcy related events involving material subsidiaries and relating to accelerations of outstanding material debt of material subsidiaries or any subsidiaries that in the aggregate constitute a material subsidiary; or
- result in foreclosure on the assets that are pledged under the non-recourse financings, resulting in write-downs of assets and eliminating any and all potential future benefits derived from those assets.

None of the projects that are in default are owned by subsidiaries that, individually or in the aggregate, meet the applicable standard of materiality in The AES Corporation's revolving credit facility or other debt agreements to trigger an event of default or permit acceleration under such indebtedness. However, as a result of future mix of distributions, write-down of assets, dispositions and other changes to our financial position and results of operations, one or more of these subsidiaries, individually or in the aggregate, could fall within the applicable standard of materiality and thereby upon an acceleration of such subsidiary's debt, trigger an event of default and possible acceleration of Parent Company indebtedness.

The AES Corporation has significant cash requirements and limited sources of liquidity.

The AES Corporation requires cash primarily to fund: principal repayments of debt, interest, dividends on our common stock, acquisitions, construction and other project commitments, other equity commitments (including business development investments); equity repurchases; taxes and Parent Company overhead costs. Our principal sources of liquidity are: dividends and other distributions from our subsidiaries, proceeds from financings at the Parent Company, and proceeds from asset sales. See Item 7.—*Management's Discussion and Analysis — Capital Resources and Liquidity*. We believe that these sources will be adequate to meet our obligations for the foreseeable future, based on a number of material assumptions about access the capital or commercial lending markets, the operating and financial performance of our subsidiaries, exchange rates, our ability to sell assets, and the ability of our subsidiaries to pay dividends and other distributions; however, there can be no assurance that these sources will be available when needed or that our actual cash requirements will not be greater than expected. In addition, our cash flow may not be sufficient to repay our debt obligations at maturity and we may have to refinance such

obligations. There can be no assurance that we will be successful in obtaining such refinancing on acceptable terms.

Our ability to grow our business depends on our ability to raise capital on favorable terms.

We rely on the capital markets as a source of liquidity for capital requirements not satisfied by operating cash flows. Our ability to arrange for financing on either a recourse or non-recourse basis and the costs of such capital are dependent on numerous factors, some of which are beyond our control, including: general economic and capital market conditions; the availability of bank credit; the availability of tax equity partners; the financial condition, performance and prospects of AES as well as our competitors; and changes in tax and securities laws. Should access to capital not be available to us, we may have to sell assets or cease further investments, including the expansion or improvement of existing facilities, any of which would affect our future growth.

A downgrade in the credit ratings of The AES Corporation or its subsidiaries could adversely affect our access to the capital markets, interest expense, liquidity or cash flow.

If any of the credit ratings of the The AES Corporation and its subsidiaries were to be downgraded, our ability to raise capital on favorable terms could be impaired and our borrowing costs could increase. Furthermore, counterparties may no longer be willing to accept general unsecured commitments by The AES Corporation to provide credit support. Accordingly, we may be required to provide some other form of assurance, such as a letter of credit and/or collateral, to backstop or replace any credit support by The AES Corporation, which reduces our available credit. There can be no assurance that counterparties will accept such guarantees or other assurances.

The market price of our common stock may be volatile.

The market price and trading volumes of our common stock could fluctuate substantially due to factors including general economic conditions, conditions in our industry and our markets, environmental and economic developments, and general credit and capital markets conditions, as well as developments specific to us, including risks described in this section, failing to meet our publicly announced guidance or key trends and other matters described in Item 7.—*Management's Discussion and Analysis of Financial Condition and Results of Operations*.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

We maintain offices in many places around the world, generally pursuant to the provisions of long- and short-term leases, none of which we believe are material. With a few exceptions, our facilities, which are described in Item 1—*Business* of this Form 10-K, are subject to mortgages or other liens or encumbrances as part of the project's related finance facility. In addition, the majority of our facilities are located on land that is leased. However, in a few instances, no accompanying project financing exists for the facility, and in a few of these cases, the land interest may not be subject to any encumbrance and is owned outright by the subsidiary or affiliate.

ITEM 3. LEGAL PROCEEDINGS

The Company is involved in certain claims, suits and legal proceedings in the normal course of business. The Company has accrued for litigation and claims when it is probable that a liability has been incurred and the amount of loss can be reasonably estimated. The Company believes, based upon information it currently possesses and taking into account established reserves for estimated liabilities and its insurance coverage, that the ultimate outcome of these proceedings and actions is unlikely to have a material adverse effect on the Company's consolidated financial statements. It is reasonably possible, however, that some matters could be decided unfavorably to the Company and could require the Company to pay damages or make expenditures in amounts that could be material, but cannot be estimated as of December 31, 2022.

In December 2001, Grid Corporation of Odisha ("GRIDCO") served a notice to arbitrate pursuant to the Indian Arbitration and Conciliation Act of 1996 on the Company, AES Orissa Distribution Private Limited ("AES ODPL"), and Jyoti Structures ("Jyoti") pursuant to the terms of the shareholders agreement between GRIDCO, the Company, AES ODPL, Jyoti and the Central Electricity Supply Company of Orissa Ltd. ("CESCO"), an affiliate of the Company. In the arbitration, GRIDCO asserted that a comfort letter issued by the Company in connection with the Company's indirect investment in CESCO obligates the Company to provide additional financial support to cover all of CESCO's financial obligations to GRIDCO. GRIDCO appeared to be seeking approximately \$189 million in damages, plus

undisclosed penalties and interest, but a detailed alleged damage analysis was not filed by GRIDCO. The Company counterclaimed against GRIDCO for damages. In June 2007, a 2-to-1 majority of the arbitral tribunal rendered its award rejecting GRIDCO's claims and holding that none of the respondents, the Company, AES ODPL, or Jyoti, had any liability to GRIDCO. The respondents' counterclaims were also rejected. A majority of the tribunal later awarded the respondents, including the Company, some of their costs relating to the arbitration. GRIDCO filed challenges of the tribunal's awards with the local Indian court. GRIDCO's challenge of the costs award has been dismissed by the court, but its challenge of the liability award remains pending. A hearing on the liability award has not taken place to date. The Company believes that it has meritorious defenses to the claims asserted against it and will defend itself vigorously in these proceedings; however, there can be no assurances that it will be successful in its efforts.

Pursuant to their environmental audit, AES Sul and AES Florestal discovered 200 barrels of solid creosote waste and other contaminants at a pole factory that AES Florestal had been operating. The conclusion of the audit was that a prior operator of the pole factory, Companhia Estadual de Energia ("CEEE"), had been using those contaminants to treat the poles that were manufactured at the factory. On their initiative, AES Sul and AES Florestal communicated with Brazilian authorities and CEEE about the adoption of containment and remediation measures. In March 2008, the State Attorney of the state of Rio Grande do Sul, Brazil filed a public civil action against AES Sul, AES Florestal and CEEE seeking an order requiring the companies to mitigate the contaminated area located on the grounds of the pole factory and an indemnity payment of approximately R\$6 million (\$1 million). In October 2011, the State Attorney filed a request for an injunction ordering the defendant companies to contain and remove the contamination immediately. The court granted injunctive relief on October 18, 2011, but determined that only CEEE was required to perform the removal work. In May 2012, CEEE began the removal work in compliance with the injunction. The case is now awaiting judgment. The removal and remediation costs are estimated to be approximately R\$15 million to R\$60 million (\$3 million to \$11 million), and there could be additional costs which cannot be estimated at this time. In June 2016, the Company sold AES Sul to CPFL Energia S.A. and as part of the sale, AES Guaiba, a holding company of AES Sul, retained the potential liability relating to this matter. The Company believes that there are meritorious defenses to the claims asserted against it and will defend itself vigorously in these proceedings; however, there can be no assurances that it will be successful in its efforts.

In September 2015, AES Southland Development, LLC and AES Redondo Beach, LLC filed a lawsuit against the California Coastal Commission (the "CCC") over the CCC's determination that the site of AES Redondo Beach included approximately 5.93 acres of CCC-jurisdictional wetlands. The CCC has asserted that AES Redondo Beach has improperly installed and operated water pumps affecting the alleged wetlands in violation of the California Coastal Act and Redondo Beach Local Coastal Program. Potential outcomes of the CCC determination could include an order requiring AES Redondo Beach to perform a restoration and/or pay fines or penalties. AES Redondo Beach believes that it has meritorious arguments concerning the underlying CCC determination, but there can be no assurances that it will be successful. On March 27, 2020, AES Redondo Beach, LLC sold the site to an unaffiliated third-party purchaser that assumed the obligations contained within these proceedings. On May 26, 2020, CCC staff sent AES a NOV directing AES to submit a Coastal Development Permit ("CDP") application for the removal of the water pumps within the alleged wetlands. AES has submitted the CDP to the permitting authority, the City of Redondo Beach ("the City"), with respect to AES' plans to disable or remove the pumps. The NOV also directed AES to submit technical analysis regarding additional water pumps located within onsite electrical vaults and a CDP application for their continued operation. AES has responded to the CCC, providing the requested analysis and seeking further discussion with the agency regarding the CDP. On October 14, 2020, the City deemed the CDP application to be complete and indicated a public hearing will be required, at which time AES must present additional information and analysis on the pumps within the alleged wetlands and the onsite electrical vaults.

In October 2015, AES Indiana received an NOV alleging violations of the Clean Air Act ("CAA"), the Indiana State Implementation Plan ("SIP"), and the Title V operating permit related to alleged particulate and opacity violations at Petersburg Station Unit 3. In addition, in February 2016, AES Indiana received an NOV from the EPA alleging violations of New Source Review and other CAA regulations, the Indiana SIP, and the Title V operating permit at Petersburg Station. On August 31, 2020, AES Indiana reached a settlement with the EPA, the DOJ and the Indiana Department of Environmental Management ("IDEM"), resolving these purported violations of the CAA at Petersburg Station. The settlement agreement, in the form of a proposed judicial consent decree, was approved and entered by the U.S. District Court for the Southern District of Indiana on March 23, 2021, and includes, among other items, the following requirements: annual caps on NO_x and SO₂ emissions and more stringent emissions limits than AES Indiana's current Title V air permit; payment of civil penalties totaling \$1.5 million; a \$5 million environmental mitigation project consisting of the construction and operation of a new, non-emitting source of generation at the site; expenditure of \$0.3 million on a state-only environmentally beneficial project to preserve

local, ecologically-significant lands; and retirement of Units 1 and 2 prior to July 1, 2023. If AES Indiana does not meet the retirement obligation, it must install a Selective Non-Catalytic Reduction System ("SNCR") on Unit 4.

In October 2017, the Maritime Prosecution Office from Valparaíso issued a ruling alleging responsibility by AES Andes for the presence of coal waste on Ventanas beach, and proposed a fine before the Maritime Governor, of approximately \$395,000. AES Andes submitted its statement of defense, denying the allegations. In May 2021, AES Andes was notified of an amended Opinion of the Maritime Prosecution Office which extends the alleged liability to a third party and reduces the proposed fine to AES Andes to approximately \$372,000. On August 18, the Maritime Governor issued a resolution affirming the proposed fine, and on September 8, AES Andes filed an administrative action with the Maritime Governor requesting reconsideration of the fine. On December 28, 2021 the resolution rejecting the reinstatement appeal was notified and on January 17, 2022 AES Andes filed an appeal against that ruling. In April 2022, Puerto Ventanas requested that the Maritime Authority join this proceeding with a parallel proceeding; however, the request was rejected. In May 2022, the General Director of the Maritime Territory and Merchant Marine of the Chilean Navy rejected AES Andes' appeal and imposed a fine of \$341,363. AES Andes will continue with administrative appeals. AES Andes believes that it has meritorious defenses to the allegations; however, there are no assurances it will be successful.

In December 2018, a lawsuit was filed in Dominican Republic civil court against the Company, AES Puerto Rico, and three other AES affiliates. The lawsuit purports to be brought on behalf of over 100 Dominican claimants, living and deceased, and appears to seek relief relating to CCRs that were delivered to the Dominican Republic in 2004. The lawsuit generally alleges that the CCRs caused personal injuries and deaths and demands \$476 million in alleged damages. The lawsuit does not identify, or provide any supporting information concerning, the alleged injuries of the claimants individually. Nor does the lawsuit provide any information supporting the demand for damages or explaining how the quantum was derived. The relevant AES companies believe that they have meritorious defenses to the claims asserted against them and will defend themselves vigorously in this proceeding; however, there can be no assurances that they will be successful in their efforts.

In February 2019, a separate lawsuit was filed in Dominican Republic civil court against the Company, AES Puerto Rico, two other AES affiliates, and an unaffiliated company and its principal. The lawsuit purports to be brought on behalf of over 200 Dominican claimants, living and deceased, and appears to seek relief relating to CCRs that were delivered to the Dominican Republic in 2003 and 2004. The lawsuit generally alleges that the CCRs caused personal injuries and deaths and demands over \$900 million in alleged damages. The lawsuit does not identify, or provide any supporting information concerning, the alleged injuries of the claimants individually, nor does the lawsuit provide any information supporting the demand for damages or explaining how the quantum was derived. In August 2020, at the request of the relevant AES companies, the case was transferred to a different civil court. Preliminary hearings have taken place and are ongoing. The relevant AES companies believe that they have meritorious defenses to the claims asserted against them and will defend themselves vigorously in this proceeding; however, there can be no assurances that they will be successful in their efforts.

In October 2019, the Superintendency of the Environment (the "SMA") notified AES Andes of certain alleged breaches associated with the environmental permit of the Ventanas Complex, initiating a sanctioning process through Exempt Resolution N° 1 / ROL D-129-2019. The alleged charges include exceeding generation limits, failing to reduce emissions during episodes of poor air quality, exceeding limits on discharges to the sea, and exceeding noise limits. AES Andes has submitted a proposed "Compliance Program" to the SMA for the Ventanas Complex. The latest version of this Compliance Program was submitted on May 26, 2021. On December 30, 2021, the Compliance Program was approved by the SMA. However an ex officio action was brought by the SMA due to alleged exceedances of generation limits, which would require the Company to reduce SO₂, NO_x and PM emissions in order to achieve the emissions offset established in the Compliance Program. On January 6, 2022, AES Andes filed a reposition with the SMA seeking modification of the means for compliance with the ex officio action. On January 17, 2023, the SMA approved street paving measures, or alternatively a program providing heaters for community members, as the means to satisfy the air emissions offsets in the approved Compliance Plan. Fines are possible if the SMA determines there is an unsatisfactory execution of the Compliance Program. The cost of proposed Compliance Program is approximately \$10.8 million.

In March 2020, Mexico's Comisión Federal de Electricidad ("CFE") served an arbitration demand upon AES Mérida III. CFE makes allegations that AES Mérida III is in breach of its obligations under a power and capacity purchase agreement ("Contract") between the two parties, which allegations related to CFE's own failure to provide fuel within the specifications of the Contract. CFE seeks to recover approximately \$200 million in payments made to AES Mérida under the Contract as well as approximately \$480 million in alleged damages for having to acquire

power from alternative sources in the Yucatan Peninsula. AES Mérida has filed an answer denying liability to CFE and asserting a counterclaim for damages due to CFE's breach of its obligations. The parties submitted their respective initial briefs and supporting evidence in December 2020. After additional briefing, the evidentiary hearing took place in November 2021. Closing arguments were heard in May 2022. In November 2022, the arbitration Tribunal issued its decision in the case, rejecting CFE's claims for damages and granting AES Mérida a net amount of damages on AES Mérida's counterclaims. It is unclear whether CFE will comply with the decision or will attempt to challenge it. AES Mérida believes that it has meritorious defenses and claims and will assert them vigorously in this dispute; however, there can be no assurances that it will be successful in its efforts.

On May 12, 2021, the Mexican Federal Attorney for Environmental Protection (the "Authority") initiated an environmental audit at the Termoelectrica del Golfo ("TEG") and Termoelectrica del Peñoles ("TEP") thermal generating facilities. On July 15, 2022, TEG was notified of the resolution issued by the Authority, which alleges breaches of air emission regulations, including failure to submit reports. The resolution imposes a fine of \$8,467,360 pesos (approximately USD \$400,000). The facility filed a nullity judgment to challenge the resolution, and on September 8, 2022, a provisional injunction was granted by the Tribunal, subject to TEG's presentation of a warranty, which could include a corporate guaranty or bail. The provisional injunction temporarily suspends the obligation to pay the fine while the Tribunal considers a definitive injunction, and potentially, a sentence dismissing the fine. On December 2, 2022, TEG presented a bail as guarantee for the injunction, which was rejected by the local tax authority. TEG challenged the tax authority's denial through an amparo claim on January 10, 2023. No resolution for TEP's audit has been issued, and on September 9, 2022, TEP filed an amparo claim challenging the inaction of the Authority on the environmental audit. The amparo claim was admitted on October 17, 2022. The Company believes that it has meritorious defenses to the claims asserted against it and will defend itself vigorously in these proceedings; however, there can be no assurances that it will be successful in its efforts.

In February 2022, a lawsuit was filed in Dominican Republic civil court against the Company. The lawsuit purports to be brought on behalf of over 425 Dominican claimants, living and deceased, and appears to seek relief relating to CCRs that were delivered to the Dominican Republic in 2003 and 2004. The lawsuit generally alleges that the CCRs caused personal injuries and deaths and demands over \$600 million in alleged damages. The lawsuit does not identify or provide any supporting information concerning the alleged injuries of the claimants individually. Nor does the lawsuit provide any information supporting the demand for damages or explaining how the quantum was derived. The Company believes that it has meritorious defenses to the claims asserted against it and will defend itself vigorously in this proceeding; however, there can be no assurances that it will be successful in its efforts.

On July 25, 2022, AES Puerto Rico, LP ("AES-PR") received from the EPA an NOV alleging certain violations of the CAA at AES-PR's coal-fired power facility in Guayama, Puerto Rico. The NOV alleges AES-PR exceeded an emission limit and did not continuously operate certain monitoring equipment, conduct certain analyses and testing, maintain complete records, and submit certain reports as required by the EPA's Mercury and Air Toxics Standards. The NOV further alleges AES-PR did not comply fully with the facility's Title V operating permit. AES-PR is engaging in discussions with the EPA about the NOV. AES-PR will defend its interests, but we cannot predict the outcome of this matter at this time. However, settlements and litigated outcomes of CAA claims alleged against other coal-fired power plants have required companies to pay civil penalties and undertake remedial measures.

In April 2022, the Superintendency of the Environment (the "SMA") notified AES Andes of certain alleged breaches associated with the construction of the Mesamávida wind project, initiating a sanctioning process. The alleged charges include untimely implementation of road improvement measures and road use schedules and the failure to identify all noise receptors closest to the first construction phases of the project. On June 23, 2022, the SMA addressed the charges to Energía Eólica Mesamávida SpA. On June 28, 2022, Energía Eólica Mesamávida SpA submitted a proposed compliance program, with an estimated cost of \$4.3 million, which was subsequently approved by the SMA. On November 9, 2022, opponents to the project submitted before the Third Environmental Court a judicial action challenging the approval of this compliance program. If the third-party appeal is successful or if the SMA determines there is an unsatisfactory execution of this compliance program, fines are possible. AES Andes believes that it has meritorious defenses to the third-party challenge and will defend itself vigorously in these proceedings; however, there can be no assurances that it will be successful in its efforts.

In September 2022, the SMA initiated sanctioning proceedings against the Cochrane Power Station on four alleged charges, including one instance of noncompliance categorized as "serious" with the Environmental Qualification Resolution (RCA). The allegations included structural and monitoring deficiencies, as well as an unauthorized underwater outfall discharging from the facility. On December 12, 2022, AES Andes submitted a

proposed compliance program to the SMA, with an estimated cost of approximately \$340,000, which is currently under review. Fines are possible if the SMA does not approve the compliance program or if the SMA determines that the compliance program was not executed to its satisfaction.

On January 26, 2023, the SMA notified Alto Maipo SpA of four alleged charges relating to the Alto Maipo facility, all which are categorized by the SMA as “serious.” The alleged charges include untimely completion of intake works and insufficient capture by the provisional works, irrigation water outlet and canal contemplated by an agreement with local communities; non-compliance with the details of the forest management plans and intervention in unauthorized areas; construction of a road in a restricted paleontological area; and unlawful moving of fauna. The Alto Maipo project intends to submit a compliance program for consideration by the SMA. The costs of any such compliance program are uncertain. If a compliance program is not agreed or executed to the satisfaction of the SMA, fines, revocation of the facility’s RCA environmental permit approved by the SMA, or closure are possible outcomes for such alleged serious violations under applicable regulations.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Recent Sales of Unregistered Securities

None.

Purchases of Equity Securities by the Issuer and Affiliated Purchasers

Stock Repurchase Program — The Board authorization permits the Parent Company to repurchase stock through a variety of methods, including open market repurchases and/or privately negotiated transactions. There can be no assurances as to the amount, timing or prices of repurchases, which may vary based on market conditions and other factors. The Stock Repurchase Program does not have an expiration date and can be modified or terminated by the Board of Directors at any time. The cumulative repurchases from the commencement of the Stock Repurchase Program in July 2010 through December 31, 2022 totaled 154.3 million shares for a total cost of \$1.9 billion, at an average price per share of \$12.12 (including a nominal amount of commissions). As of December 31, 2022, \$264 million remained available for repurchase under the Stock Repurchase Program. No repurchases were made by The AES Corporation of its common stock in 2022, 2021, and 2020.

Market Information

Our common stock is traded on the New York Stock Exchange under the symbol "AES."

Dividends

The Parent Company commenced a quarterly cash dividend in the fourth quarter of 2012. The Parent Company has increased this dividend annually and the quarterly per-share cash dividends for the last three years are displayed below.

Commencing the fourth quarter of	2022	2021	2020
Cash dividend	\$0.1659	\$0.1580	\$0.1505

The fourth quarter 2022 cash dividend is to be paid in the first quarter of 2023. There can be no assurance the AES Board will declare a dividend in the future or, if declared, the amount of any dividend. Our ability to pay dividends will also depend on receipt of dividends from our various subsidiaries across our portfolio.

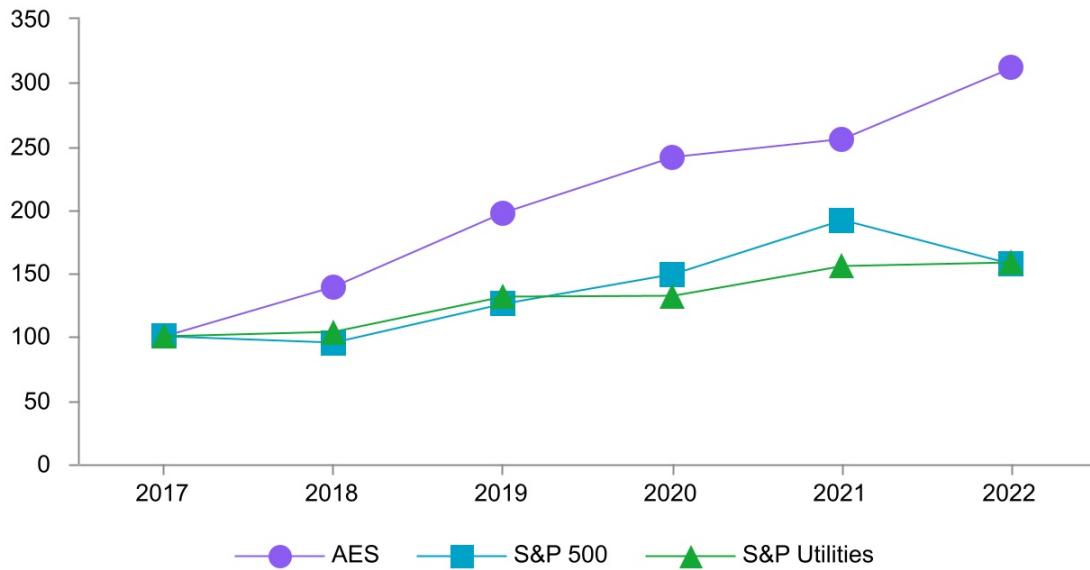
Under the terms of our revolving credit facility, which we entered into with a commercial bank syndicate, we have limitations on our ability to pay cash dividends and/or repurchase stock. Our subsidiaries' ability to declare and pay cash dividends to us is also subject to certain limitations contained in the project loans, governmental provisions and other agreements to which our subsidiaries are subject. See the information contained under Item 12.—*Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters—Securities Authorized for Issuance under Equity Compensation Plans* of this Form 10-K.

Holders

As of February 27, 2023, there were approximately 3,508 record holders of our common stock.

Performance Graph

**THE AES CORPORATION
PEER GROUP INDEX/STOCK PRICE PERFORMANCE**



Source: Bloomberg

We have selected the Standard and Poor's ("S&P") 500 Utilities Index as our peer group index. The S&P 500 Utilities Index is a published sector index comprising the 28 electric and gas utilities included in the S&P 500.

The five year total return chart assumes \$100 invested on December 31, 2016 in AES Common Stock, the S&P 500 Index and the S&P 500 Utilities Index. The information included under the heading *Performance Graph* shall not be considered "filed" for purposes of Section 18 of the Securities Exchange Act of 1934 or incorporated by reference in any filing under the Securities Act of 1933 or the Securities Exchange Act of 1934.

ITEM 6. SELECTED FINANCIAL DATA

The following table presents our selected financial data as of the dates and for the periods indicated. This data should be read together with Item 7.—*Management's Discussion and Analysis of Financial Condition and Results of Operations* and the Consolidated Financial Statements and the notes thereto included in Item 8.—*Financial Statements and Supplementary Data* of this Form 10-K. The selected financial data for each of the years in the five year period ended December 31, 2022 have been derived from our audited Consolidated Financial Statements. Prior period amounts have been restated to reflect discontinued operations in all periods presented. Our historical results are not necessarily indicative of our future results.

Acquisitions, disposals, reclassifications, and changes in accounting principles affect the comparability of information included in the tables below. Please refer to the Notes to the Consolidated Financial Statements included in Item 8.—*Financial Statements and Supplementary Data* of this Form 10-K for further explanation of the effect of such activities. Please also refer to Item 1A.—*Risk Factors* of this Form 10-K and Note 27—*Risks and Uncertainties* to the Consolidated Financial Statements included in Item 8.—*Financial Statements and Supplementary Data* of this Form 10-K for certain risks and uncertainties that may cause the data reflected herein not to be indicative of our future financial condition or results of operations.

Selected Financial Data

	2022	2021	2020	2019	2018
Statement of Operations Data for the Years Ended December 31:					
Revenue	\$ 12,617	\$ 11,141	\$ 9,660	\$ 10,189	\$ 10,736
Income (loss) from continuing operations ⁽¹⁾	(505)	(955)	149	477	1,349
Income (loss) from continuing operations attributable to The AES Corporation, net of tax	(546)	(413)	43	302	985
Income from discontinued operations attributable to The AES Corporation, net of tax ⁽²⁾	—	4	3	1	218
Net income (loss) attributable to The AES Corporation	\$ (546)	\$ (409)	\$ 46	\$ 303	\$ 1,203
Per Common Share Data					
Basic earnings (loss) per share:					
Income (loss) from continuing operations attributable to The AES Corporation common stockholders, net of tax	\$ (0.82)	\$ (0.62)	\$ 0.06	\$ 0.46	\$ 1.49
Income from discontinued operations attributable to The AES Corporation common stockholders, net of tax	—	0.01	0.01	—	0.33
Net income (loss) attributable to The AES Corporation common stockholders	\$ (0.82)	\$ (0.61)	\$ 0.07	\$ 0.46	\$ 1.82
Diluted earnings (loss) per share:					
Income (loss) from continuing operations attributable to The AES Corporation common stockholders, net of tax	\$ (0.82)	\$ (0.62)	\$ 0.06	\$ 0.45	\$ 1.48
Income from discontinued operations attributable to The AES Corporation common stockholders, net of tax	—	0.01	0.01	—	0.33
Net income (loss) attributable to The AES Corporation common stockholders	\$ (0.82)	\$ (0.61)	\$ 0.07	\$ 0.45	\$ 1.81
Dividends Declared Per Common Share					
	\$ 0.64	\$ 0.61	\$ 0.58	\$ 0.55	\$ 0.53
Cash Flow Data for the Years Ended December 31:					
Net cash provided by operating activities	\$ 2,715	\$ 1,902	\$ 2,755	\$ 2,466	\$ 2,343
Net cash used in investing activities	(5,836)	(3,051)	(2,295)	(2,721)	(505)
Net cash provided by (used in) financing activities	3,758	797	(78)	(86)	(1,643)
Total increase (decrease) in cash, cash equivalents and restricted cash	603	(343)	255	(431)	215
Cash, cash equivalents and restricted cash, ending	2,087	1,484	1,827	1,572	2,003
Balance Sheet Data at December 31:					
Total assets	\$ 38,363	\$ 32,963	\$ 34,603	\$ 33,648	\$ 32,521
Non-recourse debt (noncurrent)	17,846	13,603	15,005	14,914	13,986
Recourse debt (noncurrent)	3,894	3,729	3,446	3,391	3,650
Redeemable stock of subsidiaries	1,321	1,257	872	888	879
Accumulated deficit	(1,635)	(1,089)	(680)	(692)	(1,005)
The AES Corporation stockholders' equity	2,437	2,798	2,634	2,996	3,208

⁽¹⁾ Includes pre-tax losses on sales of business interests of \$9 million, \$1.7 billion, and \$95 million for the years ended December 31, 2022, 2021, and 2020, respectively, and pre-tax gains of \$28 million and \$984 million for the years ended December 31, 2019, and 2018, respectively; pre-tax impairment expense of \$1.5 billion, \$1.6 billion, \$864 million, \$185 million, and \$208 million for the years ended December 31, 2022, 2021, 2020, 2019, and 2018, respectively; other-than-temporary impairment of equity method investments of \$175 million, \$202 million, \$92 million, and \$147 million for the years ended December 31, 2022, 2020, 2019, and 2018, respectively; income tax benefit of \$176 million related to the reversal of uncertain tax positions effectively settled upon the closure of the Company's 2017 U.S. tax return exam for the year ended December 31, 2021 and income tax expense of \$194 million related to the one-time transition tax on foreign earnings and income tax benefit of \$77 million related to the remeasurement of deferred tax assets and liabilities to the lower corporate tax rate for the year ended December 31, 2018; and net equity in losses of affiliates, primarily at Guacolda, of \$123 million, and \$172 million, for the years ended December 31, 2020 and 2019, respectively. See Note 24—Held-for-Sale and Dispositions, Note 22—Asset Impairment Expense, Note 9—Goodwill and Other Intangible Assets, Note 8—Investments in and Advances to Affiliates and Note 23—Income Taxes included in Item 8—Financial Statements and Supplementary Data of this Form 10-K for further information.

⁽²⁾ Includes gain on sale of \$199 million related to Eletropaulo for the year ended December 31, 2018.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Executive Summary

In 2022, AES delivered on its strategic and financial objectives. We completed construction or the acquisition of 1.9 GW of renewables and energy storage, and signed long-term PPAs for an additional 5.2 GW of new renewable energy. See *Overview of our Strategy* included in Item 1.—*Business* of this Form 10-K for further information.

Compared with last year, diluted loss per share from continuing operations increased \$0.20, from \$0.62 to \$0.82. This loss increase reflects the prior year gains on remeasurement of our interest in sPower's development platform and the Fluence capital raise, higher income tax expense, lower contributions from our US and Utilities SBU due to the recognition of previously deferred power purchase costs and impacts of outages, the prior year impact of realized gains on de-designated interest rate swaps at the Parent Company, higher interest expense, and lower capitalized interest at construction projects in Chile; partially offset by the prior year loss on deconsolidation of Alto Maipo, and higher margins from our MCAC SBU due to favorable LNG transactions.

Adjusted EPS, a non-GAAP measure, increased \$0.15, from \$1.52 to \$1.67, mainly driven by higher contributions from our MCAC SBU due to favorable LNG transactions and from our South America SBU due to higher margins and increased ownership in AES Andes, partially offset by lower contributions from our US and Utilities SBU due to the recognition of previously deferred power purchase costs and impacts of outages, the prior year impact of realized gains on de-designated interest rate swaps at the Parent Company, and higher interest expense.

Review of Consolidated Results of Operations

Years Ended December 31, (in millions, except per share amounts)	2022	2021	2020	% Change 2022 vs. 2021	% Change 2021 vs. 2020
Revenue:					
US and Utilities SBU	\$ 5,013	\$ 4,335	\$ 3,918	16 %	11 %
South America SBU	3,539	3,541	3,159	— %	12 %
MCAC SBU	2,868	2,157	1,766	33 %	22 %
Eurasia SBU	1,217	1,123	828	8 %	36 %
Corporate and Other	119	116	231	3 %	-50 %
Eliminations	(139)	(131)	(242)	6 %	-46 %
Total Revenue	12,617	11,141	9,660	13 %	15 %
Operating Margin:					
US and Utilities SBU	564	792	638	-29 %	24 %
South America SBU	823	1,069	1,243	-23 %	-14 %
MCAC SBU	820	521	559	57 %	-7 %
Eurasia SBU	236	216	186	9 %	16 %
Corporate and Other	175	158	120	11 %	32 %
Eliminations	(70)	(45)	(53)	56 %	-15 %
Total Operating Margin	2,548	2,711	2,693	-6 %	1 %
General and administrative expenses	(207)	(166)	(165)	25 %	1 %
Interest expense	(1,117)	(911)	(1,038)	23 %	-12 %
Interest income	389	298	268	31 %	11 %
Loss on extinguishment of debt	(15)	(78)	(186)	-81 %	-58 %
Other expense	(68)	(60)	(53)	13 %	13 %
Other income	102	410	75	-75 %	NM
Loss on disposal and sale of business interests	(9)	(1,683)	(95)	-99 %	NM
Goodwill impairment expense	(777)	—	—	NM	— %
Asset impairment expense	(763)	(1,575)	(864)	-52 %	82 %
Foreign currency transaction gains (losses)	(77)	(10)	55	NM	NM
Other non-operating expense	(175)	—	(202)	NM	-100 %
Income tax benefit (expense)	(265)	133	(216)	NM	NM
Net equity in losses of affiliates	(71)	(24)	(123)	NM	-80 %
INCOME (LOSS) FROM CONTINUING OPERATIONS	(505)	(955)	149	-47 %	NM
Gain from disposal of discontinued businesses, net of income tax expense of \$0, \$1, and \$0, respectively	—	4	3	-100 %	33 %
NET INCOME (LOSS)	(505)	(951)	152	-47 %	NM
Less: Net loss (income) attributable to noncontrolling interests and redeemable stock of subsidiaries	(41)	542	(106)	NM	NM
NET INCOME (LOSS) ATTRIBUTABLE TO THE AES CORPORATION	\$ (546)	\$ (409)	\$ 46	33 %	NM
AMOUNTS ATTRIBUTABLE TO THE AES CORPORATION COMMON STOCKHOLDERS:					
Income (loss) from continuing operations, net of tax	\$ (546)	\$ (413)	\$ 43	32 %	NM
Income from discontinued operations, net of tax	—	4	3	-100 %	33 %
NET INCOME (LOSS) ATTRIBUTABLE TO THE AES CORPORATION	\$ (546)	\$ (409)	\$ 46	33 %	NM
Net cash provided by operating activities	\$ 2,715	\$ 1,902	\$ 2,755	43 %	-31 %

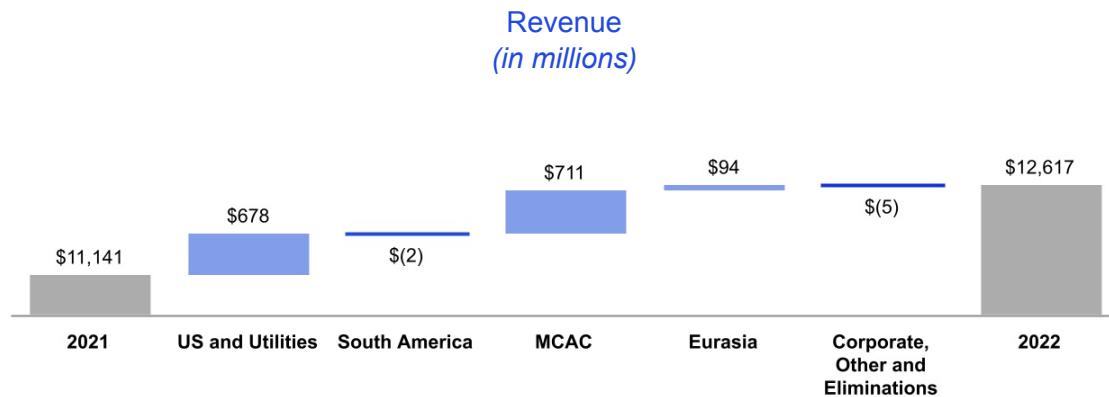
Components of Revenue, Cost of Sales and Operating Margin — Revenue includes revenue earned from the sale of energy from our utilities and the production and sale of energy from our generation plants, which are classified as regulated and non-regulated, respectively, on the Consolidated Statements of Operations. Revenue also includes the gains or losses on derivatives associated with the sale of electricity.

Cost of sales includes costs incurred directly by the businesses in the ordinary course of business. Examples include electricity and fuel purchases, operations and maintenance costs, depreciation and amortization expenses, bad debt expense and recoveries, and general administrative and support costs (including employee-related costs directly associated with the operations of the business). Cost of sales also includes the gains or losses on derivatives (including embedded derivatives other than foreign currency embedded derivatives) associated with the purchase of electricity or fuel.

Operating margin is defined as revenue less cost of sales.

Consolidated Revenue and Operating Margin

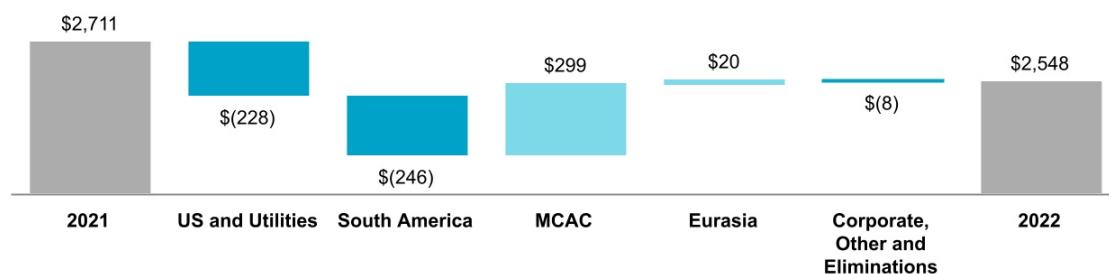
Year Ended December 31, 2022 Compared to Year Ended December 31, 2021



Consolidated Revenue — Revenue increased \$1.5 billion, or 13%, in 2022 compared to 2021, driven by:

- \$711 million at MCAC driven by favorable LNG transactions in Panama and the Dominican Republic; higher contract sales due to increased demand and higher prices in the Dominican Republic; higher spot sales due to better hydrology in Panama; and higher pass-through fuel costs in Mexico; partially offset by the impact from the sale of Itabo in April 2021;
- \$678 million at US and Utilities driven by higher prices at AES Indiana and AES Ohio due to increases in riders to collect fuel and purchased power costs from customers, as well as increased demand and favorable weather; higher sales at AES Clean Energy due to the supply agreement with Google, the prior year acquisition of New York Wind and the commencement of renewable projects; higher spot sales at Southland; and higher pass-through energy prices in El Salvador; partially offset by an increase in unrealized derivative losses at Southland and Southland Energy and a decrease at AES Hawaii due to closure of the plant in August 2022; and
- \$94 million at Eurasia mainly driven by higher energy prices and generation in Bulgaria, higher electricity prices at St. Nikola, and recognition of construction revenue at Mong Duong due to a reduction in expected completion costs for ash pond 2; partially offset by unfavorable FX impact.

**Operating Margin
(in millions)**



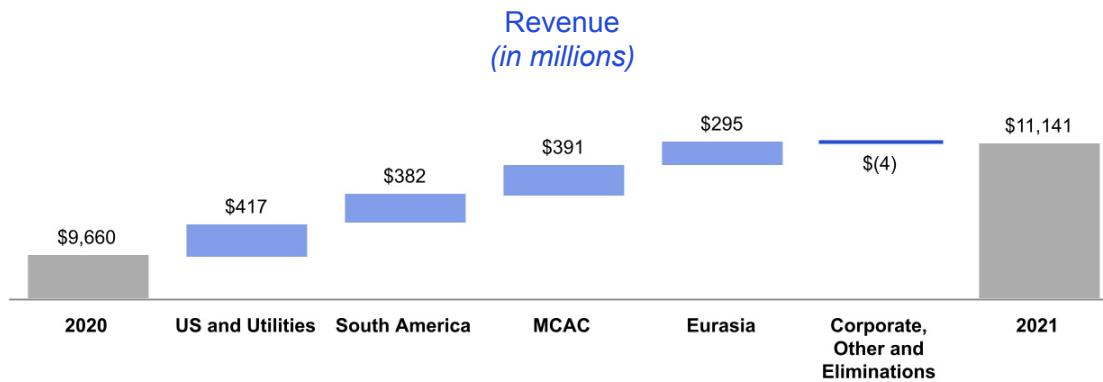
Consolidated Operating Margin — Operating margin decreased \$163 million, or 6%, in 2022 compared to 2021, driven by:

- \$246 million at South America primarily driven by revenue recognized at Angamos in the prior year for the early termination of contracts with Minera Escondida and Minera Spence; an increase in regulatory receivable credit loss allowances in Argentina; higher energy purchases and higher fixed costs at AES Brasil; and unfavorable FX impact; partially offset by higher generation, lower depreciation of coal assets, and lower spot purchases in Chile; higher contract sales at AES Brasil due to better hydrology; higher energy prices in Colombia; and higher availability at TermoAndes; and
- \$228 million at US and Utilities mainly driven by an increase in unrealized derivative losses at Southland Energy; recognition of previously deferred purchased power costs at AES Ohio and a charge resulting from a regulatory settlement at AES Indiana; the impact from outages and closure of the plant at AES Hawaii; lower availability and higher maintenance costs at AES Puerto Rico due to forced outages and a higher heat rate; and an increase in costs associated with growing the business at AES Clean Energy; partially offset by higher retail margin at AES Indiana due to higher volumes from favorable weather; and higher sales at AES Clean Energy due to the supply agreement with Google, the prior year acquisition of New York Wind, and the commencement of renewables projects.

These unfavorable impacts were partially offset by increases of:

- \$299 million at MCAC primarily driven by an increase in Panama and the Dominican Republic due to favorable LNG transactions; higher contract sales due to higher prices and favorable hydrology in Panama and increased demand and higher prices in the Dominican Republic; partially offset by the impact from the sale of Itabo in April 2021; and
- \$20 million at Eurasia mainly driven by recognition of construction revenue at Mong Duong due to a reduction in expected completion costs for ash pond 2; and by higher electricity prices at St. Nikola in Bulgaria; partially offset by unfavorable FX impact and higher maintenance costs.

Year Ended December 31, 2021 Compared to Year Ended December 31, 2020

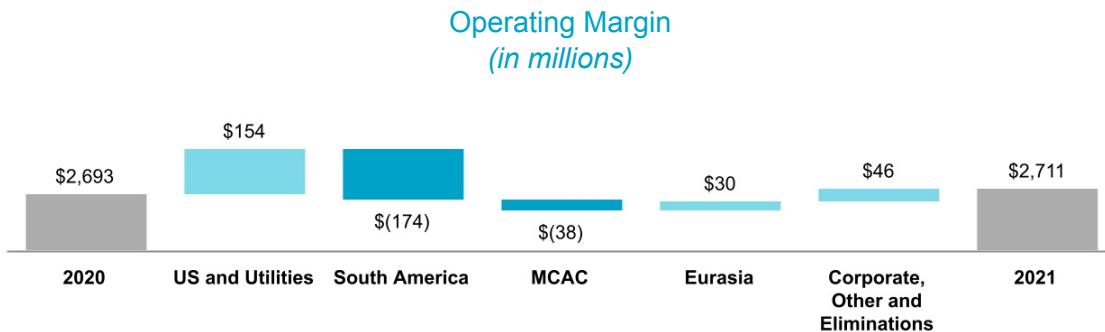


Consolidated Revenue — Revenue increased \$1.5 billion, or 15%, in 2021 compared to 2020, driven by:

- \$417 million at US and Utilities driven by higher sales at Southland Energy primarily due to the CCGT units operating under active PPAs during the full 2021 period; higher demand in El Salvador due to the economic recovery from the COVID-19 impact; higher fuel revenues and higher demand from favorable weather at AES Indiana; increases in capacity sales and in realized gains resulting from the commercial hedging strategy at Southland; and higher sales at AES Clean Energy due to the supply agreement with Google; partially offset by decreased capacity at DPL due to its exit from the generation business;
- \$391 million at MCAC driven by higher contract sales, fuel prices, and LNG sales, driven by the Eastern Pipeline COD in 2020, in the Dominican Republic; higher pass-through fuel prices in Mexico; and higher energy prices and contract sales due to increased demand in Panama; partially offset by the impact from the sale of Itabo in April 2021;
- \$382 million at South America primarily driven by the revenue recognized at Angamos for the early termination of contracts with Minera Escondida and Minera Spence; higher generation and prices (Resolution 440/2021) in Argentina; higher availability, from higher reservoir levels, in Colombia; and higher

volume and generation at AES Brasil, partially due to the acquisition of Ventus and Cubico I; partially offset by unfavorable FX impact and by the prior period recovery of previously expensed payments from customers in Chile; and

- \$295 million at Eurasia mainly driven by higher energy prices and generation in Bulgaria and higher generation in Vietnam.



Consolidated Operating Margin — Operating margin increased \$18 million, or 1%, in 2021 compared to 2020, driven by:

- \$154 million at US and Utilities primarily from higher sales at Southland Energy due to the CCGT units operating under active PPAs during the full 2021 period; increases in capacity sales and in realized gains resulting from the commercial hedging strategy at Southland; and higher demand in El Salvador due to the economic recovery from the COVID-19 impact; partially offset by increased costs associated with growing and accelerating the development pipeline at AES Clean Energy and by higher maintenance expenses at AES Indiana;
- \$46 million at Corporate and Other, mainly eliminated at the consolidated level, driven by increases in IT costs reallocated to the operating segments and premiums earned by the AES self-insurance company; and
- \$30 million at Eurasia mainly driven by higher energy prices and generation in Bulgaria and improved operational performance in Vietnam.

These favorable impacts were partially offset by decreases of:

- \$174 million at South America primarily due to unfavorable FX impact; higher energy purchases due to drier hydrology and a prior period GSF settlement at Tietê; and higher spot prices on energy prices and prior period recovery of previously expensed payments from customers in Chile; partially offset by revenue recognized at Angamos for the early termination of contracts with Minera Escondida and Minera Spence; higher generation and prices (Resolution 440/2021) in Argentina; lower fixed costs in Chile; and higher availability from higher reservoir levels in Colombia; and
- \$38 million at MCAC mainly driven by the impact from the sale of Itabo in April 2021; decreased capacity and higher fixed costs in the Dominican Republic; decreased availability and higher fixed costs in Mexico; and higher fuel costs, drier hydrology, and the disconnection of the Estrella del Mar I power barge in the prior year in Panama; partially offset by higher LNG sales in the Dominican Republic driven by the Eastern Pipeline COD in 2020 and higher demand and positive impact from new renewables businesses in Panama.

See Item 7.—*Management's Discussion and Analysis of Financial Condition and Results of Operations—SBU Performance Analysis* of this Form 10-K for additional discussion and analysis of operating results for each SBU.

Consolidated Results of Operations — Other

General and administrative expenses

General and administrative expenses include expenses related to corporate staff functions and initiatives, executive management, finance, legal, human resources, and information systems, as well as global development costs.

General and administrative expenses increased \$41 million, or 25%, to \$207 million in 2022 compared to \$166 million in 2021, primarily due to increased business development activity and people costs.

General and administrative expenses increased \$1 million, or 1%, to \$166 million in 2021 compared to \$165 million in 2020, with no material drivers.

Interest expense

Interest expense increased \$206 million, or 23%, to \$1.1 billion in 2022, compared to \$911 million in 2021, primarily due to the prior year impact of realized gains on de-designated interest rate swaps, lower capitalized interest at construction projects in Chile, and increased borrowings in South America and at the Parent Company.

Interest expense decreased \$127 million, or 12%, to \$911 million in 2021, compared to \$1 billion in 2020, primarily due to realized gains on de-designated interest rate swaps, lower interest rates related to refinancing at the Parent Company, and lower monetary correction due to the GSF settlement in March 2021.

Interest income

Interest income increased \$91 million, or 31%, to \$389 million in 2022, compared to \$298 million in 2021 primarily due to an increase in short-term investments at AES Brasil and Argentina, higher CAMMESA interest rates on receivables in Argentina, and increase in sales-type lease receivables at the Alamitos Energy Center.

Interest income increased \$30 million, or 11%, to \$298 million in 2021, compared to \$268 million in 2020 primarily due to the arbitration proceeding in Chile, the commencement of a sales-type lease at the Alamitos Energy Center in January 2021, and higher CAMMESA interest rates on receivables in Argentina, partially offset by a lower loan receivable balance in Vietnam.

Loss on extinguishment of debt

Loss on extinguishment of debt decreased \$63 million, or 81%, to \$15 million in 2022, compared to \$78 million in 2021. This decrease was primarily due to the prior year losses of \$27 million due to the prepayment at AES Brasil, at AES Argentina and AES Andes of \$17 million and \$14 million, respectively, due to repayments, and a refinancing resulting in a \$14 million loss at Andres, partially offset in 2022 by a refinancing resulting in a loss of \$12 million at AES Renewable Holdings.

Loss on extinguishment of debt decreased \$108 million, or 58% to \$78 million in 2021, compared to \$186 million in 2020. This decrease was primarily due to losses in 2020 of \$145 million and \$34 million at the Parent Company and DPL, respectively, resulting from the redemption of senior notes and a \$16 million loss resulting from the Panama refinancing. These decreases were partially offset in 2021 by the losses mentioned above.

See Note 11—Debt included in Item 8.—*Financial Statements and Supplementary Data* of this Form 10-K for further information.

Other income

Other income decreased \$308 million to \$102 million in 2022, compared to \$410 million in 2021 primarily due to the prior year gain on remeasurement of our equity interest in the sPower development platform to its acquisition-date fair value, recognized as part of the merger to form AES Clean Energy Development, prior year legal arbitration at Alto Maipo, and the prior year gain on remeasurement of contingent consideration at AES Clean Energy; partially offset by the current year gain on remeasurement of our existing investment in 5B, which is accounted for using the measurement alternative, and insurance proceeds primarily associated with property damage at TermoAndes.

Other income increased \$335 million to \$410 million in 2021, compared to \$75 million in 2020 primarily due to the 2021 gain on remeasurement of our equity interest in the sPower development platform to its acquisition-date fair value, recognized as part of the merger to form AES Clean Energy Development, legal arbitration at Alto Maipo, and the gain on remeasurement of contingent consideration of the Great Cove Solar acquisition at AES Clean Energy, partially offset by the 2020 gain on sale of Redondo Beach land at Southland.

Other expense

Other expense increased \$8 million, or 13%, to \$68 million in 2022, compared to \$60 million in 2021, primarily due to current year costs related to the disposition of AES Gilbert, including the recognition of an allowance on the sales-type lease receivable; partially offset by lower losses recognized at commencement of sales-type leases due to the prior year loss at AES Renewable Holdings.

Other expense increased \$7 million, or 13% to \$60 million in 2021, compared to \$53 million in 2020 primarily due to the 2021 loss recognized at commencement of a sales-type lease at AES Renewable Holdings and an increase in loss on sale and disposal of assets, partially offset by lower losses on sales of Stabilization Fund receivables in Chile and compliance with an arbitration decision in 2020.

See Note 21—*Other Income and Expense* included in Item 8.—*Financial Statements and Supplementary Data* of this Form 10-K for further information.

Loss on disposal and sale of business interests

Loss on disposal and sale of business interests decreased \$1.7 billion to \$9 million in 2022, compared to \$1.7 billion in 2021, primarily due to the prior year \$2.1 billion loss on the deconsolidation of Alto Maipo, partially offset by the issuance of new shares by Fluence, our equity method investment, to new investors, which AES accounted for as a gain on the partial disposition of its investment in Fluence in 2021.

Loss on disposal and sale of business interests increased \$1.6 billion to \$1.7 billion in 2021, compared to \$95 million in 2020, primarily due to the changes at Alto Maipo and Fluence referenced in the paragraph above.

See Note 24—*Held-for-Sale and Dispositions* and Note 8—*Investments in and Advances to Affiliates* included in Item 8.—*Financial Statements and Supplementary Data* of this Form 10-K for further information.

Goodwill impairment expense

Goodwill impairment expense was \$777 million in 2022, due to a \$644 million impairment at AES Andes and a \$133 million impairment at AES El Salvador. This was due to the Company seeing increases in inputs utilized to derive the discount rate applied in our goodwill impairment analysis, such as higher interest rates and country risk premiums in certain markets. These changes to the inputs of our discount rate have negatively impacted our annual goodwill impairment test as of October 1, 2022. There was no goodwill impairment expense in 2021 or 2020.

See Note 9—*Goodwill and Other Intangible Assets* included in Item 8.—*Financial Statements and Supplementary Data* of this Form 10-K for further information.

Asset impairment expense

Asset impairment expense decreased \$812 million to \$763 million in 2022, compared to \$1.6 billion in 2021. This decrease was primarily due to 2021 impairments at AES Andes totaling \$804 million associated with a commitment to accelerate the retirement of the Ventanas 3 & 4 and Angamos coal-fired plants, a \$475 million impairment at Puerto Rico associated with the economic costs and reputational risks of disposal of coal combustion residuals off island, impairments at the Buffalo Gap wind generation facilities totaling \$193 million due to an expired PPA and volatile spot prices in the ERCOT market, and a \$67 million impairment at the Mountain View I & II facilities related to a repowering project that will result in decommissioning the majority of the existing wind turbines in advance of their depreciable lives. This was partially offset by the \$468 million impairment of Maritza's coal-fired plant due to Bulgaria's commitment to cease electricity generation using coal as a fuel source beyond 2038, the \$193 million impairment at TEG TEP in Mexico, and a \$76 million impairment of Amman East and IPP4 in Jordan.

Asset impairment expense increased \$711 million to \$1.6 billion in 2021, compared to \$864 million in 2020. This increase was primarily due to 2021 impairments at AES Andes totaling \$804 million, a \$475 million impairment at Puerto Rico, impairments at the Buffalo Gap wind generation facilities totaling \$193 million, and a \$67 million impairment at the Mountain View I & II wind facilities. This was partially offset by the \$564 million and \$213 million impairments related to the Angamos and Ventanas 1 & 2 coal-fired plants in Chile and the \$38 million impairment of the generation facility in Hawaii during 2020.

See Note 22—*Asset Impairment Expense* included in Item 8.—*Financial Statements and Supplementary Data* of this Form 10-K for further information.

Foreign currency transaction gains (losses)

Foreign currency transaction gains (losses) in millions were as follows:

Years Ended December 31,	2022	2021	2020
Argentina ⁽¹⁾	\$ (88)	\$ (21)	\$ 29
Chile	13	20	(5)
Corporate	—	(11)	21
Dominican Republic	—	(1)	9
Other	(2)	3	1
Total ⁽²⁾	<u>\$ (77)</u>	<u>\$ (10)</u>	<u>\$ 55</u>

⁽¹⁾ Includes peso-denominated energy receivable indexed to the USD through the FONINVEMEM agreement which is considered a foreign currency derivative. See Note 7—*Financing Receivables* included in Item 8.—*Financial Statements and Supplementary Data* of this Form 10-K for further information.

⁽²⁾ Includes losses of \$20 million and gains of \$12 million and \$57 million on foreign currency derivative contracts for the years ended December 31, 2022, 2021, and 2020, respectively.

The Company recognized net foreign currency transaction losses of \$77 million in 2022, primarily driven by the depreciation of the Argentine peso, partially offset by realized foreign currency derivative gains in South America due to the depreciating Colombian peso.

The Company recognized net foreign currency transaction losses of \$10 million in 2021, primarily driven by the depreciation of the Argentine peso, unrealized losses on foreign currency derivatives related to government receivables in Argentina, and unrealized losses at the Parent Company resulting from the depreciation of intercompany receivables denominated in Euro, partially offset by unrealized derivative gains on foreign currency derivatives due to the depreciating Colombian peso.

The Company recognized net foreign currency transaction gains of \$55 million in 2020, primarily driven by realized and unrealized gains on foreign currency derivatives related to government receivables in Argentina and unrealized gains at the Parent Company resulting from the appreciation of intercompany receivables denominated in Euro.

Other non-operating expense

Other non-operating expense was \$175 million in 2022 due to the other-than-temporary impairment of the sPower equity method investment. The impairment analysis was triggered by the signing of a purchase and sale agreement which, at the time, implied an expected loss upon sale of the Company's indirect interest in a portfolio of sPower's operating assets ("OpCo B"). The transaction closed on February 28, 2023. sPower primarily holds operating assets where the tax credits associated with underlying projects have already been allocated to tax equity partners. The application of HLBV accounting increases the carrying value of these investments, as earnings are initially disproportionately allocated to the sponsor entity. Since sPower does not have any ongoing development or other value creation activities following the transfer of these activities to AES Clean Energy Development, the impairment adjusts the carrying value to the fair market value of the operating assets. See Note 25—*Acquisitions* included in Item 8.—*Financial Statements and Supplementary Data* of this Form 10-K for further information regarding the formation of AES Clean Energy Development.

There was no other non-operating expense in 2021.

Other non-operating expense was \$202 million in 2020 due to the other-than-temporary impairment of the OPGC equity method investment. In December 2019, an other-than-temporary impairment was recorded for OPGC primarily due to the estimated market value of the Company's investment and other negative developments impacting future expected cash flows at the investee. In March 2020, the Company recognized an additional \$43 million other-than-temporary impairment due to the economic slowdown. In June 2020, the Company agreed to sell its entire stake in the OPGC investment, resulting in an other-than-temporary impairment of \$158 million.

See Note 8—*Investments In and Advances to Affiliates* included in Item 8.—*Financial Statements and Supplementary Data* of this Form 10-K for further information.

Income tax benefit (expense)

Income tax expense was \$265 million in 2022, compared to income tax benefit of \$133 million in 2021. The Company's effective tax rates were (157)% and 13% for the years ended December 31, 2022 and 2021, respectively.

The 2022 effective tax rate was impacted by the current year nondeductible goodwill impairments at AES Andes and AES El Salvador, as well as the current year asset impairment of the Maritza coal-fired plant. These impacts were partially offset by favorable LNG transactions at certain MCAC businesses and inflationary and foreign currency impacts at certain Argentine businesses recognized in 2022. The 2021 effective tax rate was impacted by the deconsolidation of Alto Maipo and the asset impairment at Puerto Rico. These impacts were partially offset by the income tax benefit related to effective settlement resulting from the exam closure of the Company's U.S. 2017 tax return. Additionally offsetting the 2021 impacts was the benefit associated with the release of valuation allowance due to a change in expected realizability of net operating loss carryforwards at one of our Brazilian subsidiaries. See Note 9—*Goodwill and Other Intangible Assets* included in Item 8.—*Financial Statements and Supplementary Data* of this Form 10-K for details of the goodwill impairments. See Note 22—*Asset Impairment Expense* included in Item 8.—*Financial Statements and Supplementary Data* of this Form 10-K for details of the asset impairments. See Note 24—*Held-for-Sale and Dispositions* included in Item 8.—*Financial Statements and Supplementary Data* of this Form 10-K for details of the deconsolidation of Alto Maipo.

Income tax benefit was \$133 million in 2021, compared to income tax expense of \$216 million in 2020. The Company's effective tax rates were 13% and 44% for the years ended December 31, 2021, and 2020, respectively.

The net decrease in the effective tax rate was primarily due to the 2021 impacts of the drivers cited above. Further, the 2020 effective tax rate was impacted by the other-than-temporary impairment of the OPGC equity method investment and the loss on sale of the Company's entire interest in AES Uruguiana, partially offset by the recognition of a federal ITC for the Na Pua Makani wind facility in Hawaii. See Note 24—*Held-for-Sale and Dispositions* included in Item 8.—*Financial Statements and Supplementary Data* of this Form 10-K for details of the sale of the Company's entire interest of AES Uruguiana.

Our effective tax rate reflects the tax effect of significant operations outside the U.S., which are generally taxed at rates different than the U.S. statutory rate. Foreign earnings may be taxed at rates higher than the U.S. corporate rate of 21% and are also subject to current U.S. taxation under the GILTI rule. A future proportionate change in the composition of income before income taxes from foreign and domestic tax jurisdictions could impact our periodic effective tax rate. The Company also benefits from reduced tax rates in certain countries as a result of satisfying specific commitments regarding employment and capital investment. See Note 23—*Income Taxes* included in Item 8.—*Financial Statements and Supplementary Data* of this Form 10-K for additional information regarding these reduced rates.

Net equity in losses of affiliates

Net equity in losses of affiliates increased \$47 million to \$71 million in 2022, compared to \$24 million in 2021. This was primarily driven by lower earnings of \$31 million from sPower, mainly due to lower earnings from renewable projects that came online and higher losses on extinguishment of debt, partially offset by lower impairment expense; and by an increase in losses of \$22 million from Fluence mainly due to an increase in costs, including share-based compensation, associated with the growing business.

Net equity in losses of affiliates decreased \$99 million, or 80%, to \$24 million in 2021, compared to \$123 million in 2020. This was primarily driven by earnings from sPower in 2021 of \$79 million, compared to losses in 2020, driven by renewable projects that came online and impairments of certain development projects in 2020, and \$81 million of losses from AES Andes in 2020 mainly due to a long-lived asset impairment and the suspension of equity method accounting at Guacolda. This decrease in losses was partially offset by higher losses of \$45 million from Fluence due to shipping issues, cost overruns and delays at projects under construction, and an increase in costs associated with the growing business, as well as higher losses of \$10 million from Uplight due to higher costs associated with the growing business.

See Note 8—*Investments In and Advances to Affiliates* included in Item 8.—*Financial Statements and Supplementary Data* of this Form 10-K for further information.

Net income (loss) attributable to noncontrolling interests and redeemable stock of subsidiaries

Net income attributable to noncontrolling interests and redeemable stock of subsidiaries increased \$583 million to \$41 million in 2022, compared to a loss of \$542 million in 2021. This increase was primarily due to:

- Prior year loss on deconsolidation of Alto Maipo due to loss of control after Chapter 11 filing;
- Prior year asset impairments at Buffalo Gap; and
- Lower allocation of losses to tax equity partners at AES Renewable Holdings.

These increases were partially offset by:

- Higher allocation of losses to tax equity partners and increased costs associated with growing the business at AES Clean Energy Development;
- Lower earnings from AES Andes due to increased AES ownership from 67% to 99% in the first quarter of 2022;
- Prior year deferred tax benefits recorded at AES Brasil; and
- Asset impairments at Amman East and IPP4 in Jordan.

Net income attributable to noncontrolling interests and redeemable stock of subsidiaries decreased \$648 million to a loss of \$542 million in 2021, compared to income of \$106 million in 2020. This decrease was primarily due to:

- Loss on deconsolidation of Alto Maipo due to loss of control after Chapter 11 filing;
- Asset impairments at Buffalo Gap;
- Increased costs associated with growing the business at AES Clean Energy Development;
- Lower earnings in Brazil due to the 2020 favorable revision of the GSF liability; and
- Lower earnings in the Dominican Republic due to the sale of Itabo in the second quarter of 2021.

These decreases were partially offset by:

- Allocation of earnings at Southland Energy to noncontrolling interests;
- Higher earnings in Panama primarily due to the 2020 asset impairment and loss on extinguishment of debt; and
- Higher earnings in Colombia due to the life extension project at the Chivor hydroelectric plant completed in 2020 and better hydrology.

Net income (loss) attributable to The AES Corporation

Net loss attributable to The AES Corporation increased \$137 million, or 33%, to \$546 million in 2022, compared to \$409 million in 2021. This increase was primarily due to:

- Higher goodwill impairments in the current year;
- Prior year gain due to the initial public offering of Fluence;
- Higher income tax expense;
- Prior year gain on remeasurement of our equity interest in the sPower development platform to acquisition date fair value;
- Higher Parent interest expense due to prior year realized gains on de-designated interest rate swaps, higher interest rates, and higher outstanding debt;
- Lower margins at our US and Utilities SBU due to the recognition of previously deferred power purchase costs, impacts of outages, and unrealized derivative losses;
- Lower capitalized interest at construction projects in Chile; and
- Other-than-temporary impairment of sPower.

These increases were partially offset by:

- Prior year loss on deconsolidation of Alto Maipo due to loss of control after Chapter 11 filing;
- Lower long-lived asset impairments in the current year; and
- Higher margins at our MCAC SBU due to favorable LNG transactions.

Net income attributable to The AES Corporation decreased \$455 million to a loss of \$409 million in 2021, compared to income of \$46 million in 2020. This decrease was primarily due to:

- Loss on deconsolidation of Alto Maipo due to loss of control after Chapter 11 filing;
- Higher asset impairments in 2021; and
- Lower margins at our South America SBU primarily due to the 2020 revision of the GSF liability at Brazil.

These decreases were partially offset by:

- Gain due to the initial public offering of Fluence;
- Gain on remeasurement of our equity interest in the sPower development platform to acquisition-date fair value;
- Other-than-temporary impairment of OPGC in 2020;
- Lower Parent interest expense due to realized gains on de-designated interest rate swaps and lower interest rates;
- Losses on extinguishment of debt at the Parent Company and DPL in 2020;
- Higher margins at our US and Utilities SBU primarily due to favorable price variances under the commercial hedging strategy at Southland and at Southland Energy mainly due to the CCGT units operating under active PPAs during the full 2021 period; and
- Lower income tax expense.

SBU Performance Analysis

Segments

We are organized into four market-oriented SBUs: **US and Utilities** (United States, Puerto Rico, and El Salvador); **South America** (Chile, Colombia, Argentina, and Brazil); **MCAC** (Mexico, Central America, and the Caribbean); and **Eurasia** (Europe and Asia).

Non-GAAP Measures

Adjusted Operating Margin, Adjusted PTC, and Adjusted EPS are non-GAAP supplemental measures that are used by management and external users of our Consolidated Financial Statements such as investors, industry analysts, and lenders.

For the year ended December 31, 2021, the Company updated the definition of Adjusted EPS item (g) *tax benefit or expense related to the enactment effects of 2017 U.S. tax law reform and related regulations and any subsequent period adjustments related to enactment effects* to include the 2021 tax benefit on reversal of uncertain tax positions effectively settled upon the closure of the Company's 2017 U.S. tax return exam.

Effective January 1, 2021, the Company changed the definitions of Adjusted Operating Margin, Adjusted PTC, and Adjusted EPS to remove the adjustment for costs directly associated with a major restructuring program, including, but not limited to, workforce reduction efforts, relocations, and office consolidation. As this adjustment was specific to the major restructuring program announced by the Company in 2018, we believe removing this adjustment from our non-GAAP definitions provides simplification and clarity for our investors. There were no such costs in 2020, 2021 or 2022.

For the year ended December 31, 2020, the Company changed the definitions of Adjusted Operating Margin, Adjusted PTC, and Adjusted EPS to exclude net gains at Angamos, one of our businesses in the South America SBU, associated with the early contract terminations with Minera Escondida and Minera Spence which occurred in 2020, and also impacted 2021. We believe the inclusion of the effects of this non-recurring transaction would result

in a lack of comparability in our results of operations and would distort the metrics that our investors use to measure us.

Adjusted Operating Margin

We define Adjusted Operating Margin as Operating Margin, adjusted for the impact of NCI, excluding (a) unrealized gains or losses related to derivative transactions; (b) benefits and costs associated with dispositions and acquisitions of business interests, including early plant closures; and (c) net gains at Angamos, one of our businesses in the South America SBU, associated with the early contract terminations with Minera Escondida and Minera Spence. The allocation of HLBV earnings to noncontrolling interests is not adjusted out of Adjusted Operating Margin. See *Review of Consolidated Results of Operations* for definitions of Operating Margin and cost of sales.

The GAAP measure most comparable to Adjusted Operating Margin is *Operating Margin*. We believe that Adjusted Operating Margin better reflects the underlying business performance of the Company. Factors in this determination include the impact of NCI, where AES consolidates the results of a subsidiary that is not wholly owned by the Company, as well as the variability due to unrealized gains or losses related to derivative transactions and strategic decisions to dispose of or acquire business interests. Adjusted Operating Margin should not be construed as an alternative to Operating Margin, which is determined in accordance with GAAP.

Reconciliation of Adjusted Operating Margin (in millions)

	Years Ended December 31,		
	2022	2021	2020
Operating Margin	\$ 2,548	\$ 2,711	\$ 2,693
Noncontrolling interests adjustment ⁽¹⁾	(473)	(722)	(831)
Unrealized derivative losses (gains)	75	(28)	24
Disposition/acquisition losses	3	11	24
Net gains from early contract terminations at Angamos	—	(251)	(182)
Total Adjusted Operating Margin	\$ 2,153	\$ 1,721	\$ 1,728

⁽¹⁾ The allocation of HLBV earnings to noncontrolling interests is not adjusted out of Adjusted Operating Margin.



Adjusted PTC

We define Adjusted PTC as pre-tax income from continuing operations attributable to The AES Corporation excluding gains or losses of the consolidated entity due to (a) unrealized gains or losses related to derivative transactions and equity securities; (b) unrealized foreign currency gains or losses; (c) gains, losses, benefits and costs associated with dispositions and acquisitions of business interests, including early plant closures, and gains and losses recognized at commencement of sales-type leases; (d) losses due to impairments; (e) gains, losses and costs due to the early retirement of debt; and (f) net gains at Angamos, one of our businesses in the South America SBU, associated with the early contract terminations with Minera Escondida and Minera Spence. Adjusted PTC also includes net equity in earnings of affiliates on an after-tax basis adjusted for the same gains or losses excluded from consolidated entities.

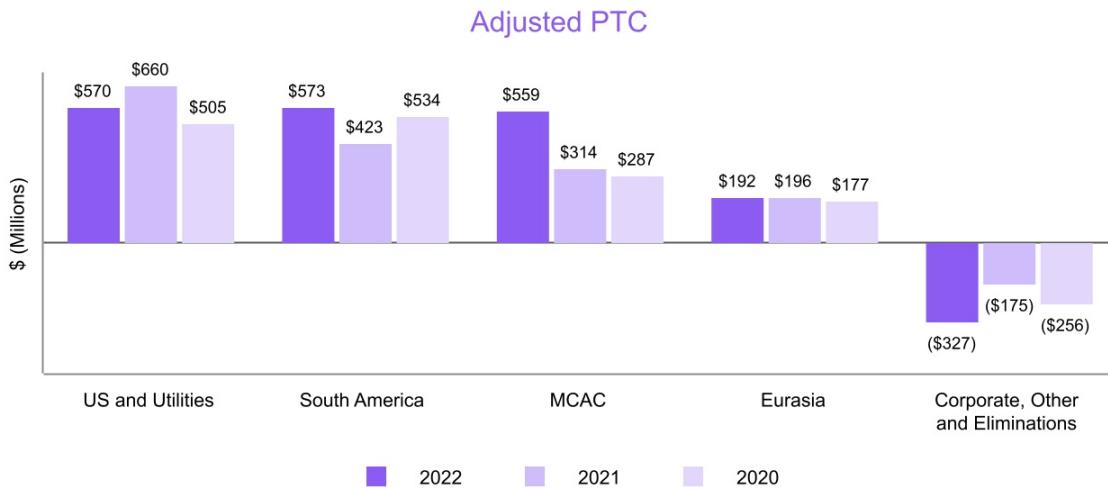
Adjusted PTC reflects the impact of NCI and excludes the items specified in the definition above. In addition to the revenue and cost of sales reflected in Operating Margin, Adjusted PTC includes the other components of our Consolidated Statement of Operations, such as *general and administrative expenses* in the Corporate segment, as well as business development costs, *interest expense* and *interest income*, *other expense* and *other income*, *realized foreign currency transaction gains and losses*, and *net equity in earnings of affiliates*.

The GAAP measure most comparable to Adjusted PTC is *income from continuing operations attributable to The AES Corporation*. We believe that Adjusted PTC better reflects the underlying business performance of the Company and is the most relevant measure considered in the Company's internal evaluation of the financial performance of its segments. Factors in this determination include the variability due to unrealized gains or losses related to derivative transactions or equity securities remeasurement, unrealized foreign currency gains or losses, losses due to impairments, strategic decisions to dispose of or acquire business interests or retire debt, and the non-recurring nature of the impact of the early contract terminations at Angamos, which affect results in a given period or periods. In addition, Adjusted PTC represents the business performance of the Company before the application of statutory income tax rates and tax adjustments, including the effects of tax planning, corresponding to the various jurisdictions in which the Company operates. Given its large number of businesses and complexity, the Company concluded that Adjusted PTC is a more transparent measure that better assists investors in determining which businesses have the greatest impact on the Company's results.

Adjusted PTC should not be construed as an alternative to *income from continuing operations attributable to The AES Corporation*, which is determined in accordance with GAAP.

Reconciliation of Adjusted PTC (in millions)

	Years Ended December 31,		
	2022	2021	2020
Income (loss) from continuing operations, net of tax, attributable to The AES Corporation	\$ (546)	\$ (413)	\$ 43
Income tax expense (benefit) attributable to The AES Corporation	210	(31)	130
Pre-tax contribution	(336)	(444)	173
Unrealized derivative and equity securities losses (gains)	128	(1)	3
Unrealized foreign currency losses (gains)	42	14	(10)
Disposition/acquisition losses	40	861	112
Impairment losses	1,658	1,153	928
Loss on extinguishment of debt	35	91	223
Net gains from early contract terminations at Angamos	—	(256)	(182)
Total Adjusted PTC	\$ 1,567	\$ 1,418	\$ 1,247



Adjusted EPS

We define Adjusted EPS as diluted earnings per share from continuing operations excluding gains or losses of both consolidated entities and entities accounted for under the equity method due to (a) unrealized gains or losses related to derivative transactions and equity securities; (b) unrealized foreign currency gains or losses; (c) gains, losses, benefits and costs associated with dispositions and acquisitions of business interests, including early plant closures, the tax impact from the repatriation of sales proceeds, and gains and losses recognized at commencement of sales-type leases; (d) losses due to impairments; (e) gains, losses and costs due to the early retirement of debt; (f) net gains at Angamos, one of our businesses in the South America SBU, associated with the early contract terminations with Minera Escondida and Minera Spence; and (g) tax benefit or expense related to the enactment effects of 2017 U.S. tax law reform and related regulations and any subsequent period adjustments related to enactment effects, including the 2021 tax benefit on reversal of uncertain tax positions effectively settled upon the closure of the Company's U.S. tax return exam.

The GAAP measure most comparable to Adjusted EPS is diluted earnings per share from continuing operations. We believe that Adjusted EPS better reflects the underlying business performance of the Company and is considered in the Company's internal evaluation of financial performance. Factors in this determination include the variability due to unrealized gains or losses related to derivative transactions or equity securities remeasurement, unrealized foreign currency gains or losses, losses due to impairments, strategic decisions to dispose of or acquire business interests or retire debt, the one-time impact of the 2017 U.S. tax law reform and subsequent period adjustments related to enactment effects, and the non-recurring nature of the impact of the early contract terminations at Angamos, which affect results in a given period or periods. Adjusted EPS should not be construed as an alternative to diluted earnings per share from continuing operations, which is determined in accordance with GAAP.

The Company reported a loss from continuing operations of \$0.82 and \$0.62 for the years ended December 31, 2022 and 2021, respectively. For purposes of measuring diluted loss per share under GAAP, common stock equivalents were excluded from weighted average shares as their inclusion would be anti-dilutive. However, for purposes of computing Adjusted EPS, the Company has included the impact of dilutive common stock equivalents. The table below reconciles the weighted average shares used in GAAP diluted loss per share to the weighted average shares used in calculating the non-GAAP measure of Adjusted EPS.

Reconciliation of Denominator Used for Adjusted EPS (in millions, except per share data)	Year Ended December 31, 2022			Year Ended December 31, 2021		
	Loss	Shares	\$ per Share	Loss	Shares	\$ per Share
GAAP DILUTED LOSS PER SHARE						
Loss from continuing operations attributable to The AES Corporation common stockholders	\$ (546)	668	\$ (0.82)	\$ (413)	666	\$ (0.62)
EFFECT OF DILUTIVE SECURITIES						
Stock options	—	1	—	—	1	—
Restricted stock units	—	2	—	—	3	—
Equity units	—	40	0.05	2	33	0.03
NON-GAAP DILUTED LOSS PER SHARE	\$ (546)	711	\$ (0.77)	\$ (411)	703	\$ (0.59)

Reconciliation of Adjusted EPS	Years Ended December 31,		
	2022	2021	2020
Diluted earnings (loss) per share from continuing operations	\$ (0.77)	\$ (0.59)	\$ 0.06
Unrealized derivative and equity securities losses	0.18 ⁽¹⁾	—	0.01
Unrealized foreign currency losses (gains)	0.07 ⁽²⁾	0.02	(0.01)
Disposition/acquisition losses	0.06 ⁽³⁾	1.22 ⁽⁴⁾	0.17 ⁽⁵⁾
Impairment losses	2.33 ⁽⁶⁾	1.65 ⁽⁷⁾	1.39 ⁽⁸⁾
Loss on extinguishment of debt	0.05 ⁽⁹⁾	0.13 ⁽¹⁰⁾	0.33 ⁽¹¹⁾
Net gains from early contract terminations at Angamos	—	(0.37) ⁽¹²⁾	(0.27) ⁽¹²⁾
U.S. Tax Law Reform Impact	—	(0.25) ⁽¹³⁾	0.02 ⁽¹⁴⁾
Less: Net income tax benefit	(0.25) ⁽¹⁵⁾	(0.29) ⁽¹⁶⁾	(0.26) ⁽¹⁷⁾
Adjusted EPS	\$ 1.67	\$ 1.52	\$ 1.44

- (1) Amount primarily relates to unrealized losses on power swaps at Southland Energy of \$109 million, or \$0.15 per share.
- (2) Amount primarily relates to unrealized foreign currency losses in Argentina of \$39 million, or \$0.05 per share, mainly associated with the devaluation of long-term receivables denominated in Argentine pesos.
- (3) Amount primarily relates to costs on disposition of AES Gilbert, including the recognition of an allowance on the sales-type lease receivable, of \$13 million, or \$0.02 per share, and a day-one loss recognized at commencement of a sales-type lease at AES Waikoloa Solar of \$5 million, or \$0.01 per share.
- (4) Amount primarily relates to loss on deconsolidation of Alto Maipo of \$1.5 billion, or \$2.09 per share, loss on Uplight transaction with shareholders of \$25 million, or \$0.04 per share, and a day-one loss recognized at commencement of a sales-type lease at AES Renewable Holdings of \$13 million, or \$0.02 per share, partially offset by gain on initial public offering of Fluence of \$325 million, or \$0.46 per share, gain on remeasurement of our equity interest in sPower to acquisition-date fair value of \$249 million, or \$0.35 per share, gain on Fluence issuance of shares of \$60 million, or \$0.09 per share, and gain on sale of Guacolda of \$22 million, or \$0.03 per share.
- (5) Amount primarily relates to loss on sale of Uruguiana of \$85 million, or \$0.13 per share, loss on sale of the Kazakhstan HPPs of \$30 million, or \$0.05 per share, as a result of the final arbitration decision, and advisor fees associated with the successful acquisition of additional ownership interest in AES Brasil of \$9 million, or \$0.01 per share; partially offset by gain on sale of OPGC of \$23 million, or \$0.03 per share.
- (6) Amount primarily relates to goodwill impairments at AES Andes of \$644 million, or \$0.91 per share, and at AES El Salvador of \$133 million, or \$0.19 per share, other-than-temporary impairment at sPower of \$175 million, or \$0.25, as well as long-lived asset impairments at Maritza of \$468 million, or \$0.66 per share, at TEG TEP of \$191 million, or \$0.27 per share, and in Jordan of \$28 million, or \$0.04 per share.
- (7) Amount primarily relates to asset impairments at AES Andes of \$540 million, or \$0.77 per share, at Puerto Rico of \$475 million, or \$0.68 per share, at Mountain View of \$67 million, or \$0.10 per share, at our sPower equity affiliate, impacting equity earnings by \$24 million, or \$0.03 per share, at Buffalo Gap of \$22 million, or \$0.03 per share, at AES Clean Energy of \$14 million, or \$0.02 per share, and at Laurel Mountain of \$7 million, or \$0.01 per share.
- (8) Amount primarily relates to asset impairments at AES Andes of \$527 million, or \$0.79 per share, other-than-temporary impairment of OPGC of \$201 million, or \$0.30 per share, impairments at our Guacolda and sPower equity affiliates, impacting equity earnings by \$85 million, or \$0.13 per share, and \$57 million, or \$0.09 per share, respectively; impairment at AES Hawaii of \$38 million, or \$0.06 per share, and impairment at Panama of \$15 million, or \$0.02 per share.
- (9) Amount primarily relates to losses on early retirement of debt due to refinancing at AES Renewable Holdings of \$12 million, or \$0.02 per share, at AES Clean Energy of \$5 million, or \$0.01 per share, at Mong Duong of \$4 million, or \$0.01 per share, and at TEG TEP of \$4 million, or \$0.01 per share.
- (10) Amount primarily relates to losses on early retirement of debt at AES Brasil of \$27 million, or \$0.04 per share, at Argentina of \$17 million, or \$0.02 per share, at AES Andes of \$15 million, or \$0.02 per share, and at Andres and Los Mina of \$15 million, or \$0.02 per share.
- (11) Amount primarily relates to losses on early retirement of debt at the Parent Company of \$146 million, or \$0.22 per share, DPL of \$32 million, or \$0.05 per share, Angamos of \$17 million, or \$0.02 per share, and Panama of \$11 million, or \$0.02 per share.
- (12) Amounts relate to net gains at Angamos associated with the early contract terminations with Minera Escondida and Minera Spence of \$256 million, or \$0.37 per share, and \$182 million, or \$0.27 per share, for the periods ended December 31, 2021 and 2020, respectively.
- (13) Amount relates to the tax benefit on reversal of uncertain tax positions effectively settled upon the closure of the Company's 2017 U.S. tax return exam of \$176 million, or \$0.25 per share.
- (14) Amount represents adjustment to tax law reform remeasurement due to incremental deferred taxes related to DPL of \$16 million, or \$0.02 per share.
- (15) Amount primarily relates to the income tax benefits associated with the impairment at Maritza of \$48 million, or \$0.07 per share, the income tax benefits associated with the other-than-temporary impairment at sPower of \$39 million, or \$0.06 per share, the income tax benefits associated with the impairment at TEG TEP of \$34 million, or \$0.05, and the income tax benefits associated with the unrealized losses on power swaps at Southland Energy of \$24 million, or \$0.03 per share.
- (16) Amount primarily relates to income tax benefits associated with the loss on deconsolidation of Alto Maipo of \$209 million, or \$0.30 per share, income tax benefits associated with the impairments at AES Andes of \$146 million, or \$0.21 per share, at Puerto Rico of \$20 million, or \$0.03 per share, and at Mountain View of \$15 million, or \$0.02 per share, partially offset by income tax expense associated with the gain on initial public offering of Fluence of \$73 million, or \$0.10 per share, income tax expense related to net gains at Angamos associated with the early contract terminations with Minera Escondida and Minera Spence of \$69 million, or \$0.10 per share, and income tax expense associated with the gain on remeasurement of our equity interest in sPower of \$55 million, or \$0.08 per share.
- (17) Amount primarily relates to income tax benefits associated with the impairments at AES Andes and Guacolda of \$164 million, or \$0.25 per share, and income tax benefits associated with losses on early retirement of debt at the Parent Company of \$31 million, or \$0.05 per share; partially offset by income tax expense related to net gains at Angamos associated with the early contract terminations with Minera Escondida and Minera Spence of \$49 million, or \$0.07 per share.

US and Utilities SBU

The following table summarizes Operating Margin, Adjusted Operating Margin and Adjusted PTC (in millions) for the periods indicated:

For the Years Ended December 31,	2022	2021	2020	\$ Change 2022 vs. 2021	% Change 2022 vs. 2021	\$ Change 2021 vs. 2020	% Change 2021 vs. 2020
Operating Margin	\$ 564	\$ 792	\$ 638	\$ (228)	-29 %	\$ 154	24 %
Adjusted Operating Margin ⁽¹⁾	523	617	577	(94)	-15 %	40	7 %
Adjusted PTC ⁽¹⁾	570	660	505	(90)	-14 %	155	31 %

⁽¹⁾ A non-GAAP financial measure, adjusted for the impact of NCI. See *SBU Performance Analysis—Non-GAAP Measures* for definition and Item 1.—*Business* for the respective ownership interest for key businesses.

Fiscal year 2022 versus 2021

Operating Margin decreased \$228 million, or 29%, which was driven primarily by the following (in millions):

Decrease at Southland Energy primarily due to unrealized derivative losses and the impact of forced outages at the CCGT units	\$ (127)
Decrease at AES Ohio primarily due to the recognition of previously deferred purchased power costs and higher fixed costs, partially offset by higher transmission revenues due to higher rates	(34)
Decrease at AES Hawaii primarily due to increased outages in the current year and closure of the plant in August 2022	(20)
Decrease in Puerto Rico primarily driven by lower availability and higher maintenance costs due to forced outages and higher heat rate	(19)
Decrease at AES Indiana driven by a charge resulting from a regulatory settlement and higher maintenance expenses, partially offset by higher retail margin primarily due to higher volumes from favorable weather	(14)
Decrease at AES Clean Energy driven by increased costs associated with growing the business, partially offset by higher revenue from new projects and the Company's agreement to supply Google's data centers with 24/7 carbon-free energy	(11)
Other	(3)
Total US and Utilities SBU Operating Margin Decrease	\$ (228)

Adjusted Operating Margin decreased \$94 million primarily due to the drivers above, adjusted for NCI, and unrealized gains and losses on derivatives.

Adjusted PTC decreased \$90 million, primarily driven by the decrease in Adjusted Operating Margin described above, higher development costs, and lower contributions at our U.S. renewables businesses due to timing of renewable projects coming online, partially offset by higher interest income.

Fiscal year 2021 versus 2020

Operating Margin increased \$154 million, or 24%, which was driven primarily by the following (in millions):

Increase at Southland Energy primarily due to the CCGT units operating under active PPAs during the full 2021 period	\$ 100
Increase at Southland primarily driven by increase in capacity sales and favorable price variances under the commercial hedging strategy, partially offset by unfavorable energy price adjustments due to market re-settlements	83
Increase in El Salvador due to higher demand mainly driven by the impact of COVID-19 in 2020	18
Decrease at AES Clean Energy driven by increased costs associated with growing and accelerating the development pipeline, partially offset by higher revenue due to the Company's agreement to supply Google's data centers with 24/7 carbon-free energy	(37)
Decrease at AES Indiana primarily due to higher maintenance and other fixed costs, partially offset by higher volumes from favorable weather	(16)
Other	6
Total US and Utilities SBU Operating Margin Increase	\$ 154

Adjusted Operating Margin increased \$40 million primarily due to the drivers above, adjusted for NCI, primarily related to the sale of ownership interest in Southland Energy, and unrealized gains and losses on derivatives.

Adjusted PTC increased \$155 million, primarily driven by the increase in Adjusted Operating Margin described above, an increase at our U.S. renewables businesses due to contributions from newly operational projects, lower interest expenses at Southland Energy attributable to NCI allocation in 2021, non-service pension income at AES Indiana, and lower interest expense at DPL. These increases were partially offset by a gain in 2020 on sale of land held by AES Redondo Beach at Southland.

South America SBU

The following table summarizes Operating Margin, Adjusted Operating Margin and Adjusted PTC (in millions) for the periods indicated:

For the Years Ended December 31,	2022	2021	2020	\$ Change 2022 vs. 2021	% Change 2022 vs. 2021	\$ Change 2021 vs. 2020	% Change 2021 vs. 2020
Operating Margin	\$ 823	\$ 1,069	\$ 1,243	\$ (246)	-23 %	\$ (174)	-14 %
Adjusted Operating Margin ⁽¹⁾	672	432	550	240	56 %	(118)	-21 %
Adjusted PTC ⁽¹⁾	573	423	534	150	35 %	(111)	-21 %

⁽¹⁾ A non-GAAP financial measure, adjusted for the impact of NCI. See *SBU Performance Analysis—Non-GAAP Measures* for definition and Item 1.—*Business* for the respective ownership interest for key businesses. AES' indirect beneficial interest in AES Brasil increased from 24.35% to 44.13% in 2020 and to 47.4% in . In the first quarter of 2022, AES' indirect beneficial interest in AES Andes increased from 67% to 99%. See Item 1.—*Business—South America SBU* and Note 17—*Equity* included in Item 8.—*Financial Statements and Supplementary Data* of this Form 10-K for further information.

Fiscal year 2022 versus 2021

Operating Margin decreased \$246 million, or 23%, which was driven primarily by the following (in millions):

Lower revenue recognized on contract terminations at Angamos in Chile	\$ (382)
Decrease in Argentina primarily due to an increase in regulatory receivable credit loss allowances and lower thermal dispatch, partially offset by higher availability at TermoAndes and higher tariffs as per inflation adjustments granted in 2022	(16)
Increase in Chile primarily due to an increase in contract margin, new generation and lower depreciation of coal assets, partially offset by higher operational costs	80
Increase in Brazil primarily due to higher energy sales led by better hydrology, partially offset by higher energy purchases and fixed costs	52
Increase in Colombia primarily due to an increase in spot margin, partially offset by depreciation of the Colombian peso	20
Total South America SBU Operating Margin Decrease	\$ (246)

After adjusting for the net gains on early contract terminations at Angamos in the prior year, Adjusted Operating Margin increased \$240 million mainly due to the increase in ownership in AES Andes from 67% to 99% in the first quarter of 2022 and the drivers explained above.

Adjusted PTC increased \$150 million, primarily associated with the increase in Adjusted Operating Margin described above and higher interest income in Brazil and Argentina; partially offset by higher interest expense and lower capitalized interest in construction projects in Chile, higher realized foreign currency losses in Argentina, and the impact of a prior year favorable award in an arbitration proceeding in Chile.

Fiscal year 2021 versus 2020

Operating Margin decreased \$174 million, or 14%, which was driven primarily by the following (in millions):

Lower margin in Brazil primarily due to the prior year GSF settlement gain and higher energy purchases led by drier hydrology	\$ (251)
Recovery of previously expensed payments from customers in Chile	(47)
Decrease in energy and capacity tariffs in Argentina, lower availability of TermoAndes, and higher fixed costs, partially offset by higher dispatch of San Nicolás and the commencement of operations of wind facilities	(19)
Increase in Colombia related to higher reservoir levels and better hydrology	80
Increase in Chile primarily related to early contract terminations at Angamos and lower depreciation, partially offset by lower contract margin mainly related to higher spot prices on energy purchases coupled with lower availability	63
Total South America SBU Operating Margin Decrease	\$ (174)

Adjusted Operating Margin decreased \$118 million primarily due to the drivers above, adjusted for NCI and the net gains on early contract terminations at Angamos.

Adjusted PTC decreased \$111 million, mainly driven by the decrease in Adjusted Operating Margin described above, incremental capitalized interest at Alto Maipo in the prior period, lower equity earnings at Guacolda due to the suspension of equity method accounting, and higher interest expense in Brazil. These negative variances were partially offset by a favorable award in an arbitration proceeding in Chile and higher interest income in Argentina due to increase in rates and higher sales.

MCAC SBU

The following table summarizes Operating Margin, Adjusted Operating Margin and Adjusted PTC (in millions) for the periods indicated:

For the Years Ended December 31,	2022	2021	2020	\$ Change 2022 vs. 2021	% Change 2022 vs. 2021	\$ Change 2021 vs. 2020	% Change 2021 vs. 2020
Operating Margin	\$ 820	\$ 521	\$ 559	\$ 299	57 %	\$ (38)	-7 %
Adjusted Operating Margin ⁽¹⁾	679	398	394	281	71 %	4	1 %
Adjusted PTC ⁽¹⁾	559	314	287	245	78 %	27	9 %

⁽¹⁾ A non-GAAP financial measure, adjusted for the impact of NCI. See *SBU Performance Analysis—Non-GAAP Measures* for definition and Item 1.—*Business* for the respective ownership interest for key businesses.

Fiscal year 2022 versus 2021

Operating Margin increased \$299 million, or 57%, which was driven primarily by the following (in millions):

Increase in Panama driven by favorable LNG transactions, higher prices due to increase in NYMEX Henry Hub index and lower cost of sales resulting from favorable hydrology	\$ 217
Increase in the Dominican Republic driven by favorable LNG transactions and higher contract sales due to increased demand and higher prices	97
Decrease in the Dominican Republic mainly driven by the sale of Itabo on April 8, 2021	(19)
Other	4
Total MCAC SBU Operating Margin Increase	\$ 299

Adjusted Operating Margin increased \$281 million due to the drivers above, adjusted for NCI and unrealized gains on LNG derivatives.

Adjusted PTC increased \$245 million, mainly driven by the increase in Adjusted Operating Margin described above, partially offset by higher allocation of interest expense attributable to AES after Colon's noncontrolling interest buyout in September 2021 and lower gain on pension plan buyout in Mexico in 2021.

Fiscal year 2021 versus 2020

Operating Margin decreased \$38 million, or 7%, which was driven primarily by the following (in millions):

Decrease in the Dominican Republic mainly driven by the sale of Itabo on April 8, 2021	\$ (64)
Decrease in Mexico driven by lower availability and higher fixed costs	(29)
Increase in the Dominican Republic driven by higher LNG sales mainly due to Eastern Pipeline COD in 2020 and positive LNG transaction, partially offset by lower capacity due to the incorporation of new plants into the system and higher fixed costs	48
Increase in Panama mainly driven by Panama's demand recovery, new wind and solar projects, higher capacity prices, and lower fixed costs, partially offset by the Estrella del Mar I power barge disconnection in July 2020, higher cost of gas, and drier hydrology in 2021, mainly during Q4	11
Other	(4)
Total MCAC SBU Operating Margin Decrease	\$ (38)

Adjusted Operating Margin increased \$4 million primarily due to the drivers above, adjusted for NCI.

Adjusted PTC increased \$27 million, mainly driven by the increase in Adjusted Operating Margin described above, as well as a legal settlement in Panama in 2020 and a 2021 gain on pension plan buyout in Mexico.

Eurasia SBU

The following table summarizes Operating Margin, Adjusted Operating Margin and Adjusted PTC (in millions) for the periods indicated:

For the Years Ended December 31,	2022	2021	2020	\$ Change 2022 vs. 2021	% Change 2022 vs. 2021	\$ Change 2021 vs. 2020	% Change 2021 vs. 2020
Operating Margin	\$ 236	\$ 216	\$ 186	\$ 20	9 %	\$ 30	16 %
Adjusted Operating Margin ⁽¹⁾	172	162	142	10	6 %	20	14 %
Adjusted PTC ⁽¹⁾	192	196	177	(4)	-2 %	19	11 %

⁽¹⁾ A non-GAAP financial measure, adjusted for the impact of NCI. See *SBU Performance Analysis—Non-GAAP Measures* for definition and Item 1.—*Business* for the respective ownership interest for key businesses.

Fiscal year 2022 versus 2021

Operating Margin increased \$20 million, or 9%, which was driven primarily by the following (in millions):

Construction revenue for Mong Duong driven by a reduction in expected completion costs for ash pond 2, partially offset by higher maintenance costs	\$ 15
Higher merchant prices captured by St. Nikola, partially offset by depreciation of the Euro	11
Other	(6)
Total Eurasia SBU Operating Margin Increase	\$ 20

Adjusted Operating Margin increased \$10 million due to the drivers above, adjusted for NCI.

Adjusted PTC decreased \$4 million, mainly driven by higher interest expense, partially offset by the increase in Adjusted Operating Margin described above.

Fiscal year 2021 versus 2020

Operating Margin increased \$30 million, or 16%, which was driven primarily by the following (in millions):

Increase at Maritsa and St. Nikola primarily driven by higher electricity prices in Bulgaria and higher generation	\$ 19
Improved operational performance at Mong Duong	4
Other	7
Total Eurasia SBU Operating Margin Increase	\$ 30

Adjusted Operating Margin increased \$20 million due to the drivers above, adjusted for NCI.

Adjusted PTC increased \$19 million driven by the increase in Adjusted Operating Margin described above.

Key Trends and Uncertainties

During 2023 and beyond, we expect to face the following challenges at certain of our businesses. Management expects that improved operating performance at certain businesses, growth from new businesses, and global cost reduction initiatives may lessen or offset their impact. If these favorable effects do not occur, or if the challenges described below and elsewhere in this section impact us more significantly than we currently anticipate, or if volatile foreign currencies and commodities move more unfavorably, then these adverse factors (or other adverse factors unknown to us) may have a material impact on our operating margin, net income attributable to The AES Corporation and cash flows. We continue to monitor our operations and address challenges as they arise. For the risk factors related to our business, see Item 1.—*Business* and Item 1A.—*Risk Factors* of this Form 10-K.

Operational

Trade Restrictions and Supply Chain — On March 29, 2022, the U.S. Department of Commerce (“Commerce”) announced the initiation of an investigation into whether imports into the U.S. of solar cells and panels imported from Cambodia, Malaysia, Thailand, and Vietnam are circumventing antidumping and countervailing duty orders on solar cells and panels from China. This investigation resulted in significant systemic disruptions to the import of solar cells and panels from Southeast Asia. On June 6, 2022, President Biden issued a Proclamation waiving any tariffs that result from this investigation for a 24-month period. Since President Biden’s proclamation, suppliers in Southeast Asia have imported cells and panels again to the U.S.

On December 2, 2022, Commerce issued country-wide affirmative preliminary determinations that circumvention had occurred in each of the four Southeast Asian countries. Commerce also evaluated numerous individual companies and issued preliminary determinations that circumvention had occurred with respect to many but not all of these companies. Additionally, Commerce issued a preliminary determination that circumvention would not be deemed to occur for any solar cells and panels imported from the four countries if the wafers were manufactured outside of China or if no more than two out of six specifically identified components were produced in China. These preliminary determinations could be modified and final determinations from Commerce are expected in May 2023. We have contracted and secured our expected requirements for solar panels for U.S. projects targeted to achieve commercial operations in 2023.

Additionally, the Uyghur Forced Labor Prevention Act ("UFLPA") seeks to block the import of products made with forced labor in certain areas of China and may lead to certain suppliers being blocked from importing solar cells and panels to the U.S. While this has impacted the U.S. market, AES has managed this issue without significant impact to our projects. Further disruptions may impact our suppliers' ability or willingness to meet their contractual agreements or to continue to supply cells or panels into the U.S. market on terms that we deem satisfactory.

The impact of any adverse Commerce determination, the impact of the UFLPA, future disruptions to the solar panel supply chain and their effect on AES' U.S. solar project development and construction activities are uncertain. AES will continue to monitor developments and take prudent steps towards maintaining a robust supply chain for our renewable projects.

COVID-19 Pandemic — The COVID-19 pandemic has impacted global economic activity, including electricity and energy consumption, and caused significant volatility in financial markets intermittently in the last three years. Throughout the COVID-19 pandemic we have conducted our essential operations without significant disruption. We derive approximately 85% of our total revenues from our regulated utilities and long-term sales and supply contracts or PPAs at our generation businesses, which contributes to a relatively stable revenue and cost structure at most of our businesses. In 2022, our operational locations continued to experience the impact of, and recovery from, the COVID-19 pandemic. Across our global portfolio, our utilities businesses have generally performed in line with our expectations consistent with a recovery from the COVID-19 pandemic. Also see Item 1A.—*Risk Factors* of this Form 10-K.

Estí Hydro Plant Flooding Incident — On September 30, 2022, there was a flooding incident that impacted Estí, a 120 MW hydro plant in Panama. The plant was taken out of service for a complete assessment of the damages, which has now been completed. Repairs will be needed to ensure the long-term performance of the facility. During this time, the plant will continue to be out of service. The plant is covered by business interruption and property damage insurance and, in December 2022, a partial settlement was reached with the insurer.

The Company has not identified any indicators of impairment and believes the carrying value of the plant of \$130 million is recoverable as of December 31, 2022.

Macroeconomic and Political

The macroeconomic and political environments in some countries where our subsidiaries conduct business have changed during 2022. This could result in significant impacts to tax laws and environmental and energy policies. Additionally, we operate in multiple countries and as such are subject to volatility in exchange rates at the subsidiary level. See Item 7A.—*Quantitative and Qualitative Disclosures About Market Risk* for further information.

Inflation Reduction Act and U.S. Renewable Energy Tax Credits — The Inflation Reduction Act (the "IRA") was signed into law in the United States. The IRA includes provisions that are expected to benefit the U.S. clean energy industry, including increases, extensions and/or new tax credits for onshore and offshore wind, solar, storage and hydrogen projects. We expect that the extension of the current solar investment tax credits ("ITCs"), as well as higher credits available for projects that satisfy wage and apprenticeship requirements, will increase demand for our renewables products.

Our U.S. renewables business has a 51 GW pipeline that we intend to utilize to continue to grow our business, and these changes in tax policy are supportive of this strategy. We account for U.S. renewables projects according to U.S. GAAP, which, when partnering with tax-equity investors to monetize tax benefits, utilizes the HLBV method. This method recognizes the tax-credit value that is transferred to tax equity partners at the time of its creation, which for projects utilizing the investment tax credit is in the quarter the project begins commercial operation. For projects utilizing the production tax credit, this value is recognized over 10 years as the facility produces energy. In 2022, we

realized \$246 million of Adjusted PTC from tax credits earned by our U.S. renewables business. In 2023, we expect to realize significantly increased amounts of Adjusted PTC from tax credits earned by our U.S. renewables business in line with the growth in that business. Based on construction schedules, a significant portion of these earnings will be realized in the fourth quarter.

The implementation of the IRA is expected to require substantial guidance from the U.S. Department of Treasury and other government agencies. While that guidance is pending, there will be uncertainty with respect to the implementation of certain provisions of the IRA.

Global Tax — The macroeconomic and political environments in the U.S. and in some countries where our subsidiaries conduct business have changed during 2021 and 2022. This could result in significant impacts to tax law. For example, on July 1, 2022, the Chilean government proposed to reduce the corporate tax rate from 27% to 25%, limit net operating loss utilization per year, and introduce a disintegrated system whereby dividends may be subject to a 22% withholding tax, among other changes. The potential impact to the Company may be material.

In the U.S., the IRA includes a 15% corporate alternative minimum tax based on adjusted financial statement income. We are currently evaluating the applicability and effect of the new law and additional guidance issued in the fourth quarter of 2022.

In the fourth quarter of 2022, the European Commission adopted an amended Directive on Pillar 2 establishing a global minimum tax at a 15% rate. The adoption requires EU Member States to transpose the Directive into their respective national laws by December 31, 2023 for the rules to come into effect as of January 1, 2024. We will continue to monitor issuance of draft legislation in Bulgaria and other relevant EU Member States. The impact to the Company remains unknown but may be material.

Inflation — In the markets in which we operate, there have been higher rates of inflation recently. While most of our contracts in our international businesses are indexed to inflation, in general, our U.S.-based generation contracts are not indexed to inflation. If inflation continues to increase in our markets, it may increase our expenses that we may not be able to pass through to customers. It may also increase the costs of some of our development projects that could negatively impact their competitiveness. Our utility businesses do allow for recovering of operations and maintenance costs through the regulatory process, which may have timing impacts on recovery.

Reference Rate Reform — In July 2017, the United Kingdom Financial Conduct Authority announced that it intends to phase out LIBOR. In the U.S., the Alternative Reference Rate Committee at the Federal Reserve identified the Secured Overnight Financing Rate ("SOFR") as its preferred alternative rate for LIBOR; alternative reference rates in other key markets are under development. The ICE Benchmark Association ("IBA") has determined that it will cease publication of the one-month, three-month, six-month, and 12-month USD LIBOR rates by June 30, 2023. AES holds a substantial amount of debt and derivative contracts referencing LIBOR as an interest rate benchmark. In order to facilitate an organized transition from LIBOR to alternative benchmark rate(s), AES has established a process to measure and mitigate risks associated with the cessation of LIBOR. As part of this initiative, alternative benchmark rates have been, and continue to be, assessed, and implemented for newly executed agreements. Many of AES' existing agreements include provisions designed to facilitate an orderly transition from LIBOR, and interest rate derivatives address the LIBOR transition through the adoption of the ISDA 2020 IBOR Fallbacks Protocol and subsequent amendments. To the extent that the terms of the credit agreements and derivative instruments do not align following the cessation of LIBOR rates, AES negotiates contract amendments with counterparties or additional derivatives contracts.

Puerto Rico — Our subsidiaries in Puerto Rico have long-term PPAs with state-owned PREPA, which has been facing economic challenges that could result in a material adverse effect on our business in Puerto Rico. Despite the Title III protection, PREPA has been making substantially all of its payments to the generators in line with historical payment patterns.

The Puerto Rico Oversight, Management, and Economic Stability Act ("PROMESA") was enacted to create a structure for exercising federal oversight over the fiscal affairs of U.S. territories and created procedures for adjusting debt accumulated by the Puerto Rico government and, potentially, other territories ("Title III"). PROMESA also expedites the approval of key energy projects and other critical projects in Puerto Rico.

PROMESA allowed for the establishment of an Oversight Board with broad powers of budgetary and financial control over Puerto Rico. The Oversight Board filed for bankruptcy on behalf of PREPA under Title III in July 2017.

As a result of the bankruptcy filing, AES Puerto Rico and AES Ilumina's non-recourse debt of \$143 million and \$27 million, respectively, continue to be in technical default and are classified as current as of December 31, 2022. The Company is in compliance with its debt payment obligations as of December 31, 2022.

On April 12, 2022, a mediation team was appointed to prepare the plan to resolve the PREPA Title III case and related proceedings. A disclosure statement hearing was held on February 28, 2023; the PREPA disclosure statement was approved and mediation was extended through April 28, 2023.

Considering the information available as of the filing date, management believes the carrying amount of our long-lived assets in Puerto Rico of \$96 million is recoverable as of December 31, 2022.

Decarbonization Initiatives

Our strategy involves shifting towards clean energy platforms, including renewable energy, energy storage, LNG, and modernized grids. It is designed to position us for continued growth while reducing our carbon intensity and in support of our mission of accelerating the future of energy, together. In February 2022, we announced our intent to exit coal generation by year-end 2025, subject to necessary approvals.

In addition, initiatives have been announced by regulators, including in Chile, Puerto Rico, Bulgaria and Hawaii, and offtakers in recent years, with the intention of reducing GHG emissions generated by the energy industry. In parallel, the shift towards renewables has caused certain customers to migrate to other low-carbon energy solutions and this trend may continue.

Although we cannot currently estimate the financial impact of these decarbonization initiatives, new legislative or regulatory programs further restricting carbon emissions or other initiatives to voluntarily exit coal generation could require material capital expenditures, resulting in a reduction of the estimated useful life of certain coal facilities, or have other material adverse effects on our financial results.

For further information about the risks associated with decarbonization initiatives, see Item 1A.—*Risk Factors—Concerns about GHG emissions and the potential risks associated with climate change have led to increased regulation and other actions that could impact our businesses included in this Form 10-K.*

Regulatory

AES Maritza PPA Review — DG Comp is conducting a preliminary review of whether AES Maritza's PPA with NEK is compliant with the European Union's State Aid rules. No formal investigation has been launched by DG Comp to date. However, AES Maritza has been engaging in discussions with the DG Comp case team and the Government of Bulgaria ("GoB") to attempt to reach a negotiated resolution of the DG Comp's review ("PPA Discussions"). The PPA Discussions are ongoing and the PPA continues to remain in place. However, there can be no assurance that, in the context of the PPA Discussions, the other parties will not seek a prompt termination of the PPA.

We do not believe termination of the PPA is justified. Nevertheless, the PPA Discussions involve a range of potential outcomes, including but not limited to the termination of the PPA and payment of some level of compensation to AES Maritza. Any negotiated resolution would be subject to mutually acceptable terms, lender consent, and DG Comp approval. At this time, we cannot predict the outcome of the PPA Discussions or when those discussions will conclude. Nor can we predict how DG Comp might resolve its review if the PPA Discussions fail to result in an agreement concerning the agency's review. AES Maritza believes that its PPA is legal and in compliance with all applicable laws, and it will take all actions necessary to protect its interests, whether through negotiated agreement or otherwise. However, there can be no assurance that this matter will be resolved favorably; if it is not, there could be a material adverse effect on the Company's financial condition, results of operation, and cash flows. As of December 31, 2022, the carrying value of our long-lived assets at Maritza is \$427 million.

AES Ohio Distribution Rate Case — On December 14, 2022, the PUCO issued an order on AES Ohio's application to increase its base rates for electric distribution service to address, in part, increased costs of materials and labor and substantial investments to improve distribution structures. Among other matters, the order establishes a revenue increase of \$76 million for AES Ohio's base rates for electric distribution service. This increase will go into effect when AES Ohio has a new electric security plan in place, which is expected in 2023.

AES Ohio Electric Security Plan — On September 26, 2022, AES Ohio filed its latest Electric Security Plan (ESP 4) with the PUCO, which is a comprehensive plan to enhance and upgrade its network and improve

service reliability, provide greater safeguards for price stability, and continue investments in local economic development. ESP 4 also seeks to recover outstanding regulatory assets not currently in rates. AES Ohio did not propose that the Rate Stabilization Charge continue under ESP 4. This plan requires PUCO approval, which is expected in 2023.

AES Indiana Integrated Resource Plan (“IRP”) — AES Indiana filed its 2022 IRP with the IURC in December 2022. The 2022 IRP includes converting the two remaining coal units at Petersburg to natural gas by the end of 2025. Additionally, AES Indiana plans to add up to 1,300 MW of wind, solar, and battery energy storage by 2027.

Foreign Exchange Rates

We operate in multiple countries and as such are subject to volatility in exchange rates at varying degrees at the subsidiary level and between our functional currency, the USD, and currencies of the countries in which we operate. For additional information, refer to Item 7A.—*Quantitative and Qualitative Disclosures About Market Risk*.

Impairments

Long-lived Assets and Equity Affiliates — During the year ended December 31, 2022, the Company recognized asset and other-than-temporary impairment expenses of \$938 million. See Note 8—*Investments and Advances to Affiliates* and Note 22—*Asset Impairment Expense* included in Item 8.—*Financial Statements and Supplementary Data* of this Form 10-K for further information. After recognizing these impairment expenses, the carrying value of our investments in equity affiliates and long-lived assets that were assessed for impairment in 2022 totaled \$1.5 billion at December 31, 2022.

Events or changes in circumstances that may necessitate recoverability tests and potential impairments of long-lived assets may include, but are not limited to, adverse changes in the regulatory environment, unfavorable changes in power prices or fuel costs, increased competition due to additional capacity in the grid, technological advancements, declining trends in demand, evolving industry expectations to transition away from fossil fuel sources for generation, or an expectation it is more likely than not the asset will be disposed of before the end of its estimated useful life.

Goodwill — The Company has seen degradation in certain external factors used to determine the discount rate applied in our goodwill impairment analysis, such as increasing interest rates and country risk premiums in certain markets, as well as a decrease in forecast energy prices and other unfavorable macroeconomic assumptions in Colombia. These changes to the inputs of our discount rate have negatively impacted our annual goodwill impairment test as of October 1, 2022 and thus, an impairment of goodwill of \$777 million has been recognized as of December 31, 2022, reducing the goodwill balances of both AES Andes and AES El Salvador to zero. See Note 9—*Goodwill and Other Intangibles Assets* included in Item 8.—*Financial Statements and Supplementary Data* for further information.

The Company had no other reporting units considered to be “at risk,” as the fair value of all other reporting units exceeded their carrying amounts by more than 10%. Should the fair value of any of the Company’s reporting units fall below its carrying amount as a result of these inputs or other changes such as reduced operating performance, market declines, changes in the discount rate, regulatory changes, or other adverse conditions, goodwill impairment charges may be necessary in future periods.

Capital Resources and Liquidity

Overview

As of December 31, 2022, the Company had unrestricted cash and cash equivalents of \$1.4 billion, of which \$24 million was held at the Parent Company and qualified holding companies. The Company had \$730 million in short-term investments, held primarily at subsidiaries, and restricted cash and debt service reserves of \$713 million. The Company also had non-recourse and recourse aggregate principal amounts of debt outstanding of \$19.4 billion and \$3.9 billion, respectively. Of the \$1.8 billion of our current non-recourse debt, \$1.6 billion was presented as such because it is due in the next twelve months and \$177 million relates to debt considered in default due to covenant violations. None of the defaults are payment defaults but are instead technical defaults triggered by failure to comply with covenants or other requirements contained in the non-recourse debt documents, of which \$170 million is due to

the bankruptcy of the offtaker. As of December 31, 2022, the Company also had \$662 million outstanding related to supplier financing arrangements, which are classified as *Accrued and other liabilities*.

We expect current maturities of non-recourse debt and amounts due under supplier financing arrangements to be repaid from net cash provided by operating activities of the subsidiary to which the liability relates, through opportunistic refinancing activity, or some combination thereof. While we have no recourse debt which matures within the next twelve months, we do have amounts due under supplier financing arrangements, of which \$296 million has a Parent Company guarantee. From time to time, we may elect to repurchase our outstanding debt through cash purchases, privately negotiated transactions or otherwise when management believes that such securities are attractively priced. Such repurchases, if any, will depend on prevailing market conditions, our liquidity requirements, and other factors. The amounts involved in any such repurchases may be material.

We rely mainly on long-term debt obligations to fund our construction activities. We have, to the extent available at acceptable terms, utilized non-recourse debt to fund a significant portion of the capital expenditures and investments required to construct and acquire our electric power plants, distribution companies, and related assets. Our non-recourse financing is designed to limit cross-default risk to the Parent Company or other subsidiaries and affiliates. Our non-recourse long-term debt is a combination of fixed and variable interest rate instruments. Debt is typically denominated in the currency that matches the currency of the revenue expected to be generated from the benefiting project, thereby reducing currency risk. In certain cases, the currency is matched through the use of derivative instruments. The majority of our non-recourse debt is funded by international commercial banks, with debt capacity supplemented by multilaterals and local regional banks.

Given our long-term debt obligations, the Company is subject to interest rate risk on debt balances that accrue interest at variable rates. When possible, the Company will borrow funds at fixed interest rates or hedge its variable rate debt to fix its interest costs on such obligations. In addition, the Company has historically tried to maintain at least 70% of its consolidated long-term obligations at fixed interest rates, including fixing the interest rate through the use of interest rate swaps. These efforts apply to the notional amount of the swaps compared to the amount of related underlying debt. Presently, the Parent Company's only material unhedged exposure to variable interest rate debt relates to drawings of \$325 million under its revolving credit facility and a \$200 million senior unsecured term loan. On a consolidated basis, of the Company's \$23.7 billion of total gross debt outstanding as of December 31, 2022, approximately \$6 billion bore interest at variable rates that were not subject to a derivative instrument which fixed the interest rate. Brazil holds \$2 billion of our floating rate non-recourse exposure as variable rate instruments act as a natural hedge against inflation in Brazil.

In addition to utilizing non-recourse debt at a subsidiary level when available, the Parent Company provides a portion, or in certain instances all, of the remaining long-term financing or credit required to fund development, construction or acquisition of a particular project. These investments have generally taken the form of equity investments or intercompany loans, which are subordinated to the project's non-recourse loans. We generally obtain the funds for these investments from our cash flows from operations, proceeds from the sales of assets and/or the proceeds from our issuances of debt, common stock and other securities. Similarly, in certain of our businesses, the Parent Company may provide financial guarantees or other credit support in support of tax equity partnerships or for the benefit of counterparties who have entered into contracts for the purchase or sale of electricity, equipment, or other services with our subsidiaries or lenders. In such circumstances, if a business defaults on its payment or supply obligation or other obligation under the terms of the relevant agreement, the Parent Company will be responsible for the business' obligations up to the amount provided for in the relevant guarantee or other credit support. As of December 31, 2022, the Parent Company had provided outstanding financial and performance-related guarantees or other credit support commitments to or for the benefit of our businesses, which were limited by the terms of the agreements, of approximately \$2.4 billion in aggregate (excluding those collateralized by letters of credit and other obligations discussed below).

Some counterparties may be unwilling to accept our general unsecured commitments to provide credit support. Accordingly, with respect to both new and existing commitments, the Parent Company may be required to provide some other form of assurance, such as a letter of credit, to backstop or replace our credit support. The Parent Company may not be able to provide adequate assurances to such counterparties. To the extent we are required and able to provide letters of credit or other collateral to such counterparties, this will reduce the amount of credit available to us to meet our other liquidity needs. As of December 31, 2022, we had \$128 million in letters of credit outstanding provided under our unsecured credit facilities, \$123 million in letters of credit under bilateral agreements, and \$34 million in letters of credit outstanding provided under our revolving credit facility. These letters of credit operate to guarantee performance relating to certain project development and construction activities and

business operations. During the year ended December 31, 2022, the Company paid letter of credit fees ranging from 1% to 3% per annum on the outstanding amounts.

We expect to continue to seek, where possible, non-recourse debt financing in connection with the assets or businesses that we or our affiliates may develop, construct or acquire. However, depending on local and global market conditions and the unique characteristics of individual businesses, non-recourse debt may not be available on economically attractive terms or at all. If we decide not to provide any additional funding or credit support to a subsidiary project that is under construction or has near-term debt payment obligations and that subsidiary is unable to obtain additional non-recourse debt, such subsidiary may become insolvent, and we may lose our investment in that subsidiary. Additionally, if any of our subsidiaries lose a significant customer, the subsidiary may need to withdraw from a project or restructure the non-recourse debt financing. If we or the subsidiary choose not to proceed with a project or are unable to successfully complete a restructuring of the non-recourse debt, we may lose our investment in that subsidiary.

Many of our subsidiaries depend on timely and continued access to capital markets to manage their liquidity needs. The inability to raise capital on favorable terms, to refinance existing indebtedness or to fund operations and other commitments during times of political or economic uncertainty may have material adverse effects on the financial condition and results of operations of those subsidiaries. In addition, changes in the timing of tariff increases or delays in the regulatory determinations under the relevant concessions could affect the cash flows and results of operations of our businesses.

Long-Term Receivables

As of December 31, 2022, the Company had approximately \$303 million of gross accounts receivable classified as *Other noncurrent assets*. These noncurrent receivables mostly consist of accounts receivable in Chile and in the U.S. that, pursuant to amended agreements or government resolutions, have collection periods that extend beyond December 31, 2023, or one year from the latest balance sheet date. Noncurrent receivables in Chile pertain primarily to revenues recognized on regulated energy contracts that were impacted by the Stabilization Fund created by the Chilean government. The receivables in the U.S. are associated with future premium payments on a heat rate call option which are expected to be received in 2024. See Note 7—*Financing Receivables* included in Item 8.—*Financial Statements and Supplementary Data*, Item 1.—*Business—South America SBU—Argentina—Regulatory Framework and Market Structure*, and Item 7.—*Management’s Discussion and Analysis of Financial Condition and Results of Operation—Key Trends and Uncertainties—Macroeconomic and Political—Chile* of this Form 10-K for further information.

As of December 31, 2022, the Company had approximately \$1 billion of loans receivable primarily related to a facility constructed under a BOT contract in Vietnam. This loan receivable represents contract consideration related to the construction of the facility, which was substantially completed in 2015, and will be collected over the 25-year term of the plant's PPA. As of December 31, 2021, Mong Duong met the held-for-sale criteria and the loan receivable balance, net of CECL reserve, was classified in held-for-sale assets. Of the loan receivable balance, \$91 million was classified as *Current held-for-sale assets*, and \$1 billion was classified as *Noncurrent held-for-sale assets*. As of December 31, 2022, Mong Duong no longer met the held-for-sale criteria. As such, the loan receivable balance of \$1 billion, net of CECL reserve of \$28 million, was classified as a *Loan receivable* on the Consolidated Balance Sheet. See Note 20—*Revenue* included in Item 8.—*Financial Statements and Supplementary Data* of this Form 10-K for further information.

Cash Sources and Uses

The primary sources of cash for the Company in the year ended December 31, 2022 were debt financings and supplier financing arrangements, cash flows from operating activities, sales of short-term investments, and sales to noncontrolling interests. The primary uses of cash in the year ended December 31, 2022 were repayments of debt, capital expenditures, purchases of short-term investments, acquisitions of noncontrolling interests, and purchases of emissions allowances in Bulgaria.

The primary sources of cash for the Company in the year ended December 31, 2021 were debt financings, cash flows from operating activities, proceeds from the issuance of Equity Units, and sales of short-term investments. The primary uses of cash in the year ended December 31, 2021 were repayments of debt, capital expenditures, acquisitions of business interests, and purchases of short-term investments.

The primary sources of cash for the Company in the year ended December 31, 2020 were debt financings, cash flows from operating activities, sales of short-term investments, and sales to noncontrolling interests. The primary uses of cash in the year ended December 31, 2020 were repayments of debt, capital expenditures, and purchases of short-term investments.

A summary of cash-based activities are as follows (in millions):

	Year Ended December 31,		
	2022	2021	2020
Cash Sources:			
Issuance of non-recourse debt	\$ 5,788	\$ 1,644	\$ 4,680
Borrowings under the revolving credit facilities	5,424	2,802	2,420
Net cash provided by operating activities	2,715	1,902	2,755
Sale of short-term investments	1,049	616	627
Purchases under supplier financing arrangements	1,042	91	72
Sales to noncontrolling interests	742	173	553
Contributions from noncontrolling interests	233	365	1
Issuance of recourse debt	200	7	3,419
Affiliate repayments and returns of capital	149	320	158
Issuance of preferred shares in subsidiaries	60	153	112
Proceeds from the sale of business interests, net of cash and restricted cash sold	1	95	169
Issuance of preferred stock	—	1,014	—
Other	25	55	—
Total Cash Sources	\$ 17,428	\$ 9,237	\$ 14,966
Cash Uses:			
Repayments under the revolving credit facilities	\$ (4,687)	\$ (2,420)	\$ (2,479)
Capital expenditures	(4,551)	(2,116)	(1,900)
Repayments of non-recourse debt	(3,144)	(2,012)	(4,136)
Purchase of short-term investments	(1,492)	(519)	(653)
Acquisitions of noncontrolling interests	(602)	(117)	(259)
Purchase of emissions allowances	(488)	(265)	(188)
Repayments of obligations under supplier financing arrangements	(432)	(35)	(96)
Dividends paid on AES common stock	(422)	(401)	(381)
Distributions to noncontrolling interests	(265)	(284)	(422)
Acquisitions of business interests, net of cash and restricted cash acquired	(243)	(658)	(136)
Contributions and loans to equity affiliates	(232)	(427)	(332)
Payments for financing fees	(120)	(32)	(107)
Repayments of recourse debt	(29)	(26)	(3,366)
Other	(118)	(268)	(256)
Total Cash Uses	\$ (16,825)	\$ (9,580)	\$ (14,711)
Net increase (decrease) in Cash, Cash Equivalents, and Restricted Cash	\$ 603	\$ (343)	\$ 255

Consolidated Cash Flows

The following table reflects the changes in operating, investing, and financing cash flows for the comparative twelve month periods (in millions):

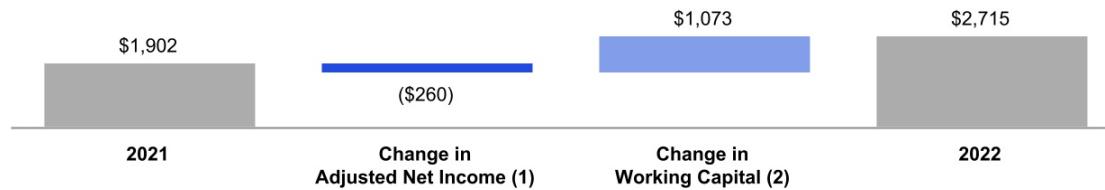
Cash flows provided by (used in):	December 31,			\$ Change	
	2022	2021	2020	2022 vs. 2021	2021 vs. 2020
Operating activities	\$ 2,715	\$ 1,902	\$ 2,755	\$ 813	\$ (853)
Investing activities	(5,836)	(3,051)	(2,295)	(2,785)	(756)
Financing activities	3,758	797	(78)	2,961	875

Operating Activities

Fiscal Year 2022 versus 2021

Net cash provided by operating activities increased \$813 million for the year ended December 31, 2022, compared to December 31, 2021.

Operating Cash Flows
(in millions)



⁽¹⁾ The change in adjusted net income is defined as the variance in *net income*, net of the total *adjustments to net income* as shown on the Consolidated Statements of Cash Flows in Item 8.—*Financial Statements and Supplementary Data* of this Form 10-K.

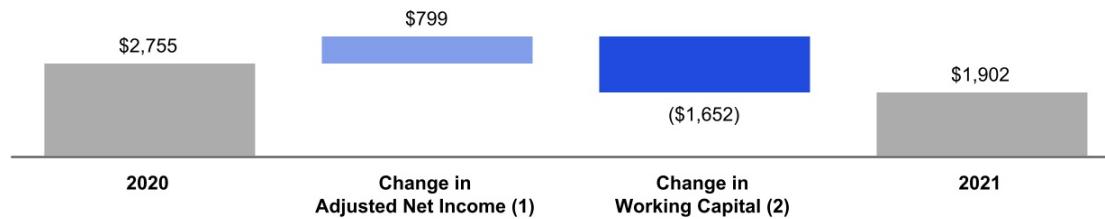
⁽²⁾ The change in working capital is defined as the variance in total *changes in operating assets and liabilities* as shown on the Consolidated Statements of Cash Flows in Item 8.—*Financial Statements and Supplementary Data* of this Form 10-K.

- Adjusted net income decreased \$260 million, primarily due to lower margins at our South America and US and Utilities SBUs and an increase in interest expense, partially offset by higher margins at our MCAC and Eurasia SBUs and an increase in interest income.
- Working capital requirements decreased \$1.1 billion, primarily due to deferred income at Angamos in the 2021 due to revenue recognized for the early contract terminations with Minera Escondida and Minera Spence, the GSF liability payment at Tieté in 2021, and the change in income tax liabilities, partially offset by an increase in inventory, primarily fuel and other raw materials, at AES Andes, AES Panama, and AES Indiana.

Fiscal Year 2021 versus 2020

Net cash provided by operating activities decreased \$853 million for the year ended December 31, 2021, compared to December 31, 2020.

Operating Cash Flows
(in millions)



⁽¹⁾ The change in adjusted net income is defined as the variance in *net income*, net of the total *adjustments to net income* as shown on the Consolidated Statements of Cash Flows in Item 8.—*Financial Statements and Supplementary Data* of this Form 10-K.

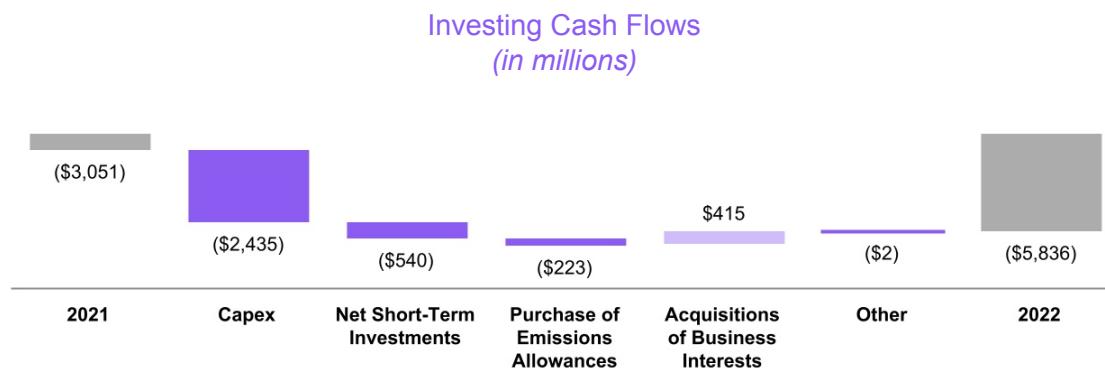
⁽²⁾ The change in working capital is defined as the variance in total *changes in operating assets and liabilities* as shown on the Consolidated Statements of Cash Flows in Item 8.—*Financial Statements and Supplementary Data* of this Form 10-K.

- Adjusted net income increased \$799 million, primarily due to higher margins at our US and Utilities SBU, a decrease in current income tax expense at Angamos due to a timing difference in recognition of the early contract terminations with Minera Escondida and Minera Spence, and a decrease in interest expense, partially offset by lower margins at our South America SBU.
- Working capital requirements increased \$1.7 billion, primarily due to a decrease in deferred income at Angamos due to revenue recognized from early contract terminations with Minera Escondida and Minera Spence in 2020, and a decrease in income tax liabilities.

Investing Activities

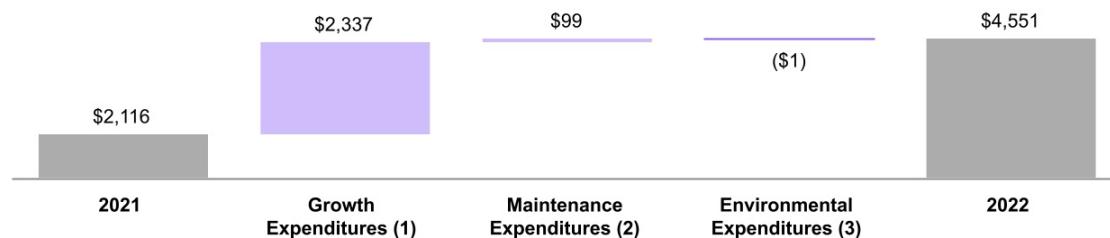
Fiscal Year 2022 versus 2021

Net cash used in investing activities increased \$2.8 billion for the year ended December 31, 2022 compared to December 31, 2021.



- Cash used for short-term investing activities increased \$540 million, primarily at AES Brasil as a result of higher net short-term investment purchases in 2022.
- Purchases of emissions allowances increased \$223 million, primarily in Bulgaria as a result of increased demand and higher CO₂ prices.
- Acquisitions of business interests decreased \$415 million, primarily due to the AES Clean Energy acquisitions of New York Wind and Community Energy and the acquisitions of wind complexes at AES Brasil in 2021, partially offset by the acquisition of the Cubico II Wind Complex at AES Brasil and Agua Clara in the Dominican Republic in 2022.
- Capital expenditures increased \$2.4 billion, discussed further below.

Capital Expenditures (in millions)



⁽¹⁾ Growth expenditures generally include expenditures related to development projects in construction, expenditures that increase capacity of a facility beyond the original design, and investments in general load growth or system modernization.

⁽²⁾ Maintenance expenditures generally include expenditures that are necessary to maintain regular operations or net maximum capacity of a facility.

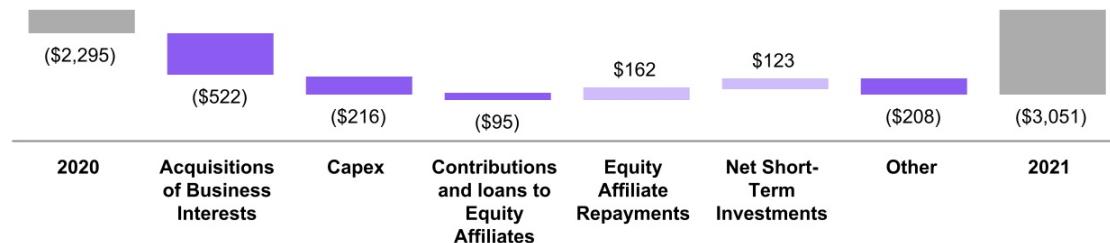
⁽³⁾ Environmental expenditures generally include expenditures to comply with environmental laws and regulations, expenditures for safety programs and other expenditures to ensure a facility continues to operate in an environmentally responsible manner.

- Growth expenditures increased \$2.3 billion, primarily driven by an increase in renewable projects at AES Clean Energy and AES Brasil, and by higher transmission and distribution and renewable project investments at AES Indiana and AES Ohio, partially offset by the timing of payments for the construction of the Alamitos Energy Center at Southland Energy in 2021.
- Maintenance expenditures increased \$99 million, primarily due to increased expenditures at AES Indiana and AES Brasil.
- Environmental expenditures decreased \$1 million, with no material drivers.

Fiscal Year 2021 versus 2020

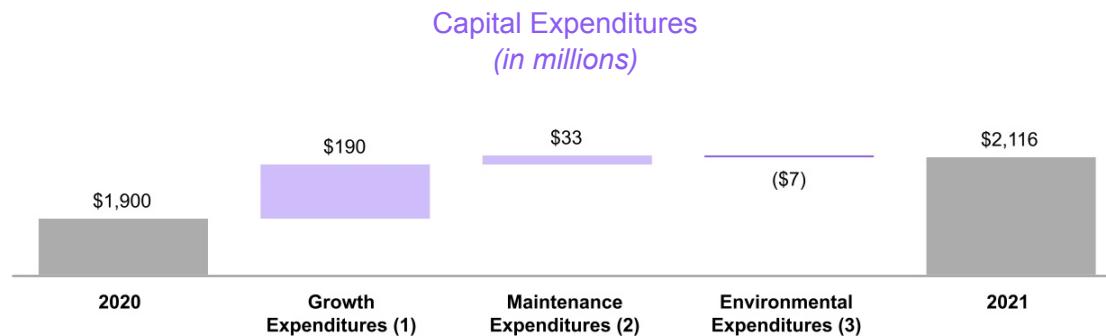
Net cash used in investing activities increased \$756 million for the year ended December 31, 2021 compared to December 31, 2020.

Investing Cash Flows (in millions)



- Acquisitions of business interests increased \$522 million, primarily due to the AES Clean Energy acquisitions of New York Wind and Community Energy and the acquisitions of wind complexes at AES Brasil, partially offset by the AES Panama acquisition of Penonome I in 2020.

- Contributions and loans to equity affiliates increased \$95 million, primarily due to higher contributions to Fluence and Uplight, our equity method investments, partially offset by higher contributions to sPower and to Gas Natural Atlántico II, which was previously recorded as an equity investment in Panama in 2020 and is now consolidated by AES.
- Repayments from equity affiliates increased \$162 million, primarily due to an increase in loan repayments from sPower and Fluence, our equity method investments.
- Cash from short-term investing activities increased \$123 million, primarily at AES Brasil as a result of lower net short-term investment purchases in 2021.
- Capital expenditures increased \$216 million, discussed further below.



⁽¹⁾ Growth expenditures generally include expenditures related to development projects in construction, expenditures that increase capacity of a facility beyond the original design, and investments in general load growth or system modernization.

⁽²⁾ Maintenance expenditures generally include expenditures that are necessary to maintain regular operations or net maximum capacity of a facility.

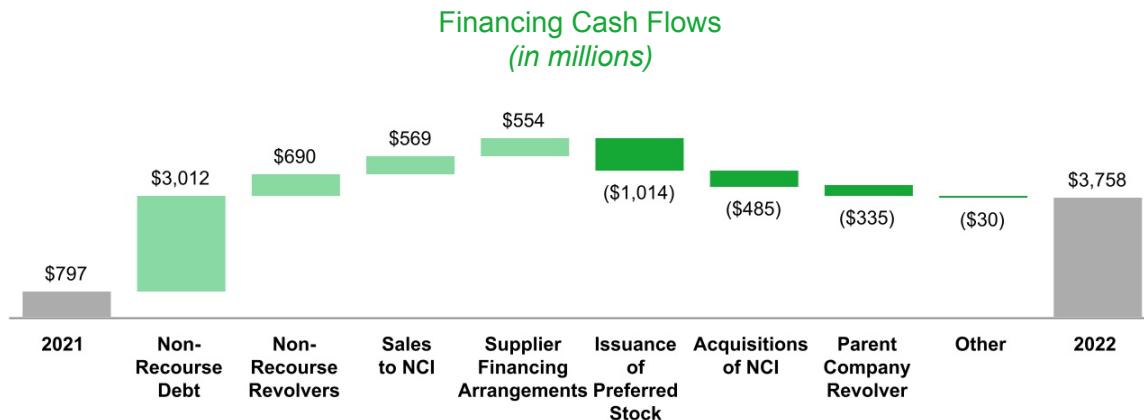
⁽³⁾ Environmental expenditures generally include expenditures to comply with environmental laws and regulations, expenditures for safety programs and other expenditures to ensure a facility continues to operate in an environmentally responsible manner.

- Growth expenditures increased \$190 million, primarily driven by higher transmission and distribution investments at AES Ohio and AES Indiana, and renewable projects at AES Clean Energy, AES Brasil, and AES Andes. This impact was partially offset by the completion of renewable energy projects in Argentina and the completion of the Southland repowering project.
- Maintenance expenditures increased \$33 million, primarily due to increased expenditures at AES Andes, AES Ohio, El Salvador, and Mexico, partially offset by expenditures at Andres in 2020 as a result of the steam turbine lightning damage, and by decreased expenditures at AES Indiana and Itabo, due to its sale in 2021.
- Environmental expenditures decreased \$7 million, primarily due to the timing of payments in 2020 related to projects at AES Indiana.

Financing Activities

Fiscal Year 2022 versus 2021

Net cash provided by financing activities increased \$3 billion for the year ended December 31, 2022 compared to December 31, 2021.

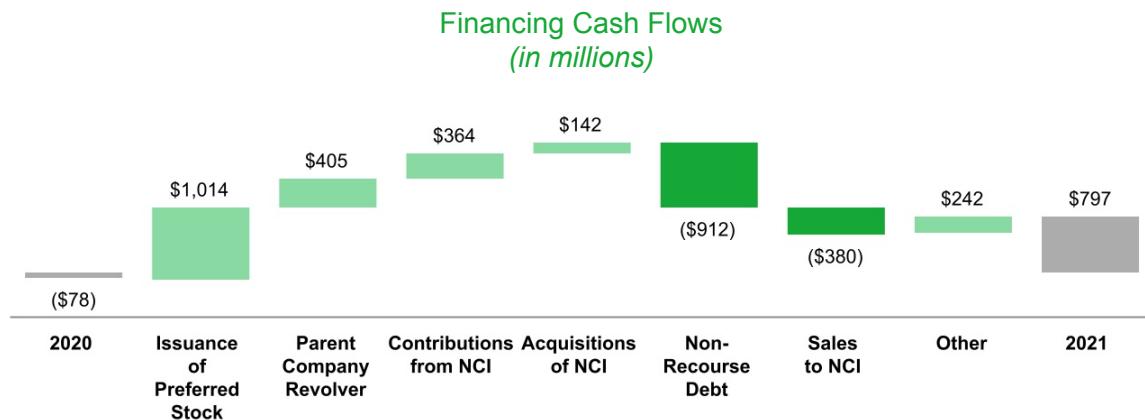


See Notes 11—*Debt* and 17—*Equity* in Item 8.—*Financial Statements and Supplementary Data* of this Form 10-K for more information regarding significant debt and equity transactions, respectively.

- The \$3 billion impact from non-recourse debt transactions is primarily due to an increase in net borrowings in the Netherlands and Panama, the United Kingdom, AES Andes, AES Brasil, AES Indiana, AES Ohio, AES Clean Energy, and in Bulgaria.
- The \$690 million impact from non-recourse revolver transactions is primarily due to higher net borrowings at AES Clean Energy, AES Ohio, and in the Dominican Republic, partially offset by higher net repayments at AES Andes and AES Indiana and lower net borrowings in Panama.
- The \$569 million impact from sales to noncontrolling interests is primarily due to proceeds received at AES Clean Energy from the sales of ownership in project companies to tax equity partners, the sale of a 14.9% ownership interest in Southland Energy, and from the sales of ownership interests in Andes Solar 2a and Los Olmos as part of the Chile Renovables renewable partnership.
- The \$554 million impact from supplier financing arrangements is primarily due to higher financed purchases, net of repayments, at AES Clean Energy, AES Andes, and AES Brasil.
- The \$1 billion impact from issuance of preferred stock is due to the issuance of Equity Units at the Parent Company in the prior year.
- The \$485 million impact from acquisitions of noncontrolling interests is mainly due to the acquisition of an additional 32% ownership interest in AES Andes, partially offset by the first installment for the acquisition of the remaining 49.9% minority ownership interest in Colon in 2021.
- The \$335 million impact from Parent Company revolver transactions is primarily due to higher net repayments in the current year.

Fiscal Year 2021 versus 2020

Net cash provided by financing activities increased \$875 million for the year ended December 31, 2021 compared to December 31, 2020.



See Notes 11—*Debt* and 17—*Equity* in Item 8.—*Financial Statements and Supplementary Data* of this Form 10-K for more information regarding significant debt and equity transactions, respectively.

- The \$1 billion impact from issuance of preferred stock is due to the issuance of Equity Units at the Parent Company.
- The \$405 million impact from Parent Company revolver transactions is primarily due to higher net borrowings in 2021.
- The \$364 million impact from contributions from noncontrolling interests is primarily due to contributions from minority interests at AES Clean Energy, IPALCO, and AES Andes, due to the preemptive rights offering to fund its renewable growth program.
- The \$142 million impact from acquisitions of noncontrolling interests is due to the 2020 acquisition of an additional 19.8% ownership interest in AES Brasil, partially offset by the first installment for the acquisition of the remaining 49.9% minority ownership interest in Colon.
- The \$912 million impact from non-recourse debt transactions is primarily due to lower net borrowings at Panama, Southland Energy, Vietnam, and Argentina, and higher net repayments at AES Brasil, partially offset by higher net borrowings at AES Clean Energy and lower net repayments in Chile.
- The \$380 million impact from sales to noncontrolling interests is primarily due to proceeds received from the sale of a 35% ownership interest in Southland Energy in 2020.
- The \$242 million impact from other financing activities is primarily driven by a decrease in distributions to noncontrolling interests, due to lower distributions to minority interests at AES Andes, AES Brasil, and Itabo, due to its sale in 2021.

Parent Company Liquidity

The following discussion is included as a useful measure of the liquidity available to The AES Corporation, or the Parent Company, given the non-recourse nature of most of our indebtedness. Parent Company Liquidity as outlined below is a non-GAAP measure and should not be construed as an alternative to *Cash and cash equivalents*, which is determined in accordance with GAAP. Parent Company Liquidity may differ from similarly titled measures used by other companies. The principal sources of liquidity at the Parent Company level are dividends and other distributions from our subsidiaries, including refinancing proceeds, proceeds from debt and equity financings at the Parent Company level, including availability under our revolving credit facility, and proceeds from asset sales. Cash requirements at the Parent Company level are primarily to fund interest and principal repayments.

of debt, construction commitments, other equity commitments, common stock repurchases, acquisitions, taxes, Parent Company overhead and development costs, and dividends on common stock.

The Company defines Parent Company Liquidity as cash available to the Parent Company, including cash at qualified holding companies, plus available borrowings under our existing credit facility. The cash held at qualified holding companies represents cash sent to subsidiaries of the Company domiciled outside of the U.S. Such subsidiaries have no contractual restrictions on their ability to send cash to the Parent Company. Parent Company Liquidity is reconciled to its most directly comparable GAAP financial measure, *Cash and cash equivalents*, at the periods indicated as follows (in millions):

	December 31, 2022	December 31, 2021
Consolidated cash and cash equivalents	\$ 1,374	\$ 943
Less: Cash and cash equivalents at subsidiaries	(1,350)	(902)
Parent Company and qualified holding companies' cash and cash equivalents	<u>24</u>	<u>41</u>
Commitments under the Parent Company credit facility	1,500	1,250
Less: Letters of credit under the credit facility	(34)	(48)
Less: Borrowings under the credit facility	(325)	(365)
Borrowings available under the Parent Company credit facility	<u>1,141</u>	<u>837</u>
Total Parent Company Liquidity	<u><u>\$ 1,165</u></u>	<u><u>\$ 878</u></u>

The Parent Company paid dividends of \$0.63 per outstanding share to its common stockholders during the year ended December 31, 2022. While we intend to continue payment of dividends and believe we will have sufficient liquidity to do so, we can provide no assurance that we will continue to pay dividends, or if continued, the amount of such dividends.

Recourse Debt

Our total recourse debt was \$3.9 billion and \$3.8 billion at December 31, 2022 and 2021, respectively. See Note 11—*Debt in Item 8.—Financial Statements and Supplementary Data* of this Form 10-K for additional detail.

We believe that our sources of liquidity will be adequate to meet our needs for the foreseeable future. This belief is based on a number of material assumptions, including, without limitation, assumptions about our ability to access the capital markets, the operating and financial performance of our subsidiaries, currency exchange rates, power market pool prices, and the ability of our subsidiaries to pay dividends. In addition, our subsidiaries' ability to declare and pay cash dividends to us (at the Parent Company level) is subject to certain limitations contained in loans, governmental provisions and other agreements. We can provide no assurance that these sources will be available when needed or that the actual cash requirements will not be greater than anticipated. We have met our interim needs for shorter-term and working capital financing at the Parent Company level with our revolving credit facility. See Item 1A.—*Risk Factors—The AES Corporation's ability to make payments on its outstanding indebtedness is dependent upon the receipt of funds from our subsidiaries*, of this Form 10-K.

Various debt instruments at the Parent Company level, including our revolving credit facility, contain certain restrictive covenants. The covenants provide for, among other items, limitations on liens; restrictions and limitations on mergers and acquisitions and the disposition of assets; maintenance of certain financial ratios; and financial and other reporting requirements. As of December 31, 2022, we were in compliance with these covenants at the Parent Company level.

Non-Recourse Debt

While the lenders under our non-recourse debt financings generally do not have direct recourse to the Parent Company, defaults thereunder can still have important consequences for our results of operations and liquidity, including, without limitation:

- reducing our cash flows as the subsidiary will typically be prohibited from distributing cash to the Parent Company during the time period of any default;
- triggering our obligation to make payments under any financial guarantee, letter of credit or other credit support we have provided to or on behalf of such subsidiary;
- causing us to record a loss in the event the lender forecloses on the assets; and
- triggering defaults in our outstanding debt at the Parent Company.

For example, our revolving credit facility and outstanding debt securities at the Parent Company include events of default for certain bankruptcy-related events involving material subsidiaries. In addition, our revolving

credit agreement at the Parent Company includes events of default related to payment defaults and accelerations of outstanding debt of material subsidiaries.

Some of our subsidiaries are currently in default with respect to all or a portion of their outstanding indebtedness. The total non-recourse debt classified as current in the accompanying Consolidated Balance Sheets amounts to \$1.8 billion. The portion of current debt related to such defaults was \$177 million at December 31, 2022, all of which was non-recourse debt related to three subsidiaries — AES Puerto Rico, AES Illumina, and AES Jordan Solar. None of the defaults are payment defaults, but are instead technical defaults triggered by failure to comply with other covenants or other conditions contained in the non-recourse debt documents, of which \$170 million is due to the bankruptcy of the offtaker. See Note 11—*Debt* in Item 8.—*Financial Statements and Supplementary Data* of this Form 10-K for additional detail.

None of the subsidiaries that are currently in default are subsidiaries that met the applicable definition of materiality under the Parent Company's debt agreements as of December 31, 2022, in order for such defaults to trigger an event of default or permit acceleration under the Parent Company's indebtedness. However, as a result of additional dispositions of assets, other significant reductions in asset carrying values or other matters in the future that may impact our financial position and results of operations or the financial position of the individual subsidiary, it is possible that one or more of these subsidiaries could fall within the definition of a "material subsidiary" and thereby trigger an event of default and possible acceleration of the indebtedness under the Parent Company's outstanding debt securities. A material subsidiary is defined in the Parent Company's revolving credit facility as any business that contributed 20% or more of the Parent Company's total cash distributions from businesses for the four most recently completed fiscal quarters. As of December 31, 2022, none of the defaults listed above, individually or in the aggregate, results in or is at risk of triggering a cross-default under the recourse debt of the Parent Company.

Contractual Obligations and Parent Company Contingent Contractual Obligations

A summary of our contractual obligations, commitments and other liabilities as of December 31, 2022 is presented below (in millions):

Contractual Obligations	Total	Less than 1 year	1-3 years	3-5 years	More than 5 years	Other	Footnote Reference ⁽⁵⁾
Debt obligations ⁽¹⁾⁽²⁾	\$ 23,663	\$ 1,761	\$ 6,024	\$ 4,885	\$ 10,993	\$ —	11
Interest payments on long-term debt ⁽³⁾	7,385	1,083	1,850	1,272	3,180	—	n/a
Finance lease obligations ⁽²⁾	356	10	18	18	310	—	14
Operating lease obligations ⁽²⁾	816	36	68	62	650	—	14
Electricity obligations	9,800	1,190	1,512	1,174	5,924	—	12
Fuel obligations	13,382	3,702	4,330	2,216	3,134	—	12
Other purchase obligations	7,341	4,642	780	404	1,515	—	12
Other long-term liabilities reflected on AES' consolidated balance sheet under GAAP ⁽²⁾⁽⁴⁾	856	—	372	212	262	10	n/a
Total	\$ 63,599	\$ 12,424	\$ 14,954	\$ 10,243	\$ 25,968	\$ 10	

⁽¹⁾ Includes recourse and non-recourse debt presented on the Consolidated Balance Sheets. These amounts exclude finance lease liabilities which are included in the finance lease category.

⁽²⁾ Excludes any businesses classified as held-for-sale. See Note 24—*Held-for-Sale and Dispositions* in Item 8.—*Financial Statements and Supplementary Data* of this Form 10-K for additional information related to held-for-sale businesses.

⁽³⁾ Interest payments are estimated based on final maturity dates of debt securities outstanding at December 31, 2022 and do not reflect anticipated future refinancing, early redemptions or new debt issuances. Variable rate interest obligations are estimated based on rates as of December 31, 2022.

⁽⁴⁾ These amounts do not include current liabilities on the Consolidated Balance Sheets except for the current portion of uncertain tax obligations. Noncurrent uncertain tax obligations are reflected in the "Other" column of the table above as the Company is not able to reasonably estimate the timing of the future payments. In addition, these amounts do not include: (1) regulatory liabilities (See Note 10—*Regulatory Assets and Liabilities*), (2) contingencies (See Note 13—*Contingencies*), (3) pension and other postretirement employee benefit liabilities (see Note 15—*Benefit Plans*), (4) derivatives and incentive compensation (See Note 6—*Derivative Instruments and Hedging Activities*) or (5) any taxes (See Note 23—*Income Taxes*) except for uncertain tax obligations, as the Company is not able to reasonably estimate the timing of future payments. See the indicated notes to the Consolidated Financial Statements included in Item 8.—*Financial Statements and Supplementary Data* of this Form 10-K for additional information on the items excluded.

⁽⁵⁾ For further information see the note referenced below in Item 8.—*Financial Statements and Supplementary Data* of this Form 10-K.

The following table presents our Parent Company's contingent contractual obligations as of December 31, 2022:

Contingent Contractual Obligations	Amount (in millions)	Number of Agreements	Maximum Exposure Range for Each Agreement (in millions)
Guarantees and commitments	\$ 2,406	81	< \$1 — 400
Letters of credit under the unsecured credit facilities	128	39	< \$1 — 36
Letters of credit under bilateral agreements	123	2	\$59— 64
Letters of credit under the revolving credit facility	34	16	< \$1 — 15
Surety bonds	2	2	< \$1 — \$1
Total	\$ 2,693	140	

⁽¹⁾ Excludes normal and customary representations and warranties in agreements for the sale of assets (including ownership in associated legal entities) where the associated risk is considered to be nominal.

We have a diverse portfolio of performance-related contingent contractual obligations. These obligations are designed to cover potential risks and only require payment if certain targets are not met or certain contingencies occur. The risks associated with these obligations include change of control, construction cost overruns, subsidiary default, political risk, tax indemnities, spot market power prices, sponsor support, and liquidated damages under power sales agreements for projects in development, in operation and under construction. While we do not expect that we will be required to fund any material amounts under these contingent contractual obligations beyond 2022, many of the events which would give rise to such obligations are beyond our control. We can provide no assurance that we will be able to fund our obligations under these contingent contractual obligations if we are required to make substantial payments thereunder.

Critical Accounting Policies and Estimates

The Consolidated Financial Statements of AES are prepared in conformity with U.S. GAAP, which requires the use of estimates, judgments, and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the periods presented. AES' significant accounting policies are described in Note 1—General and Summary of Significant Accounting Policies to the Consolidated Financial Statements included in Item 8.—Financial Statements and Supplementary Data of this Form 10-K.

An accounting estimate is considered critical if the estimate requires management to make assumptions about matters that were highly uncertain at the time the estimate was made, different estimates reasonably could have been used, or the impact of the estimates and assumptions on financial condition or operating performance is material.

Management believes that the accounting estimates employed are appropriate and the resulting balances are reasonable; however, actual results could materially differ from the original estimates, requiring adjustments to these balances in future periods. Management has discussed these critical accounting policies with the Audit Committee, as appropriate. Listed below are the Company's most significant critical accounting estimates and assumptions used in the preparation of the Consolidated Financial Statements.

Income Taxes — We are subject to income taxes in both the U.S. and numerous foreign jurisdictions. Our worldwide income tax provision requires significant judgment and is based on calculations and assumptions that are subject to examination by the Internal Revenue Service and other taxing authorities. Certain of the Company's subsidiaries are under examination by relevant taxing authorities for various tax years. The Company regularly assesses the potential outcome of these examinations in each tax jurisdiction when determining the adequacy of the provision for income taxes. Accounting guidance for uncertainty in income taxes prescribes a more likely than not recognition threshold. Tax reserves have been established, which the Company believes to be adequate in relation to the potential for additional assessments. Once established, reserves are adjusted only when there is more information available or when an event occurs necessitating a change to the reserves. While the Company believes that the amounts of the tax estimates are reasonable, it is possible that the ultimate outcome of current or future examinations may be materially different than the reserve amounts.

Because we have a wide range of statutory tax rates in the multiple jurisdictions in which we operate, any changes in our geographical earnings mix could materially impact our effective tax rate. Furthermore, our tax position could be adversely impacted by changes in tax laws, tax treaties or tax regulations, or the interpretation or enforcement thereof and such changes may be more likely or become more likely in view of recent economic trends in certain of the jurisdictions in which we operate.

In addition, no taxes have been recorded on undistributed earnings for certain of our non-U.S. subsidiaries to the extent such earnings are considered to be indefinitely reinvested in the operations of those subsidiaries. Should the earnings be remitted as dividends, the Company may be subject to additional foreign withholding and state income taxes.

Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of the existing assets and liabilities, and their respective income tax bases. The Company establishes a valuation allowance when it is more likely than not that all or a portion of a deferred tax asset will not be realized. The Company has elected to treat GILTI as an expense in the period in which the tax is accrued. Accordingly, no deferred tax assets or liabilities are recorded related to GILTI.

In addition, the Company has elected an accounting policy not to consider the effects of being subject to the corporate alternative minimum tax in future periods when assessing the realizability of our deferred tax assets, carryforwards, and tax credits. Any effect on the realization of deferred tax assets will be recognized in the period they arise.

Impairments — Our accounting policies on goodwill and long-lived assets, including events that lead to possible impairment, are described in detail in Note 1—*General and Summary of Significant Accounting Policies*, included in Item 8 of this Form 10-K. The Company makes considerable judgments in its impairment evaluations of goodwill and long-lived assets, starting with determining if an impairment indicator exists. The Company exercises judgment in determining if these indicators or events represent an impairment indicator requiring the computation of the fair value of goodwill and/or the recoverability of long-lived assets. The fair value determination is typically the most judgmental part in an impairment evaluation. Please see *Fair Value* below for further detail.

As part of the impairment evaluation process, management analyzes the sensitivity of fair value to various underlying assumptions. The level of scrutiny increases as the gap between fair value and carrying amount decreases. Changes in any of these assumptions could result in management reaching a different conclusion regarding the potential impairment, which could be material. Our impairment evaluations inherently involve uncertainties from uncontrollable events that could positively or negatively impact the anticipated future economic and operating conditions.

Further discussion of the impairment charges recognized by the Company can be found within Note 9—*Goodwill and Other Intangible Assets* and Note 22—*Asset Impairment Expense* to the Consolidated Financial Statements included in Item 8 of this Form 10-K.

Depreciation — Depreciation, after consideration of salvage value and asset retirement obligations, is computed using the straight-line method over the estimated useful lives of the assets, which are determined on a composite or component basis. The Company considers many factors in its estimate of useful lives, including expected usage, physical deterioration, technological changes, existence and length of off-taker agreements, and laws and regulations, among others. In certain circumstances, these estimates involve significant judgment and require management to forecast the impact of relevant factors over an extended time horizon.

Useful life estimates are continually evaluated for appropriateness as changes in the relevant factors arise, including when a long-lived asset group is tested for recoverability. Depreciation studies are performed periodically for assets subject to composite depreciation. Any change to useful lives is considered a change in accounting estimate and is made on a prospective basis.

Fair Value — For information regarding the fair value hierarchy, see Note 1—*General and Summary of Significant Accounting Policies* included in Item 8 of this Form 10-K.

Fair Value of Financial Instruments — A significant number of the Company's financial instruments are carried at fair value with changes in fair value recognized in earnings or other comprehensive income each period. Investments are generally fair valued based on quoted market prices or other observable market data such as interest rate indices. The Company's investments are primarily certificates of deposit and mutual funds. Derivatives are valued using observable data as inputs into internal valuation models. The Company's derivatives primarily consist of interest rate swaps, foreign currency instruments, and commodity and embedded derivatives. Additional discussion regarding the nature of these financial instruments and valuation techniques can be found in Note 5—*Fair Value* included in Item 8 of this Form 10-K.

Fair Value of Nonfinancial Assets and Liabilities — Significant estimates are made in determining the fair value of long-lived tangible and intangible assets (i.e., property, plant and equipment, intangible assets and

goodwill) during the impairment evaluation process. In addition, the relevant accounting guidance requires the Company to recognize the majority of assets acquired and liabilities assumed in a business combination and asset acquisitions by VIEs at fair value.

The Company may engage an independent valuation firm to assist management with the valuation. The Company generally utilizes the income approach to value nonfinancial assets and liabilities, specifically a Discounted Cash Flow ("DCF") model to estimate fair value by discounting cash flow forecasts, adjusted to reflect market participant assumptions, to the extent necessary, at an appropriate discount rate.

Management applies considerable judgment in selecting several input assumptions during the development of our cash flow forecasts. Examples of the input assumptions that our forecasts are sensitive to include macroeconomic factors such as growth rates, industry demand, inflation, exchange rates, power prices, rising interest rates, and commodity prices. Whenever appropriate, management obtains these input assumptions from observable market data sources (e.g., Economic Intelligence Unit) and extrapolates the market information if an input assumption is not observable for the entire forecast period. Many of these input assumptions are dependent on other economic assumptions, which are often derived from statistical economic models with inherent limitations such as estimation differences. Further, several input assumptions are based on historical trends which often do not recur. It is not uncommon that different market data sources have different views of the macroeconomic factor expectations and related assumptions. As a result, macroeconomic factors and related assumptions are often available in a narrow range; however, in some situations these ranges become wide and the use of a different set of input assumptions could produce significantly different budgets and cash flow forecasts.

A considerable amount of judgment is also applied in the estimation of the discount rate used in the DCF model. To the extent practical, inputs to the discount rate are obtained from market data sources (e.g., Bloomberg). The Company selects and uses a set of publicly traded companies from the relevant industry to estimate the discount rate inputs. Management applies judgment in the selection of such companies based on its view of the most likely market participants. It is reasonably possible that the selection of a different set of likely market participants could produce different input assumptions and result in the use of a different discount rate.

Accounting for Derivative Instruments and Hedging Activities — We enter into various derivative transactions in order to hedge our exposure to certain market risks. We primarily use derivative instruments to manage our interest rate, commodity, and foreign currency exposures. We do not enter into derivative transactions for trading purposes. See Note 6—*Derivative Instruments and Hedging Activities* included in Item 8 of this Form 10-K for further information on the classification.

The fair value measurement standard requires the Company to consider and reflect the assumptions of market participants in the fair value calculation. These factors include nonperformance risk (the risk that the obligation will not be fulfilled) and credit risk, both of the reporting entity (for liabilities) and of the counterparty (for assets). Credit risk for AES is evaluated at the level of the entity that is party to the contract. Nonperformance risk on the Company's derivative instruments is an adjustment to the fair value position that is derived from internally developed valuation models that utilize market inputs that may or may not be observable.

As a result of uncertainty, complexity, and judgment, accounting estimates related to derivative accounting could result in material changes to our financial statements under different conditions or utilizing different assumptions. As a part of accounting for these derivatives, we make estimates concerning nonperformance, volatilities, market liquidity, future commodity prices, interest rates, credit ratings, and future foreign exchange rates. Refer to Note 5—*Fair Value* included in Item 8 of this Form 10-K for additional details.

The fair value of our derivative portfolio is generally determined using internal and third party valuation models, most of which are based on observable market inputs, including interest rate curves and forward and spot prices for currencies and commodities. The Company derives most of its financial instrument market assumptions from market efficient data sources (e.g., Bloomberg, Reuters, and Platt's). In some cases, where market data is not readily available, management uses comparable market sources and empirical evidence to derive market assumptions to determine a financial instrument's fair value. In certain instances, published pricing may not extend through the remaining term of the contract, and management must make assumptions to extrapolate the curve. Specifically, where there is limited forward curve data with respect to foreign exchange contracts beyond the traded points, the Company utilizes the interest rate differential approach to construct the remaining portion of the forward curve. For individual contracts, the use of different valuation models or assumptions could have a material effect on the calculated fair value.

Regulatory Assets — Management continually assesses whether regulatory assets are probable of future recovery by considering factors such as applicable regulatory changes, recent rate orders applicable to other regulated entities, and the status of any pending or potential deregulation legislation. If future recovery of costs ceases to be probable, any asset write-offs would be required to be recognized in operating income.

Consolidation — The Company enters into transactions impacting the Company's equity interests in its affiliates. In connection with each transaction, the Company must determine whether the transaction impacts the Company's consolidation conclusion by first determining whether the transaction should be evaluated under the variable interest model or the voting model. In determining which consolidation model applies to the transaction, the Company is required to make judgments about how the entity operates, the most significant of which are whether (i) the entity has sufficient equity to finance its activities, (ii) the equity holders, as a group, have the characteristics of a controlling financial interest, and (iii) whether the entity has non-substantive voting rights.

If the entity is determined to be a variable interest entity, the most significant judgment in determining whether the Company must consolidate the entity is whether the Company, including its related parties and de facto agents, collectively have power and benefits. If AES is determined to have power and benefits, the entity will be consolidated by AES.

Alternatively, if the entity is determined to be a voting model entity, the most significant judgments involve determining whether the non-AES shareholders have substantive participating rights. The assessment of shareholder rights and whether they are substantive participating rights requires significant judgment since the rights provided under shareholders' agreements may include selecting, terminating, and setting the compensation of management responsible for implementing the subsidiary's policies and procedures, and establishing operating and capital decisions of the entity, including budgets, in the ordinary course of business. On the other hand, if shareholder rights are only protective in nature (referred to as protective rights), then such rights would not overcome the presumption that the owner of a majority voting interest shall consolidate its investee. Significant judgment is required to determine whether minority rights represent substantive participating rights or protective rights that do not affect the evaluation of control. While both represent an approval or veto right, a distinguishing factor is the underlying activity or action to which the right relates.

Pension and Other Postretirement Plans — The Company recognizes a net asset or liability reflecting the funded status of pension and other postretirement plans with current-year changes in actuarial gains or losses recognized in AOCL, except for those plans at certain of the Company's regulated utilities that can recover portions of their pension and postretirement obligations through future rates. The valuation of the Company's benefit obligation, fair value of plan assets, and net periodic benefit costs requires various estimates and assumptions, the most significant of which include the discount rate and expected return on plan assets. These assumptions are reviewed by the Company on an annual basis. Refer to Note 1—*General and Summary of Significant Accounting Policies* included in Item 8 of this Form 10-K for further information.

Revenue Recognition — The Company recognizes revenue to depict the transfer of energy, capacity, and other services to customers in an amount that reflects the consideration to which we expect to be entitled. In applying the revenue model, we determine whether the sale of energy, capacity, and other services represent a single performance obligation based on the individual market and terms of the contract. Generally, the promise to transfer energy and capacity represent a performance obligation that is satisfied over time and meets the criteria to be accounted for as a series of distinct goods or services. Progress toward satisfaction of a performance obligation is measured using output methods, such as MWhs delivered or MWs made available, and when we are entitled to consideration in an amount that corresponds directly to the value of our performance completed to date, we recognize revenue in the amount to which we have the right to invoice. For further information regarding the nature of our revenue streams and our critical accounting policies affecting revenue recognition, see Note 1—*General and Summary of Significant Accounting Policies* included in Item 8 of this Form 10-K.

Leases — The Company recognizes operating and finance right-of-use assets and lease liabilities on the Consolidated Balance Sheets for most leases with an initial term of greater than 12 months. Lease liabilities and their corresponding right-of-use assets are recorded based on the present value of lease payments over the expected lease term. Our subsidiaries' incremental borrowing rates are used in determining the present value of lease payments when the implicit rate is not readily determinable. Certain adjustments to the right-of-use asset may be required for items such as prepayments, lease incentives, or initial direct costs. For further information regarding the nature of our leases and our critical accounting policies affecting leases, see Note 1—*General and Summary of*

Significant Accounting Policies included in Item 8 of this Form 10-K.

Credit Losses — The Company uses a forward-looking "expected loss" model to recognize allowances for credit losses on trade and other receivables, held-to-maturity debt securities, loans, and other instruments. For available-for-sale debt securities with unrealized losses, the Company continues to measure credit losses as it was done under previous GAAP, except that unrealized losses due to credit-related factors are now recognized as an allowance on the Consolidated Balance Sheet with a corresponding adjustment to earnings in the Consolidated Statements of Operations. For further information regarding credit losses, see Note 1—*General and Summary of Significant Accounting Policies* included in Item 8 of this Form 10-K.

New Accounting Pronouncements

See Note 1—*General and Summary of Significant Accounting Policies* included in Item 8.—*Financial Statements and Supplementary Data* of this Form 10-K for further information about new accounting pronouncements adopted during 2022 and accounting pronouncements issued, but not yet effective.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Overview Regarding Market Risks

Our businesses are exposed to and proactively manage market risk. Our primary market risk exposure is to the price of commodities, particularly electricity, oil, natural gas, coal, and environmental credits. In addition, our businesses are exposed to lower electricity prices due to increased competition, including from renewable sources such as wind and solar, as a result of lower costs of entry and lower variable costs. We operate in multiple countries and as such are subject to volatility in exchange rates at varying degrees at the subsidiary level and between our functional currency, the USD, and currencies of the countries in which we operate. We are also exposed to interest rate fluctuations due to our issuance of debt and related financial instruments.

The disclosures presented in this Item 7A are based upon a number of assumptions; actual effects may differ. The safe harbor provided in Section 27A of the Securities Act of 1933 and Section 21E of the Exchange Act shall apply to the disclosures contained in this Item 7A. For further information regarding market risk, see Item 1A.—*Risk Factors, Fluctuations in currency exchange rates may impact our financial results and position; Wholesale power prices may experience significant volatility in our markets which could impact our operations and opportunities for future growth; We may not be adequately hedged against our exposure to changes in commodity prices or interest rates; and Certain of our businesses are sensitive to variations in weather and hydrology* of this 2022 Form 10-K.

Commodity Price Risk

Although we prefer to hedge our exposure to the impact of market fluctuations in the price of electricity, fuels, and environmental credits, some of our generation businesses operate under short-term sales, have contracted electricity obligations greater than supply or operate under contract sales that leave an unhedged exposure on some of our capacity or through imperfect fuel pass-throughs. These businesses subject our operational results to the volatility of prices for electricity, fuels, and environmental credits in competitive markets. We employ risk management strategies to hedge our financial performance against the effects of fluctuations in energy commodity prices. The implementation of these strategies can involve the use of physical and financial commodity contracts, futures, swaps, and options.

The portion of our sales and purchases that are not subject to such agreements or contracted businesses where indexation is not perfectly matched to business drivers will be exposed to commodity price risk. When hedging the output of our generation assets, we utilize contract sales that lock in the spread per MWh between variable costs and the price at which the electricity can be sold.

AES businesses will see changes in variable margin performance as global commodity prices shift. For 2023, we project pre-tax earnings exposure on a 10% (uncorrelated) move in commodity prices to be approximately a \$5 million gain for power, a \$10 million loss for oil, and a \$5 million loss for coal and natural gas. Our estimates exclude correlation of oil with coal or natural gas. For example, a decline in oil or natural gas prices can be accompanied by a decline in coal price if commodity prices are correlated. In aggregate, the Company's downside exposure occurs with lower power, lower oil, higher natural gas, and higher coal prices. Exposures at individual businesses will change as new contracts or financial hedges are executed, and our sensitivity to changes in commodity prices generally increases in later years with reduced hedge levels at some of our businesses.

Commodity prices affect our businesses differently depending on the local market characteristics and risk management strategies. Spot power prices, contract indexation provisions, and generation costs can be directly or indirectly affected by movements in the price of natural gas, oil, and coal. We have some natural offsets across our businesses such that low commodity prices may benefit certain businesses and be a cost to others. Exposures are not perfectly linear or symmetric. The sensitivities are affected by a number of local or indirect market factors. Examples of these factors include hydrology, local energy market supply/demand balances, regional fuel supply issues, regional competition, bidding strategies, and regulatory interventions such as price caps. Operational flexibility changes the shape of our sensitivities. For instance, certain power plants may limit downside exposure by reducing dispatch in low market environments. Volume variation also affects our commodity exposure. The volume sold under contracts or retail concessions can vary based on weather and economic conditions, resulting in a higher or lower volume of sales in spot markets. Thermal unit availability and hydrology can affect the generation output available for sale and can affect the marginal unit setting power prices.

In the US and Utilities SBU, the generation businesses are largely contracted but may have residual risk to the extent contracts are not perfectly indexed to the business drivers. At Southland, our existing once-through cooling generation units ("Legacy Assets") are permitted to operate through the end of 2023. These assets have contracts in capacity and have seen incremental value in energy revenues.

In the South America SBU, our business in Chile owns assets in the central and northern regions of the country and has a portfolio of contract sales in both. The significant portion of our PPAs include mechanisms of indexation that adjust the price of energy based on fluctuations in the price of coal, with the specific indices and timing varying by contract, in order to mitigate changes in the price of fuel. For the portion of our contracts not indexed to the price of coal, we have implemented a hedging strategy based on international coal financial instruments for up to 3 years. In Colombia, we operate under a shorter-term sales strategy with spot market exposure for uncontracted volumes. Because we own hydroelectric assets there, contracts are not indexed to fuel. Additionally, in Brazil, the hydroelectric generating facility is covered by contract sales. Under normal hydrological volatility, spot price risk is mitigated through a regulated sharing mechanism across all hydroelectric generators in the country. Under drier conditions, the sharing mechanism may not be sufficient to cover the business' contract position, and therefore it may have to purchase power at spot prices driven by the cost of thermal generation.

In the MCAC SBU, our businesses have commodity exposure on unhedged volumes. Panama is highly contracted under financial and load-following PPA type structures, exposing the business to hydrology-based variance. To the extent hydrological inflows are greater than or less than the contract volumes, the business will be sensitive to changes in spot power prices which may be driven by oil and natural gas prices in some time periods. In the Dominican Republic, we own natural gas plants contracted under a portfolio of contract sales, and both contract and spot prices may move with commodity prices. Additionally, the contract levels do not always match our generation availability and our assets may be sellers of spot prices in excess of contract levels or a net buyer in the spot market to satisfy contract obligations.

In the Eurasia SBU, our assets operating in Vietnam and Bulgaria have minimal exposure to commodity price risk as it has no or minor merchant exposure and fuel is subject to a pass-through mechanism.

Foreign Exchange Rate Risk

In the normal course of business, we are exposed to foreign currency risk and other foreign operations risks that arise from investments in foreign subsidiaries and affiliates. A key component of these risks stems from the fact that some of our foreign subsidiaries and affiliates utilize currencies other than our consolidated reporting currency, the USD. Additionally, certain of our foreign subsidiaries and affiliates have entered into monetary obligations in USD or currencies other than their own functional currencies. Certain of our foreign subsidiaries calculate and pay taxes in currencies other than their own functional currency. We have varying degrees of exposure to changes in the exchange rate between the USD and the following currencies: Argentine peso, Brazilian real, Chilean peso, Colombian peso, Dominican peso, Euro, and Mexican peso. Our exposure to certain of these currencies may be material. These subsidiaries and affiliates have attempted to limit potential foreign exchange exposure by entering into revenue contracts that adjust to changes in foreign exchange rates. We also use foreign currency forwards, swaps, and options where possible to manage our risk related to certain foreign currency fluctuations.

AES enters into foreign currency hedges to protect economic value of the business and minimize the impact of foreign exchange rate fluctuations to AES' portfolio. While protecting cash flows, the hedging strategy is also designed to reduce forward-looking earnings foreign exchange volatility. Due to variation of timing and amount between cash distributions and earnings exposure, the hedge impact may not fully cover the earnings exposure on

a realized basis, which could result in greater volatility in earnings. The largest foreign exchange risks for 2023 stem from the following currencies: Brazilian real and Euro. As of December 31, 2022, assuming a 10% USD appreciation, cash distributions attributable to foreign subsidiaries exposed to movement in the exchange rate of the Brazilian real are projected to be impacted by less than a \$10 million gain, a less than \$5 million gain for the Colombian peso and a less than \$5 million loss for the Euro. These numbers have been produced by applying a one-time 10% USD appreciation to forecasted exposed cash distributions for 2023 coming from the respective subsidiaries exposed to the currencies listed above, net of the impact of outstanding hedges and holding all other variables constant. The numbers presented above are net of any transactional gains/losses. These sensitivities may change in the future as new hedges are executed or existing hedges are unwound. Additionally, updates to the forecasted cash distributions exposed to foreign exchange risk may result in further modification. The sensitivities presented do not capture the impacts of any administrative market restrictions or currency inconvertibility.

Interest Rate Risks

We are exposed to risk resulting from changes in interest rates as a result of our issuance of variable and fixed-rate debt, as well as interest rate swap, cap, floor, and option agreements. Decisions on the fixed-floating debt mix are made to be consistent with the risk factors faced by individual businesses or plants. Depending on whether a plant's capacity payments or revenue stream is fixed or varies with inflation, we partially hedge against interest rate fluctuations by arranging fixed-rate or variable-rate financing. In certain cases, particularly for non-recourse financing, we execute interest rate swap, cap, and floor agreements to effectively fix or limit the interest rate exposure on the underlying financing. Most of our interest rate risk is related to non-recourse financings at our businesses.

As of December 31, 2022, the portfolio's pre-tax earnings exposure for 2023 to a one-time 100-basis-point increase in interest rates for our Argentine peso, Brazilian real, Chilean peso, Colombian peso, Euro, and USD denominated debt would be less than \$55 million on interest expense for the debt denominated in these currencies. These amounts do not take into account the historical correlation between these interest rates.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Part A — Report of Independent Registered Public Accounting Firm

Our auditors are Ernst & Young LLP, located in Tysons, Virginia. Their PCAOB ID number is 42.

Part B — Financial Statements and Supplementary Data

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and the Board of Directors of The AES Corporation

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of The AES Corporation (the Company) as of December 31, 2022 and 2021, the related consolidated statements of operations, comprehensive income (loss), changes in equity and cash flows for each of the three years in the period ended December 31, 2022, and the related notes and the financial statement schedule listed in the Index at Item 15(a) (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2022 and 2021, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2022, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2022, based on criteria established in Internal Control — Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated March 1, 2023, expressed an unqualified opinion thereon.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current period audit of the financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Goodwill Impairment Test for AES Andes and AES El Salvador Reporting Units

Description of the Matter

At December 31, 2022, the Company's goodwill balance was \$362 million. As discussed in Note 1 to the consolidated financial statements, the Company's goodwill is tested for impairment at least annually. If goodwill is determined to be impaired, an impairment loss is measured at the amount by which the reporting unit's carrying amount exceeds its fair value, not to exceed the carrying amount of goodwill. The Company performed a quantitative impairment test for the AES Andes and AES El Salvador reporting units and utilized the income approach to determine the estimated fair value of these reporting units. As discussed in Note 9 to the consolidated financial statements, the estimated fair value was less than the carrying amount for both of these reporting units and as a result the Company recognized impairment expense of \$777 million during the fourth quarter of 2022.

Auditing the Company's annual goodwill impairment tests for the AES Andes and AES El Salvador reporting units required judgment to evaluate the effects of macroeconomic and industry conditions and involved a high degree of subjectivity due to the significant estimation required to determine the fair value of these reporting units. In particular, the fair value estimates of the reporting units involve the use of significant unobservable inputs and are sensitive to changes in significant assumptions, such as the interest rates and country risk premiums, which are inputs used to determine the discount rates.

How We Addressed the Matter in Our Audit

We obtained an understanding, evaluated the design and tested the operating effectiveness of controls over the Company's goodwill impairment review and testing process for the AES Andes and AES El Salvador reporting units. For example, we tested controls over management's review of the valuation models, the significant assumptions described above, and the completeness and accuracy of the data used in the valuations.

To test the estimated fair value for the AES Andes and AES El Salvador reporting units, we performed audit procedures that included, among others, assessing the methodologies used to develop the estimated fair values, testing the significant assumptions discussed above, and evaluating the completeness and accuracy of the underlying data used by the Company in its analyses. We compared the significant assumptions used by management to current industry and economic trends. We assessed the historical accuracy of management's estimates and performed sensitivity analyses of significant assumptions to evaluate the changes in the fair value of the reporting units that would result from changes in the assumptions. We also involved valuation specialists to assist in our evaluation of the overall methodologies and the discount rates used in the fair value estimate.

Long-lived Asset Impairments and Re-evaluation of Useful Lives

Description of the Matter

At December 31, 2022, the Company's net property, plant and equipment was \$23,039 million. As discussed in Note 1 to the consolidated financial statements, when circumstances indicate that the carrying amount of long-lived assets in a held-for-use asset group may not be recoverable, the Company evaluates the assets for potential impairment. Events or changes in circumstances that may necessitate a recoverability evaluation include, but are not limited to, adverse changes in the regulatory environment, unfavorable changes in power prices or fuel costs, increased competition due to additional capacity in the grid, technological advancements, declining trends in demand, or an expectation it is more likely than not that the asset will be disposed of before the end of its previously estimated useful life. If the carrying amount of the assets exceeds the undiscounted cash flows, an impairment is recognized for the amount by which the carrying amount of the asset group exceeds its fair value. The Company's useful life estimates are continually evaluated for appropriateness as changes in the relevant factors arise, including when a long-lived asset group is tested for recoverability. As discussed in Note 22 to the consolidated financial statements, the Company recognized a total asset impairment expense of \$661 million related to the Maritza and the TEG TEP asset groups in 2022.

Auditing the Company's identification of impairment indicators and re-evaluation of useful lives was complex and highly judgmental because of the many geographic, regulatory, and economic environments in which the Company operates. Also, due to the wide variety of events or changes in circumstances that may indicate that an asset group is not recoverable or that may result in a change in useful life, auditing the Company's identification of impairment indicators and re-evaluation of useful lives involved a high degree of subjectivity, particularly given the Company's decarbonization initiatives and shift towards clean energy platforms. In addition, auditing the Company's valuation of long-lived assets used in the Maritza and TEG TEP impairment analyses involved significant judgment due to the significant unobservable inputs used in the estimation of the asset groups' fair value. In particular, the significant assumptions for the income approach used to determine the fair value of the asset groups included the Company's projections of revenue growth and discount rates, which are forward-looking assumptions and could be affected by future industry, market, and economic conditions.

*How We
Addressed the
Matter in Our Audit*

We obtained an understanding, evaluated the design and tested the operating effectiveness of the Company's controls over the identification of impairment indicators, re-evaluation of estimated useful lives, and the valuation of the Maritza and TEG TEP long-lived asset impairments. For example, we tested management's monitoring controls over the evaluation of events or changes in circumstances that would require an asset to be tested for recoverability. We also tested management's review controls of the valuation models used in the impairment analyses, the significant assumptions used to develop the estimates, and the completeness and accuracy of the data used in the valuations.

To test the Company's identification of impairment indicators and re-evaluation of useful lives, our audit procedures included, among others, making inquiries of management, including personnel in operations, to understand changes in the businesses and management's strategic plans, and evaluate whether management has considered any identified changes in their analysis. We evaluated the results of earnings and the projected cash flows for significant coal generation assets and assessed whether there has been a deterioration in earnings or projected losses that would represent an impairment indicator. We also evaluated conditions and trends in the industry for the underlying economies, including any sale or disposition activities, and evaluated any adverse changes in the regulatory environment or the geographic areas to test the completeness and accuracy of the company's evaluation of potential impairment indicators. We evaluated the Company's useful life estimates, in particular for its significant coal generation assets, considering the existing Power Purchase Agreements (PPAs) and the market for the use of these assets subsequent to the expiration of existing PPAs, based on the regulatory and market conditions.

To test the impairment analyses for the Maritza and TEG TEP asset groups, our audit procedures included, among others, assessing the appropriateness of valuation methodologies, testing the significant assumptions discussed above, and testing the completeness and accuracy of the underlying data used by the Company in its analyses. We compared the significant assumptions used by management to current industry and economic trends as well as historical results. We performed sensitivity analyses of certain significant assumptions to evaluate the changes in the fair value of the asset groups that would result from changes in the assumptions. We also involved valuation specialists to assist in our evaluation of the overall valuation methodology and the discount rates used in the fair value estimates.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 2008.

Tysons, Virginia

March 1, 2023

Consolidated Balance Sheets

December 31, 2022 and 2021

	2022	2021
	(in millions, except share and per share data)	
ASSETS		
CURRENT ASSETS		
Cash and cash equivalents	\$ 1,374	\$ 943
Restricted cash	536	304
Short-term investments	730	232
Accounts receivable, net of allowance for doubtful accounts of \$5 and \$5, respectively	1,799	1,418
Inventory	1,055	604
Prepaid expenses	98	142
Other current assets, net of CECL allowance of \$2 and \$0, respectively	1,533	897
Current held-for-sale assets	518	816
Total current assets	<u>7,643</u>	<u>5,356</u>
NONCURRENT ASSETS		
Property, Plant and Equipment:		
Land	470	426
Electric generation, distribution assets and other	26,599	25,552
Accumulated depreciation	(8,651)	(8,486)
Construction in progress	4,621	2,414
Property, plant and equipment, net	<u>23,039</u>	<u>19,906</u>
Other Assets:		
Investments in and advances to affiliates	952	1,080
Debt service reserves and other deposits	177	237
Goodwill	362	1,177
Other intangible assets, net of accumulated amortization of \$434 and \$385, respectively	1,841	1,450
Deferred income taxes	319	409
Loan receivable, net of allowance of \$26	1,051	—
Other noncurrent assets, net of allowance of \$51 and \$23, respectively	2,979	2,188
Noncurrent held-for-sale assets	—	1,160
Total other assets	<u>7,681</u>	<u>7,701</u>
TOTAL ASSETS	\$ 38,363	\$ 32,963
LIABILITIES AND EQUITY		
CURRENT LIABILITIES		
Accounts payable	\$ 1,730	\$ 1,153
Accrued interest	249	182
Accrued non-income taxes	249	266
Accrued and other liabilities	2,151	1,205
Non-recourse debt, including \$416 and \$302, respectively, related to variable interest entities	1,758	1,367
Current held-for-sale liabilities	354	559
Total current liabilities	<u>6,491</u>	<u>4,732</u>
NONCURRENT LIABILITIES		
Recourse debt	3,894	3,729
Non-recourse debt, including \$2,295 and \$2,223, respectively, related to variable interest entities	17,846	13,603
Deferred income taxes	1,139	977
Other noncurrent liabilities	3,168	3,358
Noncurrent held-for-sale liabilities	—	740
Total noncurrent liabilities	<u>26,047</u>	<u>22,407</u>
Commitments and Contingencies (see Notes 12 and 13)		
Redeemable stock of subsidiaries	1,321	1,257
EQUITY		
THE AES CORPORATION STOCKHOLDERS' EQUITY		
Preferred stock (without par value, 50,000,000 shares authorized; 1,043,050 issued and outstanding at December 31, 2022 and December 31, 2021)	838	838
Common stock (\$0.01 par value, 1,200,000,000 shares authorized; 818,790,001 issued and 668,743,464 outstanding at December 31, 2022 and 818,717,043 issued and 666,793,625 outstanding at December 31, 2021)	8	8
Additional paid-in capital	6,688	7,106
Accumulated deficit	(1,635)	(1,089)
Accumulated other comprehensive loss	(1,640)	(2,220)
Treasury stock, at cost (150,046,537 and 151,923,418 shares at December 31, 2022 and December 31, 2021, respectively)	(1,822)	(1,845)
Total AES Corporation stockholders' equity	<u>2,437</u>	<u>2,798</u>
NONCONTROLLING INTERESTS		
Total equity	<u>4,504</u>	<u>4,567</u>
TOTAL LIABILITIES AND EQUITY	\$ 38,363	\$ 32,963

See Accompanying Notes to Consolidated Financial Statements.



Consolidated Statements of Operations

Years ended December 31, 2022, 2021, and 2020

	2022	2021	2020
	(in millions, except per share amounts)		
Revenue:			
Regulated	\$ 3,538	\$ 2,868	\$ 2,661
Non-Regulated	9,079	8,273	6,999
Total revenue	<u>12,617</u>	<u>11,141</u>	<u>9,660</u>
Cost of Sales:			
Regulated	(3,162)	(2,448)	(2,235)
Non-Regulated	(6,907)	(5,982)	(4,732)
Total cost of sales	<u>(10,069)</u>	<u>(8,430)</u>	<u>(6,967)</u>
Operating margin	<u>2,548</u>	<u>2,711</u>	<u>2,693</u>
General and administrative expenses	(207)	(166)	(165)
Interest expense	(1,117)	(911)	(1,038)
Interest income	389	298	268
Loss on extinguishment of debt	(15)	(78)	(186)
Other expense	(68)	(60)	(53)
Other income	102	410	75
Loss on disposal and sale of business interests	(9)	(1,683)	(95)
Goodwill impairment expense	(777)	—	—
Asset impairment expense	(763)	(1,575)	(864)
Foreign currency transaction gains (losses)	(77)	(10)	55
Other non-operating expense	<u>(175)</u>	<u>—</u>	<u>(202)</u>
INCOME (LOSS) FROM CONTINUING OPERATIONS BEFORE TAXES AND EQUITY IN EARNINGS OF AFFILIATES	<u>(169)</u>	<u>(1,064)</u>	<u>488</u>
Income tax benefit (expense)	(265)	133	(216)
Net equity in losses of affiliates	<u>(71)</u>	<u>(24)</u>	<u>(123)</u>
INCOME (LOSS) FROM CONTINUING OPERATIONS	<u>(505)</u>	<u>(955)</u>	<u>149</u>
Gain from disposal of discontinued businesses, net of income tax expense of \$0, \$1, and \$0, respectively	—	4	3
NET INCOME (LOSS)	<u>(505)</u>	<u>(951)</u>	<u>152</u>
Less: Net loss (income) attributable to noncontrolling interests and redeemable stock of subsidiaries	(41)	542	(106)
NET INCOME (LOSS) ATTRIBUTABLE TO THE AES CORPORATION	<u>\$ (546)</u>	<u>\$ (409)</u>	<u>\$ 46</u>
AMOUNTS ATTRIBUTABLE TO THE AES CORPORATION COMMON STOCKHOLDERS:			
Income (loss) from continuing operations, net of tax	\$ (546)	\$ (413)	\$ 43
Income from discontinued operations, net of tax	—	4	3
NET INCOME (LOSS) ATTRIBUTABLE TO THE AES CORPORATION	<u>\$ (546)</u>	<u>\$ (409)</u>	<u>\$ 46</u>
BASIC EARNINGS PER SHARE:			
Income (loss) from continuing operations attributable to The AES Corporation common stockholders, net of tax	\$ (0.82)	\$ (0.62)	\$ 0.06
Income from discontinued operations attributable to The AES Corporation common stockholders, net of tax	—	0.01	0.01
NET INCOME (LOSS) ATTRIBUTABLE TO THE AES CORPORATION COMMON STOCKHOLDERS	<u>\$ (0.82)</u>	<u>\$ (0.61)</u>	<u>\$ 0.07</u>
DILUTED EARNINGS PER SHARE:			
Income (loss) from continuing operations attributable to The AES Corporation common stockholders, net of tax	\$ (0.82)	\$ (0.62)	\$ 0.06
Income from discontinued operations attributable to The AES Corporation common stockholders, net of tax	—	0.01	0.01
NET INCOME (LOSS) ATTRIBUTABLE TO THE AES CORPORATION COMMON STOCKHOLDERS	<u>\$ (0.82)</u>	<u>\$ (0.61)</u>	<u>\$ 0.07</u>

See Accompanying Notes to Consolidated Financial Statements.

Consolidated Statements of Comprehensive Income (Loss)

Years ended December 31, 2022, 2021, and 2020

	2022	2021	2020
	(in millions)		
NET INCOME (LOSS)	\$ (505)	\$ (951)	\$ 152
Foreign currency translation activity:			
Foreign currency translation adjustments, net of income tax expense of \$0, \$0, and \$8, respectively	(36)	(130)	(52)
Reclassification to earnings, net of \$0 income tax for all periods	—	3	192
Total foreign currency translation adjustments	<u>(36)</u>	<u>(127)</u>	<u>140</u>
Derivative activity:			
Change in derivative fair value, net of income tax (expense) benefit of \$(191), \$1, and \$110, respectively	711	5	(368)
Reclassification to earnings, net of income tax expense of \$9, \$105, and \$17, respectively	59	387	74
Total change in fair value of derivatives	<u>770</u>	<u>392</u>	<u>(294)</u>
Pension activity:			
Change in pension adjustments due to prior service cost, net of \$0 income tax for all periods	—	—	1
Change in pension adjustments due to net actuarial gain (loss) for the period, net of income tax (expense) benefit of \$(5), \$(10), and \$4, respectively	13	26	(14)
Reclassification to earnings, net of income tax expense of \$1, \$3, and \$0, respectively	1	1	—
Total pension adjustments	<u>14</u>	<u>27</u>	<u>(13)</u>
OTHER COMPREHENSIVE INCOME (LOSS)	<u>748</u>	<u>292</u>	<u>(167)</u>
COMPREHENSIVE INCOME (LOSS)	<u>243</u>	<u>(659)</u>	<u>(15)</u>
Less: Comprehensive loss (income) attributable to noncontrolling interests and redeemable stock of subsidiaries	<u>(127)</u>	<u>438</u>	<u>4</u>
COMPREHENSIVE INCOME (LOSS) ATTRIBUTABLE TO THE AES CORPORATION	<u><u>\$ 116</u></u>	<u><u>\$ (221)</u></u>	<u><u>\$ (11)</u></u>

See Accompanying Notes to Consolidated Financial Statements.

Consolidated Statements of Changes in Equity

Years ended December 31, 2022, 2021, and 2020

(in millions)	THE AES CORPORATION STOCKHOLDERS									
	Preferred Stock		Common Stock		Treasury Stock		Additional Paid-in Capital	Accumulated Deficit	Accumulated Other Comprehensive Loss	Noncontrolling Interests
	Shares	Amount	Shares	Amount	Shares	Amount	\$ 7,776	\$ (692)	\$ (2,229)	
Balance at December 31, 2019	—	\$ —	817.8	\$ 8	153.9	\$ (1,867)	\$ 7,776	\$ (692)	\$ (2,229)	\$ 2,233
Net income	—	—	—	—	—	—	—	46	—	98
Total foreign currency translation adjustment, net of income tax	—	—	—	—	—	—	—	—	192	(52)
Total change in derivative fair value, net of income tax	—	—	—	—	—	—	—	—	(237)	(29)
Total pension adjustments, net of income tax	—	—	—	—	—	—	—	—	(12)	(1)
Total other comprehensive loss	—	—	—	—	—	—	—	—	(57)	(82)
Cumulative effect of a change in accounting principle ⁽¹⁾	—	—	—	—	—	—	—	(34)	—	(16)
Adjustments to redemption value of redeemable stock of subsidiaries ⁽²⁾	—	—	—	—	—	—	(4)	—	—	—
Distributions to noncontrolling interests	—	—	—	—	—	—	—	—	—	(419)
Acquisitions of noncontrolling interests	—	—	—	—	—	—	(89)	—	(121)	(49)
Sales to noncontrolling interests	—	—	—	—	—	—	260	—	9	210
Issuance of preferred shares in subsidiaries	—	—	—	—	—	—	—	—	1	111
Dividends declared on common stock (\$0.5804/share)	—	—	—	—	—	—	(386)	—	—	—
Issuance and exercise of stock-based compensation benefit plans, net of income tax	—	—	0.6	—	(0.9)	9	4	—	—	—
Balance at December 31, 2020	—	\$ —	818.4	\$ 8	153.0	\$ (1,858)	\$ 7,561	\$ (680)	\$ (2,397)	\$ 2,086
Net loss	—	—	—	—	—	—	—	(409)	—	(536)
Total foreign currency translation adjustment, net of income tax	—	—	—	—	—	—	—	—	(83)	(44)
Total change in derivative fair value, net of income tax	—	—	—	—	—	—	—	—	247	126
Total pension adjustments, net of income tax	—	—	—	—	—	—	—	—	24	3
Total other comprehensive income	—	—	—	—	—	—	—	—	188	85
Adjustments to redemption value of redeemable stock of subsidiaries ⁽²⁾	—	—	—	—	—	—	(4)	—	—	—
Disposition of business interests	—	—	—	—	—	—	—	—	—	(132)
Distributions to noncontrolling interests	—	—	—	—	—	—	—	—	—	(281)
Acquisitions of noncontrolling interests	—	—	—	—	—	—	(9)	—	(11)	(4)
Contributions from noncontrolling interests	—	—	—	—	—	—	—	—	—	220
Sales to noncontrolling interests	—	—	—	—	—	—	(7)	—	—	180
Issuance of preferred shares in subsidiaries	—	—	—	—	—	—	—	—	—	151
Issuance of preferred stock ⁽³⁾	1.0	838	—	—	—	—	(29)	—	—	—
Dividends declared on AES common stock (\$0.6095/share)	—	—	—	—	—	—	(406)	—	—	—
Issuance and exercise of stock-based compensation benefit plans, net of income tax	—	—	0.3	—	(1.0)	13	—	—	—	—
Balance at December 31, 2021 ⁽³⁾	1.0	\$ 838	818.7	\$ 8	152.0	\$ (1,845)	\$ 7,106	\$ (1,089)	\$ (2,220)	\$ 1,769
Net income (loss)	—	—	—	—	—	—	—	(546)	—	128
Total foreign currency translation adjustment, net of income tax	—	—	—	—	—	—	—	—	(37)	1
Total change in derivative fair value, net of income tax	—	—	—	—	—	—	—	—	689	41
Total pension adjustments, net of income tax	—	—	—	—	—	—	—	—	10	4
Total other comprehensive income	—	—	—	—	—	—	—	—	662	46
Distributions to noncontrolling interests	—	—	—	—	—	—	—	—	—	(200)
Acquisitions of noncontrolling interests	—	—	—	—	—	—	(78)	—	(80)	(387)
Contributions from noncontrolling interests	—	—	—	—	—	—	—	—	—	178
Sales to noncontrolling interests	—	—	—	—	—	—	78	—	(2)	473
Issuance of preferred shares in subsidiaries	—	—	—	—	—	—	—	—	—	60
Dividends declared on AES common stock (\$0.6399/share)	—	—	—	—	—	—	(428)	—	—	—
Issuance and exercise of stock-based compensation benefit plans, net of income tax	—	—	0.1	—	(2.0)	23	10	—	—	—
Balance at December 31, 2022	1.0	\$ 838	818.8	\$ 8	150.0	\$ (1,822)	\$ 6,688	\$ (1,635)	\$ (1,640)	\$ 2,067

⁽¹⁾ See Note 1—General and Summary of Significant Accounting Policies for further information.

⁽²⁾ Adjustment to record the redeemable stock of Colon at redemption value.

⁽³⁾ Includes a \$13 million reclassification from Additional paid-in capital to Preferred stock to reflect the retrospective adoption of ASU 2020-06. For further information, see Note 1—General and Summary of Significant Accounting Policies.

See Accompanying Notes to Consolidated Financial Statements.

Consolidated Statements of Cash Flows

Years ended December 31, 2022, 2021, and 2020

	2022	2021	2020
	(in millions)	(in millions)	(in millions)
OPERATING ACTIVITIES:			
Net income (loss)	\$ (505)	\$ (951)	\$ 152
Adjustments to net income (loss):			
Depreciation and amortization	1,053	1,056	1,068
Loss on disposal and sale of business interests	9	1,683	95
Impairment expense	1,715	1,575	1,066
Deferred income taxes	4	(406)	(233)
Reversals of contingencies	(1)	(10)	(186)
Loss on extinguishment of debt	15	78	186
Gain on remeasurement to acquisition date fair value	(5)	(254)	—
Loss of affiliates, net of dividends	111	36	128
Emissions allowance expense	425	337	135
Other	183	120	54
Changes in operating assets and liabilities:			
(Increase) decrease in accounts receivable	(532)	(170)	48
(Increase) decrease in inventory	(417)	(93)	(20)
(Increase) decrease in prepaid expenses and other current assets	(40)	(168)	13
(Increase) decrease in other assets	433	(285)	(134)
Increase (decrease) in accounts payable and other current liabilities	470	(251)	(186)
Increase (decrease) in income tax payables, net and other tax payables	(51)	(271)	59
Increase (decrease) in deferred income	33	(314)	431
Increase (decrease) in other liabilities	(185)	190	79
Net cash provided by operating activities	<u>2,715</u>	<u>1,902</u>	<u>2,755</u>
INVESTING ACTIVITIES:			
Capital expenditures	(4,551)	(2,116)	(1,900)
Acquisitions of business interests, net of cash and restricted cash acquired	(243)	(658)	(136)
Proceeds from the sale of business interests, net of cash and restricted cash sold	1	95	169
Sale of short-term investments	1,049	616	627
Purchase of short-term investments	(1,492)	(519)	(653)
Contributions and loans to equity affiliates	(232)	(427)	(332)
Affiliate repayments and returns of capital	149	320	158
Purchase of emissions allowances	(488)	(265)	(188)
Other investing	(29)	(97)	(40)
Net cash used in investing activities	<u>(5,836)</u>	<u>(3,051)</u>	<u>(2,295)</u>
FINANCING ACTIVITIES:			
Borrowings under the revolving credit facilities	5,424	2,802	2,420
Repayments under the revolving credit facilities	(4,687)	(2,420)	(2,479)
Issuance of recourse debt	200	7	3,419
Repayments of recourse debt	(29)	(26)	(3,366)
Issuance of non-recourse debt	5,788	1,644	4,680
Repayments of non-recourse debt	(3,144)	(2,012)	(4,136)
Payments for financing fees	(120)	(32)	(107)
Purchases under supplier financing arrangements	1,042	91	72
Repayments of obligations under supplier financing arrangements	(432)	(35)	(96)
Distributions to noncontrolling interests	(265)	(284)	(422)
Acquisitions of noncontrolling interests	(602)	(117)	(259)
Contributions from noncontrolling interests	233	365	1
Sales to noncontrolling interests	742	173	553
Issuance of preferred shares in subsidiaries	60	153	112
Issuance of preferred stock	—	1,014	—
Dividends paid on AES common stock	(422)	(401)	(381)
Payments for financed capital expenditures	(33)	(24)	(60)
Other financing	3	(101)	(29)
Net cash provided by (used in) financing activities	<u>3,758</u>	<u>797</u>	<u>(78)</u>
Effect of exchange rate changes on cash, cash equivalents and restricted cash	(56)	(46)	(24)
(Increase) decrease in cash, cash equivalents and restricted cash of held-for-sale businesses	22	55	(103)
Total increase (decrease) in cash, cash equivalents and restricted cash	603	(343)	255
Cash, cash equivalents and restricted cash, beginning	1,484	1,827	1,572
Cash, cash equivalents and restricted cash, ending	<u>\$ 2,087</u>	<u>\$ 1,484</u>	<u>\$ 1,827</u>
SUPPLEMENTAL DISCLOSURES:			
Cash payments for interest, net of amounts capitalized	\$ 928	\$ 815	\$ 908
Cash payments for income taxes, net of refunds	271	459	333
SCHEDULE OF NONCASH INVESTING AND FINANCING ACTIVITIES:			
Dividends declared but not yet paid	111	105	100
Notes payable issued for the acquisition of business interests (see Notes 17 and 25)	—	258	47

Notes to Consolidated Financial Statements

1. GENERAL AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The AES Corporation is a holding company (the "Parent Company") that, through its subsidiaries and affiliates, (collectively, "AES" or "the Company") operates a geographically diversified portfolio of electricity generation and distribution businesses. Generally, the liabilities of individual operating entities are non-recourse to the Parent Company and are isolated to the operating entities. Most of our operating entities are structured as limited liability entities, which limit the liability of shareholders. The structure is generally the same regardless of whether a subsidiary is consolidated under a voting or variable interest model. The preparation of these consolidated financial statements is in conformity with accounting principles generally accepted in the United States of America ("U.S. GAAP").

PRINCIPLES OF CONSOLIDATION — The consolidated financial statements of the Company include the accounts of The AES Corporation and its controlled subsidiaries. Furthermore, VIEs in which the Company has an ownership interest and is the primary beneficiary, thus controlling the VIE, have been consolidated. Intercompany transactions and balances are eliminated in consolidation. Investments in entities where the Company has the ability to exercise significant influence, but not control, are accounted for using the equity method of accounting.

NONCONTROLLING INTERESTS — Noncontrolling interests are classified as a separate component of equity in the Consolidated Balance Sheets and Consolidated Statements of Changes in Equity. Additionally, net income and comprehensive income attributable to noncontrolling interests are reflected separately from consolidated net income and comprehensive income on the Consolidated Statements of Operations and Consolidated Statements of Changes in Equity. Any change in ownership of a subsidiary while the controlling financial interest is retained is accounted for as an equity transaction between the controlling and noncontrolling interests. Losses continue to be attributed to the noncontrolling interests, even when the noncontrolling interests' basis has been reduced to zero.

Equity securities with redemption features that are not solely within the control of the issuer are classified as temporary equity and are included in *Redeemable stock of subsidiaries* on the Consolidated Balance Sheet. Generally, initial measurement will be at fair value. The subsequent allocation of income and dividends is classified in temporary equity. Subsequent measurement and classification vary depending on whether the instrument is probable of becoming redeemable. For those securities that are currently redeemable or where it is probable that the instrument will become redeemable, AES recognizes any changes from the carrying value to redemption value at each reporting period against retained earnings or additional paid-in capital in the absence of retained earnings; such adjustments are classified in temporary equity. When the equity instrument is not probable of becoming redeemable, no adjustment to the carrying value is recognized. Instruments that are mandatorily redeemable are classified as a liability.

EQUITY METHOD INVESTMENTS — Investments in entities over which the Company has the ability to exercise significant influence, but not control, are accounted for using the equity method of accounting and reported in *Investments in and advances to affiliates* on the Consolidated Balance Sheets. The Company's proportionate share of the net income or loss of these companies is included in *Net equity in losses of affiliates* on the Consolidated Statements of Operations.

The Company utilizes the cumulative earnings approach to determine whether distributions received from equity method investees are returns on investment or returns of investment. The Company discontinues the application of the equity method when an investment is reduced to zero and the Company is not otherwise committed to provide further financial support to the investee. The Company resumes the application of the equity method accounting to the extent that net income is greater than the share of net losses not previously recorded.

Upon acquiring the investment, we determine the fair value of the identifiable assets and assumed liabilities and the basis difference between each fair value and the carrying amount of the corresponding asset or liability in the financial statements of the investee. The AES share of the amortization of the basis difference is recognized in *Net equity in losses of affiliates* in the Consolidated Statements of Operations over the life of the asset or liability.

The Company periodically assesses if impairment indicators exist at our equity method investments. When an impairment is observed, any excess of the carrying amount over its estimated fair value is recognized as impairment

expense when the loss in value is deemed other-than-temporary and included in *Other non-operating expense* in the Consolidated Statements of Operations.

BUSINESS INTERESTS — Acquisitions and disposals of business interests are generally transactions pertaining to operational legal entities, which may be accounted for as a consolidated business, an asset, or an equity method investment. Losses on expected sales of business interests are limited to the impairment of long-lived assets as of the date of execution of the sales agreement, which are recognized in *Asset impairment expense* in the Consolidated Statements of Operations. Any gains/(losses) upon the completion of disposals, which include reclassification of cumulative translation adjustments, are recognized in *Loss on disposal and sale of business interests* in the Consolidated Statements of Operations upon completion of the sale.

ALLOCATION OF EARNINGS — Certain of the Company's businesses are subject to profit-sharing arrangements where the allocation of cash distributions and the sharing of tax benefits are not based on fixed ownership percentages. These arrangements exist for certain U.S. renewable generation partnerships to designate different allocations of value among investors, where the allocations change in form or percentage over the life of the partnership. For these businesses, the Company uses the hypothetical liquidation at book value ("HLBV") method when it is a reasonable approximation of the profit-sharing arrangement. The HLBV method calculates the proceeds that would be attributable to each partner based on the liquidation provisions of the respective operating partnership agreement if the partnership was to be liquidated at book value at the balance sheet date. Each partner's share of income in the period is equal to the change in the amount of net equity they are legally able to claim based on a hypothetical liquidation of the entity at the end of a reporting period compared to the beginning of that period, adjusted for any capital transactions.

The HLBV method is used both to allocate the equity earnings attributable to AES when the Company accounts for the renewable business as an equity method investment and to calculate the earnings attributable to noncontrolling interest when the business is consolidated by AES. In the early months of operations of a renewable generation facility where HLBV results in a significant decrease in the hypothetical liquidation proceeds attributable to the tax equity investor due to the recognition of investment tax credits ("ITCs") or other adjustments as required by the U.S. Internal Revenue Code, the Company records the impact (sometimes referred to as the 'Day one gain') to income in the same period.

USE OF ESTIMATES — U.S. GAAP requires the Company to make estimates and assumptions that affect the asset and liability balances reported as of the date of the consolidated financial statements, as well as the revenues and expenses recognized during the reporting period. Actual results could differ from those estimates. Items subject to such estimates and assumptions include: the carrying amount and estimated useful lives of long-lived assets; asset retirement obligations; impairment of goodwill, long-lived assets and equity method investments; valuation allowances for receivables and deferred tax assets; the recoverability of regulatory assets; regulatory liabilities; the fair value of financial instruments; the fair value of assets and liabilities acquired as business combinations or as asset acquisitions by variable interest entities; contingent consideration arising from business combinations or asset acquisitions by variable interest entities; the measurement of equity method investments or noncontrolling interest using the HLBV method for certain renewable generation partnerships; pension liabilities; the incremental borrowing rates used in the determination of lease liabilities; the determination of lease and non-lease components in certain generation contracts; environmental liabilities; and potential litigation claims and settlements.

HELD-FOR-SALE DISPOSAL GROUPS — A disposal group classified as held-for-sale is reflected on the balance sheet at the lower of its carrying amount or estimated fair value less cost to sell. A loss is recognized if the carrying amount of the disposal group exceeds its estimated fair value less cost to sell. This loss is limited to the carrying value of long-lived assets until the completion of the sale, at which point, any additional loss is recognized. If the fair value of the disposal group subsequently exceeds the carrying amount while the disposal group is still held-for-sale, any impairment expense previously recognized will be reversed up to the lesser of the previously recognized expense or the subsequent excess.

Assets and liabilities related to a disposal group classified as held-for-sale are segregated in the current balance sheet in the period in which the disposal group is classified as held-for-sale. Assets and liabilities of held-for-sale disposal groups are classified as current when they are expected to be disposed of within twelve months. Transactions between the held-for-sale disposal group and businesses that are expected to continue to exist after the disposal are not eliminated to appropriately reflect the continuing operations and balances held-for-sale. See Note 24—*Held-for-Sale and Dispositions* for further information.

DISCONTINUED OPERATIONS — Discontinued operations reporting occurs only when the disposal of a business or a group of businesses represents a strategic shift that has (or will have) a major effect on the Company's operations and financial results. The Company reports financial results for discontinued operations separately from continuing operations to distinguish the financial impact of disposal transactions from ongoing operations. Prior period amounts in the Consolidated Statements of Operations and Consolidated Balance Sheets are retrospectively revised to reflect the businesses determined to be discontinued operations. The cash flows of businesses that are determined to be discontinued operations are included within the relevant categories within operating, investing and financing activities on the face of the Consolidated Statements of Cash Flows.

Transactions between the businesses determined to be discontinued operations and businesses that are expected to continue to exist after the disposal are not eliminated to appropriately reflect the continuing operations and balances held-for-sale. The results of discontinued operations include any gain or loss recognized on closing or adjustment of the carrying amount to fair value less cost to sell, including gains or losses associated with noncontrolling interests upon completion of the disposal transaction. Adjustments related to components previously reported as discontinued operations under prior accounting guidance are presented as discontinued operations in the current period even if the disposed-of component to which the adjustments are related would not meet the criteria for presentation as a discontinued operation under current guidance.

FAIR VALUE — Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly, hypothetical transaction between market participants at the measurement date, or exit price. The Company applies the fair value measurement accounting guidance to financial assets and liabilities in determining the fair value of investments in marketable debt and equity securities, included in the Consolidated Balance Sheet line items *Short-term investments* and *Other noncurrent assets*; derivative assets, included in *Other current assets* and *Other noncurrent assets*; and, derivative liabilities, included in *Accrued and other liabilities (current)* and *Other noncurrent liabilities*. The Company applies the fair value measurement guidance to nonfinancial assets and liabilities upon the acquisition of a business or of an asset acquisition by a variable interest entity, or in conjunction with the measurement of an asset retirement obligation or a potential impairment loss on an asset group, equity method investments, or goodwill.

When determining the fair value measurements for assets and liabilities required to be reflected at their fair values, the Company considers the principal or most advantageous market in which it would transact and considers assumptions that market participants would use when pricing the assets or liabilities, such as inherent risk, transfer restrictions and risk of nonperformance. The Company is prohibited from including transaction costs and any adjustments for blockage factors in determining fair value.

In determining fair value measurements, the Company maximizes the use of observable inputs and minimizes the use of unobservable inputs. Assets and liabilities are categorized within a fair value hierarchy based upon the lowest level of input that is significant to the fair value measurement:

- Level 1: Quoted prices in active markets for identical assets or liabilities;
- Level 2: Inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices in active markets for similar assets or liabilities, quoted prices for identical or similar assets or liabilities in markets that are not active or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities; or
- Level 3: Unobservable inputs that are supported by little or no market activity and that are significant to the fair values of the assets or liabilities.

Any transfers between all levels within the fair value hierarchy levels are recognized at the end of the reporting period.

CASH AND CASH EQUIVALENTS — The Company considers unrestricted cash on hand, cash balances not restricted as to withdrawal or usage, deposits in banks, certificates of deposit and short-term marketable securities with original maturities of three months or less to be cash and cash equivalents.

RESTRICTED CASH AND DEBT SERVICE RESERVES — Cash balances restricted as to withdrawal or usage, primarily via contract, are considered restricted cash.

The following table provides a summary of cash, cash equivalents, and restricted cash amounts reported on the Consolidated Balance Sheets that reconcile to the total of such amounts as shown on the Consolidated Statements of Cash Flows (in millions):

	December 31, 2022	December 31, 2021
Cash and cash equivalents	\$ 1,374	\$ 943
Restricted cash	536	304
Debt service reserves and other deposits	177	237
Cash, Cash Equivalents and Restricted Cash	<u><u>\$ 2,087</u></u>	<u><u>\$ 1,484</u></u>

INVESTMENTS IN MARKETABLE SECURITIES — The Company's marketable investments are primarily unsecured debentures, certificates of deposit, government debt securities and money market funds.

Short-term investments consist of marketable equity securities and debt securities with original maturities in excess of three months with remaining maturities of less than one year. Marketable debt securities where the Company has both the positive intent and ability to hold to maturity are classified as held-to-maturity and are carried at amortized cost, net of any allowance for credit losses in accordance with ASC 326. Remaining marketable debt securities are classified as available-for-sale or trading and are carried at fair value.

Unrealized gains or losses on available-for-sale debt securities that are not credit-related are reflected in AOCL, a separate component of equity, and the Consolidated Statements of Comprehensive Income (Loss). Any credit-related impairments are recognized as an allowance with a corresponding impact recognized as a credit loss in *Other Expense*. Unrealized gains or losses on equity investments are reported in *Other income*. Interest and dividends on investments are reported in *Interest income* and *Other income*, respectively. Gains and losses on sales of investments are determined using the specific identification method.

ACCOUNTS AND NOTES RECEIVABLE AND ALLOWANCE FOR DOUBTFUL ACCOUNTS — Accounts and notes receivable are carried at amortized cost. The Company periodically assesses the collectability of accounts receivable, considering factors such as historical collection experience, the age of accounts receivable and other currently available evidence supporting collectability, and records an allowance for doubtful accounts in accordance with ASC 326 for the estimated uncollectible amount as appropriate. Credit losses on accounts and notes receivable are generally recognized in *Cost of Sales*. Certain of our businesses charge interest on accounts receivable. Interest income is recognized on an accrual basis. When collection of such interest is not reasonably assured, interest income is recognized as cash is received. Individual accounts and notes receivable are written off when they are no longer deemed collectible.

INVENTORY — Inventory primarily consists of fuel and other raw materials used to generate power, and operational spare parts and supplies used to maintain power generation and distribution facilities. Inventory is carried at lower of cost or net realizable value. Cost is the sum of the purchase price and expenditures incurred to bring the inventory to its existing location. Inventory is primarily valued using the average cost method. Generally, if it is expected fuel inventory will not be recovered through revenue earned from power generation, an impairment is recognized to reflect the fuel at net realizable value. The carrying amount of spare parts and supplies is typically reduced only in instances where the items are considered obsolete.

LONG-LIVED ASSETS — Long-lived assets include property, plant and equipment, assets under finance leases and intangible assets subject to amortization (i.e., finite-lived intangible assets).

Property, plant and equipment — Property, plant and equipment are stated at cost, net of accumulated depreciation. The cost of renewals and improvements that extend the useful life of property, plant and equipment are capitalized.

Construction progress payments, engineering costs, insurance costs, salaries, interest and other costs directly relating to construction in progress are capitalized during the construction period, provided the completion of the construction project is deemed probable, or expensed at the time construction completion is determined to no longer be probable. The continued capitalization of such costs is subject to risks related to successful completion, including those related to government approvals, site identification, financing, construction permitting and contract compliance. Construction-in-progress balances are transferred to electric generation and distribution assets when an asset group is ready for its intended use. Government subsidies, liquidated damages recovered for construction delays, and income tax credits are recorded as a reduction to property, plant and equipment and reflected in cash flows from investing activities. Maintenance and repairs are charged to expense as incurred.

Depreciation, after consideration of salvage value and asset retirement obligations, is computed using the straight-line method over the estimated useful lives of the assets, which are determined on a composite or component basis. Capital spare parts, including rotatable spare parts, are included in electric generation and distribution assets. If the spare part is considered a component, it is depreciated over its useful life after the part is placed in service. If the spare part is deemed part of a composite asset, the part is depreciated over the composite useful life even when being held as a spare part.

Certain of the Company's subsidiaries operate under concession contracts. Certain estimates are utilized to determine depreciation expense for the subsidiaries, including the useful lives of the property, plant and equipment and the amounts to be recovered at the end of the concession contract. The amounts to be recovered under these concession contracts are based on estimates that are inherently uncertain and actual amounts recovered may differ from those estimates. These concession contracts are not within the scope of ASC 853—*Service Concession Arrangements*.

Intangible Assets Subject to Amortization — Finite-lived intangible assets are amortized over their useful lives which range from 1 – 50 years and are included in the Consolidated Balance Sheet line item *Other intangible assets*. The Company accounts for purchased emission allowances as intangible assets and records an expense when they are utilized or sold. Granted emission allowances are valued at zero.

Impairment of Long-lived Assets — When circumstances indicate the carrying amount of long-lived assets in a held-for-use asset group may not be recoverable, the Company evaluates the assets for potential impairment using internal projections of undiscounted cash flows resulting from the use and eventual disposal of the assets. Events or changes in circumstances that may necessitate a recoverability evaluation include, but are not limited to, adverse changes in the regulatory environment, unfavorable changes in power prices or fuel costs, increased competition due to additional capacity in the grid, technological advancements, declining trends in demand, or an expectation it is more likely than not that the asset will be disposed of before the end of its previously estimated useful life. If the carrying amount of the assets exceeds the undiscounted cash flows, an impairment expense is recognized for the amount by which the carrying amount of the asset group exceeds its fair value (subject to the carrying amount not being reduced below fair value for any individual long-lived asset that is determinable without undue cost and effort). An impairment expense for certain assets may be reduced by the establishment of a regulatory asset if recovery through approved rates is probable.

DEBT ISSUANCE COSTS — Costs incurred in connection with the issuance of long-term debt are deferred and presented as a direct reduction from the face amount of that debt and amortized over the related financing period using the effective interest method. Debt issuance costs related to a line-of-credit or revolving credit facility are deferred and presented as an asset and amortized over the related financing period. Make-whole payments in connection with early debt retirements are classified as cash flows used in financing activities.

GOODWILL AND INDEFINITE-LIVED INTANGIBLE ASSETS — The Company evaluates goodwill and indefinite-lived intangible assets for impairment on an annual basis and whenever events or changes in circumstances necessitate an evaluation for impairment. The Company's annual impairment testing date is October 1st.

Goodwill — Goodwill represents the excess of the purchase price of the business acquisition over the fair value of identifiable net assets acquired. Goodwill resulting from an acquisition is assigned to the reporting units that are expected to benefit from the synergies of the acquisition. Generally, each AES business with a goodwill balance constitutes a reporting unit as they are not similar to other businesses in a segment nor are they reported to segment management together with other businesses.

Goodwill is evaluated for impairment either under the qualitative assessment option or the quantitative test option to determine the fair value of the reporting unit. If goodwill is determined to be impaired, an impairment loss measured at the amount by which the reporting unit's carrying amount exceeds its fair value, not to exceed the carrying amount of goodwill, is recorded.

Indefinite-Lived Intangible Assets — The Company's indefinite-lived intangible assets primarily include land-use rights and water rights. Indefinite-lived intangible assets are evaluated for impairment either under the qualitative assessment option or by performing the quantitative impairment test. If the carrying amount of an intangible asset being tested for impairment exceeds its fair value, the excess is recognized as impairment expense.

ACCOUNTS PAYABLE AND OTHER ACCRUED LIABILITIES — Accounts payable consists of amounts due to trade creditors related to the Company's core business operations. These payables include amounts owed to vendors and suppliers for items such as energy purchased for resale, fuel, maintenance, inventory and other raw materials. Other accrued liabilities includes \$662 million related to supplier financing arrangements, of which \$296 million has a Parent Company guarantee; interest incurred for these arrangements is recorded on the Consolidated Statements of Operations within *Interest expense* or, if eligible for capitalization, to *Property, plant and equipment, net* on the Consolidated Balance Sheets. The remaining balance of other accrued liabilities includes items such as income taxes, regulatory liabilities, legal contingencies, and employee-related costs, including payroll, and benefits.

REGULATORY ASSETS AND LIABILITIES — The Company recognizes assets and liabilities that result from regulated ratemaking processes. Regulatory assets generally represent incurred costs which have been deferred due to the probable future recovery via customer rates. Generally, returns earned on regulatory assets are reflected in the Consolidated Statements of Operations within *Interest Income*. Regulatory liabilities generally represent obligations to refund customers. Management continually assesses whether regulatory assets are probable of future recovery and regulatory liabilities are probable of future payment by considering factors such as applicable regulatory changes, recent rate orders applicable to other regulated entities, and the status of any pending or potential deregulation legislation. If future recovery of costs previously deferred ceases to be probable, the related regulatory assets are written off and recognized in income from continuing operations.

PENSION AND OTHER POSTRETIREEMENT PLANS — The Company recognizes in its Consolidated Balance Sheets an asset or liability reflecting the funded status of pension and other postretirement plans with current-year changes in actuarial gains or losses recognized in AOCL, except for those plans at certain of the Company's regulated utilities that can recover portions of their pension and postretirement obligations through future rates. All plan assets are recorded at fair value. AES follows the measurement date provisions of the accounting guidance, which require a year-end measurement date of plan assets and obligations for all defined benefit plans.

INCOME TAXES — Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of the existing assets and liabilities, and their respective income tax basis. The Company establishes a valuation allowance when it is more likely than not that all or a portion of a deferred tax asset will not be realized. The Company's tax positions are evaluated under a more likely than not recognition threshold and measurement analysis before they are recognized for financial statement reporting.

Uncertain tax positions have been classified as noncurrent income tax liabilities unless expected to be paid within one year. The Company's policy for interest and penalties related to income tax exposures is to recognize interest and penalties as a component of the provision for income taxes in the Consolidated Statements of Operations.

The Company has elected to treat GILTI as an expense in the period in which the tax is accrued. Accordingly, no deferred tax assets or liabilities are recorded related to GILTI.

The Company applies the flow-through method to account for its investment tax credits.

The Company's accounting policy for releasing the income tax effects from AOCL occurs on a portfolio basis.

The Company has elected an accounting policy not to consider the effects of being subject to the corporate alternative minimum tax in future periods when assessing the realizability of our deferred tax assets, carryforwards, and tax credits. Any effect on the realization of deferred tax assets will be recognized in the period they arise.

ASSET RETIREMENT OBLIGATIONS — The Company records the fair value of a liability for a legal obligation to retire an asset in the period in which the obligation is incurred. When a new liability is recognized, the Company capitalizes the costs of the liability by increasing the carrying amount of the related long-lived asset. The liability is accreted to its present value each period and the capitalized cost is depreciated over the useful life of the related asset. Upon settlement of the obligation, the Company eliminates the liability and, based on the actual cost to retire, may incur a gain or loss.

FOREIGN CURRENCY TRANSLATION — A business's functional currency is the currency of the primary economic environment in which the business operates and is generally the currency in which the business generates and expends cash. Subsidiaries and affiliates whose functional currency is a currency other than the U.S. dollar translate their assets and liabilities into U.S. dollars at the current exchange rates in effect at the end of

the fiscal period. Adjustments arising from the translation of the balance sheet of such subsidiaries are included in AOCL. The revenue and expense accounts of such subsidiaries and affiliates are translated into U.S. dollars at the average exchange rates for the period. Gains and losses on intercompany foreign currency transactions that are long-term in nature and which the Company does not intend to settle in the foreseeable future, are also recognized in AOCL. Gains and losses that arise from exchange rate fluctuations on transactions denominated in a currency other than the functional currency are included in determining net income. Accumulated foreign currency translation adjustments are reclassified from AOCL to net income only when realized upon sale or upon complete or substantially complete liquidation of the investment in a foreign entity. The accumulated adjustments are included in carrying amounts in impairment assessments where the Company has committed to a plan that will cause the accumulated adjustments to be reclassified to earnings.

REVENUE RECOGNITION — Revenue is earned from the sale of electricity from our utilities, the production and sale of electricity and capacity from our generation facilities, and development and construction of generation facilities. Revenue is recognized upon the transfer of control of promised goods or services to customers in an amount that reflects the consideration to which we expect to be entitled in exchange for those goods or services. Revenue is recorded net of any taxes assessed on and collected from customers, which are remitted to the governmental authorities.

Utilities — Our utilities sell electricity directly to end-users, such as homes and businesses, and bill customers directly. The majority of our utility contracts have a single performance obligation, as the promises to transfer energy, capacity, and other distribution and/or transmission services are not distinct. Additionally, as the performance obligation is satisfied over time as energy is delivered, and the same method is used to measure progress, the performance obligation meets the criteria to be considered a series. Utility revenue is classified as regulated on the Consolidated Statements of Operations.

In exchange for the right to sell or distribute electricity in a service territory, our utility businesses are subject to government regulation. This regulation sets the framework for the prices ("tariffs") that our utilities are allowed to charge customers for electricity. Since tariffs are determined by the regulator, the price that our utilities have the right to bill corresponds directly with the value to the customer of the utility's performance completed in each period. The Company also has some month-to-month contracts. Revenue under these contracts is recognized using an output method measured by the MWh delivered each month, which best depicts the transfer of goods or services to the customer, at the approved tariff.

The Company has businesses where it sells and purchases power to and from ISOs and RTOs. Our utility businesses generally purchase power to satisfy the demand of customers that is not contracted through separate PPAs. In these instances, the Company accounts for these transactions on a net hourly basis because the transactions are settled on a net hourly basis. In limited situations, a utility customer may choose to receive generation services from a third-party provider, in which case the Company may serve as a billing agent for the provider and recognize revenue on a net basis.

Generation — Most of our generation fleet sells electricity under contracts to customers such as utilities, industrial users, and other intermediaries. Our generation contracts, based on specific facts and circumstances, can have one or more performance obligations as the promise to transfer energy, capacity, and other services may or may not be distinct depending on the nature of the market and terms of the contract.

For contracts determined to have multiple performance obligations, we allocate revenue to each performance obligation based on its relative standalone selling price using a market or expected cost plus margin approach. Additionally, the Company allocates variable consideration to one or more, but not all, distinct goods or services that form part of a single performance obligation when (1) the variable consideration relates specifically to the efforts to transfer the distinct good or service and (2) the variable consideration depicts the amount to which the Company expects to be entitled in exchange for transferring the promised good or service to the customer.

If the contract is determined to contain a performance obligation related to capacity, the performance obligation is generally satisfied over time, and if we use the same method to measure progress, the performance obligations meet the criteria to be considered a series. In measuring progress toward satisfaction of a performance obligation, the Company applies the "right to invoice" practical expedient when available and recognizes revenue in the amount to which the Company has a right to consideration from a customer that corresponds directly with the value of the performance completed to date. Revenue from generation businesses is classified as non-regulated on the Consolidated Statements of Operations.

Energy performance obligations are recognized using an output method, as energy delivered best depicts the transfer of goods or services to the customer. Performance obligations to deliver energy are generally satisfied when the MW is generated. In certain contracts, if plant availability exceeds a contractual target, the Company may receive a performance bonus payment, or if the plant availability falls below a guaranteed minimum target, we may incur a non-availability penalty. Such bonuses or penalties represent a form of variable consideration and are estimated and recognized when it is probable that there will not be a significant reversal.

Certain generation contracts contain operating and sales-type leases where capacity payments are generally considered lease elements. In such cases, the allocation between the lease and non-lease elements is made at the inception of the lease following the guidance in ASC 842.

In assessing whether variable quantities are considered variable consideration or an option to acquire additional goods and services, the Company evaluates the nature of the promise and the legally enforceable rights in the contract. In some contracts, such as requirement contracts, the legally enforceable rights merely give the customer a right to purchase additional goods and services which are distinct. In these contracts, the customer's action results in a new obligation, and the variable quantities are considered an option.

When energy or capacity is sold or purchased in the spot market or to ISOs, the Company assesses the facts and circumstances to determine gross versus net presentation of spot revenues and purchases. Generally, the nature of the performance obligation is to sell surplus energy or capacity above contractual commitments, or to purchase energy or capacity to satisfy deficits. Generally, on an hourly basis, a generator is either a net seller or a net buyer in terms of the amount of energy or capacity transacted with the ISO. In these situations, the Company recognizes revenue for the hours where the generator is a net seller and cost of sales for the hours where the generator is a net buyer.

The transaction price allocated to a construction performance obligation is recognized as revenue over time as construction activity occurs, with revenue being fully recognized upon completion of construction. These contracts may include a difference in timing between revenue recognition and the collection of cash receipts, which may be collected over the term of the entire arrangement. The timing difference could result in a significant financing component for the construction performance obligation if determined to be a material component of the transaction price. The Company accounts for a significant financing component under the effective interest rate method, recognizing a long-term receivable for the expected future payments related to the construction performance obligation in the *Loan Receivable* line item on the Consolidated Balance Sheets. As payments are collected from the customer over the term of the contract, consideration related to the construction performance obligation is bifurcated between the principal repayment of the long-term receivable and the related interest income, recognized in the Consolidated Statements of Operations.

Contract Balances — The timing of revenue recognition, billings, and cash collections results in accounts receivable and contract liabilities. Accounts receivable represent unconditional rights to consideration and consist of both billed amounts and unbilled amounts typically resulting from sales under long-term contracts when revenue recognized exceeds the amount billed to the customer. We bill both generation and utilities customers on a contractually agreed-upon schedule, typically at periodic intervals (e.g., monthly). The calculation of revenue earned but not yet billed is based on the number of days not billed in the month, the estimated amount of energy delivered during those days and the estimated average price per customer class for that month.

Our contract liabilities consist of deferred revenue which is classified as current or noncurrent based on the timing of when we expect to recognize revenue. The current portion of our contract liabilities is reported in *Accrued and other liabilities* and the noncurrent portion is reported in *Other noncurrent liabilities* on the Consolidated Balance Sheets.

Remaining Performance Obligations — The transaction price allocated to remaining performance obligations represents future consideration for unsatisfied (or partially unsatisfied) performance obligations at the end of the reporting period. The Company has elected to apply the optional disclosure exemptions under ASC 606. Therefore, the amount disclosed in Note 20—*Revenue* excludes contracts with an original length of one year or less, contracts for which we recognize revenue based on the amount we have the right to invoice for services performed, and variable consideration allocated entirely to a wholly unsatisfied performance obligation when the consideration relates specifically to our efforts to satisfy the performance obligation and depicts the amount to which we expect to be entitled. As such, consideration for energy is excluded from the amount disclosed as the variable consideration relates to the amount of energy delivered and reflects the value the Company expects to receive for the energy

transferred. Estimates of revenue expected to be recognized in future periods also exclude unexercised customer options to purchase additional goods or services that do not represent material rights to the customer.

LEASES — The Company has operating and finance leases for energy production facilities, land, office space, transmission lines, vehicles and other operating equipment in which the Company is the lessee. Operating leases with an initial term of 12 months or less are not recorded on the balance sheet, but are expensed on a straight-line basis over the lease term. The Company's leases do not contain any material residual value guarantees, restrictive covenants or subleases.

Right-of-use assets represent our right to use an underlying asset for the lease term while lease liabilities represent our obligation to make lease payments arising from the lease. Right-of-use assets and lease liabilities are recognized on commencement of the lease based on the present value of lease payments over the lease term. Generally, the rate implicit in the lease is not readily determinable; as such, we use the subsidiaries' incremental borrowing rate based on the information available at commencement date in determining the present value of lease payments. The Company determines discount rates based on its existing credit rates of its unsecured borrowings, which are then adjusted for the appropriate lease term and currency. The right-of-use asset also includes any lease payments made and excludes lease incentives that are paid or payable to the lessee at commencement. The lease term includes the option to extend or terminate the lease if it is reasonably certain that the option will be exercised.

The Company has operating leases for certain generation contracts that contain provisions to provide capacity to a customer, which is a stand-ready obligation to deliver energy when required by the customer in which the Company is the lessor. Capacity payments are generally considered lease elements as they cover the majority of available output from a facility. The allocation of contract payments between the lease and non-lease elements is made at the inception of the lease. Fixed lease payments from such contracts are recognized as lease revenue on a straight-line basis over the lease term, whereas variable lease payments are recognized when earned.

The Company has sales-type leases for BESS in which the Company is the lessor. These arrangements allow customers the ability to determine when to charge and discharge the BESS, representing the transfer of control and constitutes the arrangement as a sales-type lease. Upon commencement of the lease, the book value of the leased asset is removed from the balance sheet and a net investment in sales-type lease is recognized based on the present value of fixed payments under the contract and the residual value of the underlying asset.

SHARE-BASED COMPENSATION — The Company grants share-based compensation in the form of restricted stock units, performance stock units, performance cash units, and stock options. The expense is based on the grant-date fair value of the equity or liability instrument issued and is recognized on a straight-line basis over the requisite service period, net of estimated forfeitures. The Company uses a Black-Scholes option pricing model to estimate the fair value of stock options granted to its employees.

GENERAL AND ADMINISTRATIVE EXPENSES — General and administrative expenses include corporate and other expenses related to corporate staff functions and initiatives, primarily executive management, finance, legal, human resources, and information systems, which are not directly allocable to our business segments. Additionally, all costs associated with corporate business development efforts are classified as general and administrative expenses.

DERIVATIVES AND HEDGING ACTIVITIES — Under the accounting standards for derivatives and hedging, the Company recognizes all contracts that meet the definition of a derivative, except those designated as normal purchase or normal sale at inception, as either assets or liabilities in the Consolidated Balance Sheets and measures those instruments at fair value. See Note 5—*Fair Value* and *Fair value* in this section for additional discussion regarding the determination of fair value.

PPAs and fuel supply agreements are evaluated to assess if they contain either a derivative or an embedded derivative requiring separate valuation and accounting. Generally, these agreements do not meet the definition of a derivative, often due to the inability to be net settled. On a quarterly basis, we evaluate the markets for commodities to be delivered under these agreements to determine if facts and circumstances have changed such that the agreements could be net settled and meet the definition of a derivative.

The Company typically designates its derivative instruments as cash flow hedges if they meet the criteria specified in ASC 815, *Derivatives and Hedging*. The Company enters into interest rate swap agreements in order to hedge the variability of expected future cash interest payments. Foreign currency contracts are used to reduce risks arising from the change in fair value of certain foreign currency denominated assets and liabilities. The objective of

these practices is to minimize the impact of foreign currency fluctuations on operating results. The Company also enters into commodity contracts to economically hedge price variability inherent in electricity sales arrangements. The objectives of the commodity contracts are to minimize the impact of variability in spot electricity prices and stabilize estimated revenue streams. The Company does not use derivative instruments for speculative purposes.

For our hedges, changes in fair value are deferred in AOCL and are recognized into earnings as the hedged transactions affect earnings. If a derivative is no longer highly effective, hedge accounting will be discontinued prospectively. For cash flow hedges of forecasted transactions, AES estimates the future cash flows of the forecasted transactions and evaluates the probability of the occurrence and timing of such transactions.

Changes in the fair value of derivatives not designated and qualifying as cash flow hedges are immediately recognized in earnings. Regardless of when gains or losses on derivatives are recognized in earnings, they are generally classified as interest expense for interest rate and cross-currency derivatives, foreign currency transaction gains or losses for foreign currency derivatives, and non-regulated revenue or non-regulated cost of sales for commodity and other derivatives. Cash flows arising from derivatives are included in the Consolidated Statements of Cash Flows as an operating activity given the nature of the underlying risk being economically hedged and the lack of significant financing elements, except that cash flows on designated and qualifying hedges of variable-rate interest during construction are classified as an investing activity. The Company has elected not to offset net derivative positions in the financial statements.

CREDIT LOSSES — In accordance with ASC 326, the Company records an allowance for current expected credit losses ("CECL") for accounts and notes receivable, financing receivables, contract assets, net investments in leases recognized as a lessor, held-to-maturity debt securities, financial guarantees related to the non-payment of a financial obligation, and off-balance sheet credit exposures not accounted for as insurance. The CECL allowance is based on the asset's amortized cost and reflects management's expected risk of credit losses over the remaining contractual life of the asset. CECL allowances are estimated using relevant information about the collectibility of cash flows and consider information about past events, current conditions, and reasonable and supportable forecasts of future economic conditions. See *New Accounting Pronouncements* below for further information regarding the impact on the Company's financial statements upon adoption of ASC 326.

The following table represents the rollforward of the allowance for credit losses for the periods indicated (in millions):

Twelve Months Ended December 31, 2022	Accounts Receivable ⁽¹⁾	Mong Duong Loan Receivable	Argentina Receivables ⁽²⁾	Lease Receivable ⁽³⁾	Other	Total
CECL reserve balance at beginning of period	\$ 9	\$ 30	\$ 23	\$ —	\$ 1	\$ 63
Current period provision	10	—	22	20	1	53
Write-offs charged against allowance	(19)	—	—	—		(19)
Recoveries collected	3	(2)	(1)	—	—	—
Foreign exchange	—	—	(14)	—	—	(14)
CECL reserve balance at end of period	<u>\$ 3</u>	<u>\$ 28</u>	<u>\$ 30</u>	<u>\$ 20</u>	<u>\$ 2</u>	<u>\$ 83</u>

Twelve Months Ended December 31, 2021	Accounts Receivable ⁽¹⁾	Mong Duong Loan Receivable	Argentina Receivables	Other	Total
CECL reserve balance at beginning of period	\$ 9	\$ 32	\$ 20	\$ 1	\$ 62
Current period provision	9	—	7	—	16
Write-offs charged against allowance	(11)	—	—	—	(11)
Recoveries collected	2	(2)	—	—	—
Foreign exchange	—	—	(4)	—	(4)
CECL reserve balance at end of period	<u>\$ 9</u>	<u>\$ 30</u>	<u>\$ 23</u>	<u>\$ 1</u>	<u>\$ 63</u>

⁽¹⁾ Excludes operating lease receivable allowances and contractual dispute allowances of \$1 million and \$2 million as of December 31, 2022 and 2021, respectively. Those reserves are not in scope under ASC 326.

⁽²⁾ Increase in CECL reserve balance for regulatory receivables in Argentina.

⁽³⁾ Lease receivable credit losses allowance at Southland Energy (AES Gilbert).

NEW ACCOUNTING PRONOUNCEMENTS — The following table provides a brief description of recent accounting pronouncements that had an impact on the Company's consolidated financial statements. Accounting pronouncements not listed below were assessed and determined to be either not applicable or did not have a material impact on the Company's consolidated financial statements.

New Accounting Standards Adopted			
ASU Number and Name	Description	Date of Adoption	Effect on the financial statements upon adoption
2021-05, Leases (Topic 842), Lessors—Certain Leases with Variable Lease Payments	The amendments in this update affect lessors with lease contracts that (1) have variable lease payments that do not depend on a reference index or a rate and (2) would have resulted in the recognition of a selling loss at lease commencement if classified as sales-type or direct financing. Lessors should classify and account for a lease with variable lease payments that do not depend on a reference index or a rate as an operating lease if both of the following criteria are met: (a) The lease would have been classified as a sales-type lease or a direct financing lease in accordance with the classification criteria in paragraphs 842-10-25-2 through 25-3, (b) The lessor would have otherwise recognized a day-one loss. This update could be applied either (1) retrospectively to leases that commenced or were modified on or after the adoption of Update 2016-02 or (2) prospectively to leases that commence or are modified on or after the date that an entity first applies the amendments.	January 1, 2022	The Company adopted this standard on a prospective basis and it did not have a material impact on the financial statements.
2020-06, Debt - Debt with conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging-Contracts in Equity's Own Equity (Subtopic 815-40): Accounting for Convertible Instruments and Contracts in an Equity's Own Equity	The amendments in this update affect entities that issue convertible instruments and/or contracts indexed to and potentially settled in an entity's own equity. The new ASU eliminates the beneficial conversion and cash conversion accounting models for convertible instruments. It also amends the accounting for certain contracts in an entity's own equity that are currently accounted for as derivatives because of specific settlement provisions. In addition, the new guidance modifies how particular convertible instruments and certain contracts that may be settled in cash or shares impact the diluted EPS computation.	January 1, 2022	The Company adopted this standard on a fully retrospective basis and its adoption resulted in a \$13 million increase to <i>Preferred Stock</i> and a corresponding decrease to <i>Additional paid-in capital</i> . No impact to Earnings per Share amounts reported in 2021 or 2022.
2020-04, 2021-01, and 2022-06 Reference Rate Reform (Topic 848): Facilitation of the Effects of Reference Rate Reform on Financial Reporting	The amendments in these updates provide optional expedients and exceptions for applying GAAP to contracts, hedging relationships and other transactions that reference to LIBOR or another reference rate expected to be discontinued by reference rate reform, and clarify that certain optional expedients and exceptions in Topic 848 for contract modifications and hedge accounting apply to derivatives that are affected by the discounting transition. These amendments are effective for a limited period of time (March 12, 2020 - December 31, 2024).	Effective for all entities as of March 12, 2020 through December 31, 2024	The Company adopted this standard on a prospective basis and it did not have a material impact on the financial statements.

ASC 326 — Financial Instruments — Credit Losses

On January 1, 2020, the Company adopted ASC 326 *Financial Instruments — Credit Losses* and its subsequent corresponding updates (“ASC 326”). The new standard updates the impairment model for financial assets measured at amortized cost, known as the Current Expected Credit Loss (“CECL”) model. For trade and other receivables, held-to-maturity debt securities, loans, and other instruments, entities are required to use a new forward-looking “expected loss” model that generally results in the earlier recognition of an allowance for credit losses. For available-for-sale debt securities with unrealized losses, entities measure credit losses as it was done under previous GAAP, except that unrealized losses due to credit-related factors are now recognized as an allowance on the balance sheet with a corresponding adjustment to earnings in the income statement.

The Company applied the modified retrospective method of adoption for ASC 326. Under this transition method, the Company applied the transition provisions starting at the date of adoption. The cumulative effect of the adoption of ASC 326 on our January 1, 2020 Condensed Consolidated Balance Sheet was as follows (in millions):

Condensed Consolidated Balance Sheet	Balance at December 31, 2019	Adjustments Due to ASC 326	Balance at January 1, 2020
Assets			
Accounts receivable, net of allowance for doubtful accounts of \$20	\$ 1,479	\$ —	\$ 1,479
Other current assets	802	(2)	800
Deferred income taxes	156	9	165
Loan receivable, net of allowance of \$32	1,351	(32)	1,319
Other noncurrent assets ⁽¹⁾	1,635	(30)	1,605
Liabilities and Equity			
Accumulated deficit	\$ (692)	\$ (39)	\$ (731)
Noncontrolling interests	2,233	(16)	2,217

⁽¹⁾ Other noncurrent assets include Argentina financing receivables.

Mong Duong — The Mong Duong II power plant in Vietnam is the primary driver of changes in credit reserves under the new standard. This plant is operated under a build, operate, and transfer (“BOT”) contract and will be transferred to the Vietnamese government after the completion of a 25-year PPA. A loan receivable was recognized in 2018 upon the adoption of ASC 606 in order to account for the future expected payments for the construction performance obligation portion of the BOT contract. As the payments for the construction performance obligation occur over a 25-year term, a significant financing element was determined to exist which is accounted for under the effective interest rate method. Historically, the Company has not incurred any losses on this arrangement, of which no directly comparable assets exist in the market. In order to determine expected credit losses under ASC 326 arising from this \$1.4 billion loan receivable as of January 1, 2020, the Company considered average historical default and recovery rates on similarly rated sovereign bonds, which formed an initial basis for developing a probability of default, net of expected recoveries, to be applied as a key credit quality indicator for this arrangement. A resulting estimated loss rate of 2.4% was applied to the weighted-average remaining life of the loan receivable, after adjustments for certain asset-specific characteristics, including the Company’s status as a large foreign direct investor in Vietnam, Mong Duong’s status as critical energy infrastructure in Vietnam, and cash flows from the operations of the plant, which are under the Company’s control until the end of the BOT contract. As a result of this analysis, the Company recognized an opening CECL reserve of \$34 million as an adjustment to *Accumulated deficit* and *Noncontrolling interests* as of January 1, 2020.

Argentina — Exposure to CAMMESA, the administrator of the wholesale energy market in Argentina, is the driver of credit reserves in Argentina. As discussed in Note 7—*Financing Receivables*, the Company has credit exposures through the FONINVEMEM Agreements, other agreements related to resolutions passed by the Argentine government in which AES Argentina will receive compensation for investments in new generation plants and technologies, as well as regular accounts receivable balances. The timing of collections depends on corresponding agreements and collectability of these receivables are assessed on an ongoing basis.

Collection of the principal and interest on these receivables is subject to various business risks and uncertainties, including, but not limited to, the continued operation of power plants which generate cash for payments of these receivables, regulatory changes that could impact the timing and amount of collections, and economic conditions in Argentina. The Company monitors these risks, including the credit ratings of the Argentine government, on a quarterly basis to assess the collectability of these receivables. Historically, the Company has not incurred any credit-related losses on these receivables. In order to determine expected credit losses under ASC 326, the Company considered historical default probabilities utilizing similarly rated sovereign bonds and historic recovery rates for Argentine government bond defaults. This information formed an initial basis for developing a probability of default, net of expected recoveries, to be applied as a key credit quality indicator across the underlying financing receivables. A resulting estimated weighted average loss rate of 41.2% was applied to the remaining balance of these receivables, after adjustments for certain asset-specific characteristics, including AES Argentina’s role in providing critical energy infrastructure to Argentina, our history of collections on these receivables, and the average term that the receivables are expected to be outstanding. As a result of this analysis, the Company recognized an opening CECL reserve of \$29 million as an adjustment to *Accumulated deficit* as of January 1, 2020.

Other financial assets — Application of ASC 326 to the Company’s \$1.5 billion of trade accounts receivable and \$326 million of available-for-sale debt securities at January 1, 2020 did not result in any material adjustments, primarily due to the short-term duration and high turnover of these financial assets. Additionally, a large portion of our trade accounts receivables and amounts reserved for doubtful accounts under legacy GAAP arise from arrangements accounted for as an operating lease under ASC 842, which are excluded from the scope of ASC 326.

As discussed in Note 7—*Financing Receivables*, AES Andes recorded \$33 million of noncurrent receivables at December 31, 2020 pertaining to revenues recognized on regulated energy contracts that were impacted by the Stabilization Fund created by the Chilean government in October 2019. The Company expects to collect these noncurrent receivables through the execution of sale agreements with third parties. However, given the investment grade rating of Chile and the history of zero credit losses for regulated customers, management determined that no incremental CECL reserves were required to be recognized as of January 1, 2020.

New Accounting Pronouncements Issued But Not Yet Effective — The following table provides a brief description of recent accounting pronouncements that could have a material impact on the Company's consolidated financial statements once adopted. Accounting pronouncements not listed below were assessed and determined to be either not applicable or are expected to have no material impact on the Company's consolidated financial statements.

New Accounting Standards Issued But Not Yet Effective			
ASU Number and Name	Description	Date of Adoption	Effect on the financial statements upon adoption
2021-08, Business Combinations (Topic 805): Accounting for Contract Assets and Contract Liabilities from Contracts with Customers	This update is to improve the accounting for acquired revenue contracts with customers in a business combination by addressing diversity in practice and inconsistency related to the following: 1. Recognition of an acquired contract liability 2. Payment terms and their effect on subsequent revenue recognized by the acquirer. Early adoption of the amendments is permitted, including adoption in an interim period. An entity that early adopts in an interim period should apply the amendments (1) retrospectively to all business combinations for which the acquisition date occurs on or after the beginning of the fiscal year that includes the interim period of early application and (2) prospectively to all business combinations that occur on or after the date of initial application.	For fiscal years beginning after December 15, 2022, including interim periods within those fiscal years.	The Company is currently evaluating the impact of adopting the standard on its consolidated financial statements.
2022-04, Liabilities - Supplier Finance Programs (Topic 450-50): Disclosure of Supplier Finance Program Obligations	This update is to provide additional information and disclosures about an entity's use of supplier finance programs to see how these programs will affect an entity's working capital, liquidity, and cash flows. Entities that use supplier finance programs as the buyer party should disclose (1) the key terms of the payment terms and assets pledged as security or other forms of guarantees provided and (2) the unpaid amount outstanding, a description of where those obligations are presented on the balance sheet, and a rollforward of those obligations during the annual period. In each interim reporting period, the buyer must disclose the unpaid amount outstanding at the end of the interim period.	For fiscal years beginning after December 15, 2022, including interim periods within those fiscal years, except for the amendment on rollforward information, which is effective for fiscal years beginning after December 15, 2023.	The ASU only requires disclosures related to the Company's supplier finance programs and does not affect the recognition, measurement, or presentation of supplier finance program obligations on the balance sheet or cash flow statement. The Company expects to adopt the new disclosure requirements in the first quarter of 2023, except for the annual requirement to disclose rollforward information, which the Company expects to adopt and present prospectively beginning in the 2024 annual financial statements.

2. INVENTORY

Inventory is valued primarily using the average-cost method. The following table summarizes the Company's inventory balances as of the dates indicated (in millions):

December 31,	2022	2021
Fuel and other raw materials	\$ 733	\$ 366
Spare parts and supplies	322	238
Total	\$ 1,055	\$ 604

3. PROPERTY, PLANT AND EQUIPMENT

The following table summarizes the components of the electric generation and distribution assets and other property, plant and equipment (in millions) with their estimated useful lives (in years). The amounts are stated net of all prior asset impairment losses recognized.

	Estimated Useful Life (in years)	December 31,	
		2022	2021
Electric generation and distribution facilities	5-39	\$ 24,135	\$ 22,909
Other buildings	3-51	1,197	1,552
Furniture, fixtures and equipment	3-30	348	356
Other	1-40	919	735
Total electric generation and distribution assets and other		26,599	25,552
Accumulated depreciation		(8,651)	(8,486)
Net electric generation and distribution assets and other		\$ 17,948	\$ 17,066

The following table summarizes depreciation expense (including the amortization of assets recorded under finance leases and the amortization of asset retirement obligations) and interest capitalized during development and construction on qualifying assets for the periods indicated (in millions):

Years Ended December 31,	2022	2021	2020
Depreciation expense	\$ 982	\$ 972	\$ 1,004
Interest capitalized during development and construction	224	226	307

Property, plant and equipment, net of accumulated depreciation, of \$9 billion was mortgaged, pledged or subject to liens as of both December 31, 2022 and 2021, including assets classified as held-for-sale.

The following table summarizes regulated and non-regulated generation and distribution property, plant and equipment and accumulated depreciation as of the dates indicated (in millions):

December 31,	2022	2021
Regulated generation and distribution assets and other, gross	\$ 9,709	\$ 9,151
Regulated accumulated depreciation	(4,067)	(3,655)
Regulated generation and distribution assets and other, net	5,642	5,496
Non-regulated generation and distribution assets and other, gross	16,890	16,401
Non-regulated accumulated depreciation	(4,584)	(4,831)
Non-regulated generation and distribution assets and other, net	12,306	11,570
Net electric generation and distribution assets and other	\$ 17,948	\$ 17,066

4. ASSET RETIREMENT OBLIGATIONS

The following table presents amounts recognized related to asset retirement obligations for the periods indicated (in millions):

	2022	2021
Balance at January 1	\$ 606	\$ 462
Additional liabilities incurred	97	27
Liabilities assumed in acquisition	15	96
Liabilities settled	(29)	(15)
Accretion expense	30	22
Change in estimated cash flows	35	13
Other	3	1
Balance at December 31	\$ 757	\$ 606

The Company's asset retirement obligations include active ash landfills, water treatment basins and the removal or dismantlement of certain plants and equipment. The Company uses the cost approach to determine the initial value of ARO liabilities, which is estimated by discounting expected cash outflows to their present value using market-based rates at the initial recording of the liabilities. Cash outflows are based on the approximate future disposal costs as determined by market information, historical information or other management estimates. Subsequent downward revisions of ARO liabilities are discounted using the market-based rates that existed when the liability was initially recognized. These inputs to the fair value of the ARO liabilities are considered Level 3 inputs under the fair value hierarchy.

During the year ended December 31, 2022, the Company increased the asset retirement obligations and corresponding assets at Southland Energy, AES Clean Energy, AES Indiana, and AES Brasil by \$75 million, \$27 million, \$27 million, and \$16 million, respectively. The increase at Southland Energy is mostly due to additional liabilities incurred related to a demolition obligation at Alamitos. The increase at AES Clean Energy is mostly due to additional liabilities incurred as a result of new development projects. The increase at AES Indiana is primarily due to an upward revision of estimated cash flows at the Petersburg, Eagle Valley, and Harding Street plants. The

increase at AES Brasil is primarily due to the initial recognition of asset retirement obligations as a result of the Cubico II acquisition.

During the year ended December 31, 2021, the Company increased the asset retirement obligations and corresponding assets at AES Clean Energy and Chile by \$93 million and \$36 million, respectively. The increase at AES Clean Energy is mostly due to the initial recognition of asset retirement obligations as a result of the New York Wind acquisition. The increase in Chile is primarily due to shortened useful lives of the Ventanas and Angamos coal plants, additional liabilities incurred due to the development of the Andes Solar 2b plant, and an upward revision of estimated cash flows at the Los Cururos plant.

5. FAIR VALUE

The fair value of current financial assets and liabilities, debt service reserves, and other deposits approximate their reported carrying amounts. The estimated fair values of the Company's assets and liabilities have been determined using available market information. Because these amounts are estimates and based on hypothetical transactions to sell assets or transfer liabilities, the use of different market assumptions and/or estimation methodologies may have a material effect on the estimated fair value amounts.

Valuation Techniques — The fair value measurement accounting guidance describes three main approaches to measuring the fair value of assets and liabilities: (1) market approach, (2) income approach, and (3) cost approach. The market approach uses prices and other relevant information generated from market transactions involving identical or comparable assets or liabilities. The income approach uses valuation techniques to convert future amounts to a single present value amount. The measurement is based on current market expectations of the return on those future amounts. The cost approach is based on the amount that would currently be required to replace an asset. The Company measures its investments and derivatives at fair value on a recurring basis. Additionally, in connection with annual or event-driven impairment evaluations, certain nonfinancial assets and liabilities are measured at fair value on a nonrecurring basis. These include long-lived tangible assets (i.e., property, plant and equipment), goodwill, and intangible assets (e.g., sales concessions, land use rights and water rights, etc.). In general, the Company determines the fair value of investments and derivatives using the market approach and the income approach, respectively. In the nonrecurring measurements of nonfinancial assets and liabilities, all three approaches are considered; however, the value estimated under the income approach is often the most representative of fair value.

Investments — The Company's investments measured at fair value generally consist of marketable debt and equity securities. Equity securities are either measured at fair value using quoted market prices or based on comparisons to market data obtained for similar assets. Debt securities primarily consist of unsecured debentures and certificates of deposit held by our Brazilian subsidiaries. Returns and pricing on these instruments are generally indexed to the market interest rates in Brazil. Debt securities are measured at fair value based on comparisons to market data obtained for similar assets.

Derivatives — Derivatives are measured at fair value using quoted market prices or the income approach utilizing volatilities, spot and forward benchmark interest rates (such as LIBOR, SOFR, and EURIBOR), foreign exchange rates, credit data, and commodity prices, as applicable. When significant inputs are not observable, the Company uses relevant techniques to determine the inputs, such as regression analysis or prices for similarly traded instruments available in the market.

The Company's methodology to fair value its derivatives is to start with any observable inputs; however, in certain instances the published forward rates or prices may not extend through the remaining term of the contract, and management must make assumptions to extrapolate the curve, which necessitates the use of unobservable inputs, such as proxy commodity prices or historical settlements to forecast forward prices. Specifically, where there is limited forward curve data with respect to foreign exchange contracts beyond the traded points, the Company utilizes the interest rate differential approach to construct the remaining portion of the forward curve. Similarly, in certain instances, the spread that reflects the credit or nonperformance risk is unobservable, requiring the use of proxy yield curves of similar credit quality.

To determine the fair value of a derivative, cash flows are discounted using the relevant spot benchmark interest rate. The Company then makes a credit valuation adjustment ("CVA"), as applicable, by further discounting the cash flows for nonperformance or credit risk based on the observable or estimated debt spread of the Company's subsidiary or its counterparty and the tenor of the respective derivative instrument. The CVA for potential

future scenarios in which the derivative is in an asset position is based on the counterparty's credit ratings, credit default swap spreads, and debt spreads, as available. The CVA for potential future scenarios in which the derivative is in a liability position is based on the Parent Company's or the subsidiary's current debt spread. In the absence of readily obtainable credit information, the Parent Company's or the subsidiary's estimated credit rating (based on applying a standard industry model to historical financial information and then considering other relevant information) and spreads of comparably rated entities or the respective country's debt spreads are used as a proxy. All derivative instruments are analyzed individually and are subject to unique risk exposures.

The fair value hierarchy of an asset or a liability is based on the level of significance of the input assumptions. An input assumption is considered significant if it affects the fair value by at least 10%. Assets and liabilities are classified as Level 3 when the use of unobservable inputs is significant. When the use of unobservable inputs is insignificant, assets and liabilities are classified as Level 2. Transfers between Level 3 and Level 2 result from changes in significance of unobservable inputs used to calculate the CVA.

Debt — Recourse and non-recourse debt are carried at amortized cost. The fair value of recourse debt is estimated based on quoted market prices. The fair value of non-recourse debt is estimated based upon interest rates and other features of the loan. In general, the carrying amount of variable rate debt is a close approximation of its fair value. For fixed rate loans, the fair value is estimated using quoted market prices or discounted cash flow ("DCF") analyses. The fair value of recourse and non-recourse debt excludes accrued interest at the valuation date. The fair value was determined using available market information as of December 31, 2022. The Company is not aware of any factors that would significantly affect the fair value amounts subsequent to December 31, 2022.

Nonrecurring measurements — For nonrecurring measurements derived using the income approach, fair value is generally determined using valuation models based on the principles of DCF. The income approach is most often used in the impairment evaluation of long-lived tangible assets, equity method investments, goodwill, and intangible assets. Where the use of market observable data is limited or not available for certain input assumptions, the Company develops its own estimates using a variety of techniques such as regression analysis and extrapolations. Depending on the complexity of a valuation, an independent valuation firm may be engaged to assist management in the valuation process.

For nonrecurring measurements derived using the market approach, recent market transactions involving the sale of identical or similar assets are considered. The use of this approach is limited because it is often difficult to identify sale transactions of identical or similar assets. This approach is used in impairment evaluations of certain intangible assets. Otherwise, it is used to corroborate the fair value determined under the income approach.

For nonrecurring measurements derived using the cost approach, fair value is typically based upon a replacement cost approach. This approach involves a considerable amount of judgment, which is why its use is limited to the measurement of long-lived tangible assets. Like the market approach, this approach is also used to corroborate the fair value determined under the income approach.

Fair Value Considerations — In determining fair value, the Company considers the source of observable market data inputs, liquidity of the instrument, the credit risk of the counterparty, and the risk of the Company's or its counterparty's nonperformance. The conditions and criteria used to assess these factors are:

Sources of market assumptions — The Company derives most of its market assumptions from market efficient data sources (e.g., Bloomberg and Reuters). To determine fair value where market data is not readily available, management uses comparable market sources and empirical evidence to develop its own estimates of market assumptions.

Market liquidity — The Company evaluates market liquidity based on whether the financial or physical instrument, or the underlying asset, is traded in an active or inactive market. An active market exists if the prices are fully transparent to market participants, can be measured by market bid and ask quotes, the market has a relatively large proportion of trading volume as compared to the Company's current trading volume, and the market has a significant number of market participants that will allow the market to rapidly absorb the quantity of assets traded without significantly affecting the market price. Another factor the Company considers when determining whether a market is active or inactive is the presence of government or regulatory controls over pricing that could make it difficult to establish a market-based price when entering into a transaction.

Nonperformance risk — Nonperformance risk refers to the risk that an obligation will not be fulfilled and affects the value at which a liability is transferred or an asset is sold. Nonperformance risk includes, but may not be limited

to, the Company's or its counterparty's credit and settlement risk. Nonperformance risk adjustments are dependent on credit spreads, letters of credit, collateral, other arrangements available, and the nature of master netting arrangements. The Company is party to various interest rate swaps and options, foreign currency options and forwards, and derivatives and embedded derivatives, which subject the Company to nonperformance risk. The financial and physical instruments held at the subsidiary level are generally non-recourse to the Parent Company.

Nonperformance risk on the investments held by the Company is incorporated in the fair value derived from quoted market data to mark the investments to fair value.

Recurring Measurements — The following table presents, by level within the fair value hierarchy as described in Note 1—*General and Summary of Significant Accounting Policies*, the Company's financial assets and liabilities that were measured at fair value on a recurring basis as of the dates indicated (in millions). For the Company's investments in marketable debt securities, the security classes presented were determined based on the nature and risk of the security and are consistent with how the Company manages, monitors, and measures its marketable securities:

	December 31, 2022				December 31, 2021			
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Assets								
DEBT SECURITIES:								
Available-for-sale:								
Unsecured debentures	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —
Certificates of deposit	—	698	—	698	—	199	—	199
Government debt securities	—	3	—	3	—	—	—	—
Total debt securities	—	701	—	701	—	199	—	199
EQUITY SECURITIES:								
Mutual funds	38	—	—	38	31	13	—	44
Total equity securities	38	—	—	38	31	13	—	44
DERIVATIVES:								
Interest rate derivatives	—	314	—	314	—	51	2	53
Cross-currency derivatives	—	—	—	—	—	5	—	5
Foreign currency derivatives	—	22	64	86	—	29	108	137
Commodity derivatives	—	232	13	245	—	32	6	38
Total derivatives — assets	—	568	77	645	—	117	116	233
TOTAL ASSETS	\$ 38	\$ 1,269	\$ 77	\$ 1,384	\$ 31	\$ 329	\$ 116	\$ 476
Liabilities								
DERIVATIVES:								
Interest rate derivatives	\$ —	\$ 6	\$ —	\$ 6	\$ —	\$ 286	\$ 8	\$ 294
Cross-currency derivatives	—	42	—	42	—	11	—	11
Foreign currency derivatives	—	20	—	20	—	35	—	35
Commodity derivatives	—	346	60	406	—	37	7	44
Total derivatives — liabilities	—	414	60	474	—	369	15	384
TOTAL LIABILITIES	\$ —	\$ 414	\$ 60	\$ 474	\$ —	\$ 369	\$ 15	\$ 384

As of December 31, 2022, all available-for-sale debt securities had stated maturities within one year. For the years ended December 31, 2022 and 2021, no impairments of marketable securities were recognized in earnings or *Other Comprehensive Income (Loss)*. Gains and losses on the sale of investments are determined using the specific-identification method. The following table presents gross proceeds from sale of available-for-sale securities for the periods indicated (in millions):

Year Ended December 31,	2022	2021	2020
Gross proceeds from sale of available-for-sale securities	\$ 1,065	\$ 578	\$ 582

The following tables present a reconciliation of net derivative assets and liabilities measured at fair value on a recurring basis using significant unobservable inputs (Level 3) for the years ended December 31, 2022 and 2021 (presented net by type of derivative in millions). Transfers between Level 3 and Level 2 principally result from changes in the significance of unobservable inputs used to calculate the credit valuation adjustment.

Year Ended December 31, 2022	Interest Rate	Cross Currency	Foreign Currency	Commodity	Total
Balance at January 1	\$ (6)	\$ —	\$ 108	\$ (1)	\$ 101
Total realized and unrealized gains (losses):					
Included in earnings	4	—	(26)	—	(22)
Included in other comprehensive income — derivative activity	15	—	(6)	(54)	(45)
Included in regulatory (assets) liabilities	—	—	—	8	8
Settlements	(2)	—	(12)	2	(12)
Transfers of assets/(liabilities), net into Level 3	(1)	—	—	—	(1)
Transfers of (assets)/liabilities, net out of Level 3	(10)	—	—	(2)	(12)
Balance at December 31	\$ —	\$ —	\$ 64	\$ (47)	\$ 17
Total gains (losses) for the period included in earnings attributable to the change in unrealized gains (losses) relating to assets and liabilities held at the end of the period	\$ 3	\$ —	\$ (34)	\$ 5	\$ (26)
Year Ended December 31, 2021	Interest Rate	Cross Currency	Foreign Currency	Commodity	Total
Balance at January 1	\$ (236)	\$ (2)	\$ 146	\$ 2	\$ (90)
Total realized and unrealized gains (losses):					
Included in earnings	13	(10)	(7)	(1)	(5)
Included in other comprehensive income — derivative activity	4	—	(3)	(5)	(4)
Included in regulatory (assets) liabilities	—	—	—	1	1
Settlements	216	3	(28)	(1)	190
Transfers of assets/(liabilities), net into Level 3	(3)	—	—	3	—
Transfers of (assets)/liabilities, net out of Level 3	—	9	—	—	9
Balance at December 31	\$ (6)	\$ —	\$ 108	\$ (1)	\$ 101
Total gains (losses) for the period included in earnings attributable to the change in unrealized gains (losses) relating to assets and liabilities held at the end of the period	\$ 2	\$ 4	\$ (35)	\$ —	\$ (29)

The following table summarizes the significant unobservable inputs used for the Level 3 derivative assets (liabilities) as of December 31, 2022 (in millions, except range amounts):

Type of Derivative	Fair Value	Unobservable Input	Amount or Range (Weighted Average)
Foreign currency:			
Argentine peso	\$ 64	Argentine peso to USD currency exchange rate after one year	323 - 742 (547)
Commodity:			
CAISO Energy Swap	(59)	Forward energy prices per MWh after 2030	\$ 7.06 - \$64.78 (\$34.71)
Other	12		
Total	\$ 17		

For the Argentine peso foreign currency derivatives, increases (decreases) in the estimate of the above exchange rate would increase (decrease) the value of the derivative. For the CAISO Energy Swap, increases (decreases) in the estimate above would decrease (increase) the value of the derivative.

Nonrecurring Measurements

The Company measures fair value using the applicable fair value measurement guidance. Impairment expense is measured by comparing the fair value at the evaluation date to the then-latest available carrying amount. The following table summarizes our major categories of assets measured at fair value on a nonrecurring basis and their level within the fair value hierarchy (in millions):

Year Ended December 31, 2022	Measurement Date	Carrying Amount ⁽¹⁾	Fair Value			Pre-tax Loss
			Level 1	Level 2	Level 3	
Assets						
Long-lived assets held and used: ⁽²⁾						
Maritza	4/30/2022	\$ 920	\$ —	\$ —	\$ 452	\$ 468
TEG TEP	10/1/2022	504	—	—	311	193
Held-for-sale businesses: ⁽³⁾						
Jordan ⁽⁴⁾	9/30/2022	\$ 216	\$ —	\$ 170	\$ —	\$ 51
Jordan ⁽⁴⁾	12/31/2022	190	—	170	—	25
Goodwill: ⁽⁵⁾						
AES Andes	10/1/2022	\$ 644	\$ —	\$ —	\$ —	\$ 644
AES El Salvador	10/1/2022	133	—	—	—	133
Equity method investments: ⁽⁶⁾						
sPower	12/31/2022	\$ 607	\$ —	\$ —	\$ 432	\$ 175

Year Ended December 31, 2021	Assets	Measurement Date	Carrying Amount ⁽¹⁾	Fair Value			Pre-tax Loss
				Level 1	Level 2	Level 3	
Long-lived assets held and used: ⁽²⁾							
Puerto Rico		3/31/2021	\$ 548	\$ —	\$ —	\$ 73	\$ 475
Mountain View I & II		4/30/2021	78	—	—	11	67
Ventanas 3 & 4		6/30/2021	661	—	—	12	649
Angamos		6/30/2021	241	—	—	86	155
Buffalo Gap III		12/31/2021	91	—	—	—	91
Buffalo Gap II		12/31/2021	73	—	—	—	73
Buffalo Gap I		12/31/2021	29	—	—	—	29
Dispositions and held-for-sale businesses: ⁽³⁾							
Estrella del Mar I		9/30/2021	\$ 17	\$ —	\$ 6	\$ —	\$ 11
Alto Maipo ⁽⁷⁾		11/30/2021	2,339	—	—	2,043	—

⁽¹⁾ Represents the carrying values at the dates of initial measurement, before fair value adjustment.

⁽²⁾ See Note 22—*Asset Impairment Expense* for further information.

⁽³⁾ See Note 24—*Held-for-Sale and Dispositions* for further information.

⁽⁴⁾ The pre-tax loss recognized was calculated using the \$170 million fair value of the Jordan disposal group less cost to sell of \$5 million.

⁽⁵⁾ See Note 9—*Goodwill and Other Intangible Assets* for further information.

⁽⁶⁾ See Note 8—*Investments in and Advances to Affiliates* for further information.

⁽⁷⁾ Fair value measurement performed for purposes of allocating \$224 million of goodwill to the carrying amount of Alto Maipo in determining the loss on disposal. The goodwill allocation was determined based on the relative fair value of Alto Maipo, which was included in the AES Andes reporting unit. Note that the pre-tax loss column excludes the loss on disposal as this fair value measurement is only one component of such loss. See Note 24—*Held-for-Sale and Dispositions* for further information.

The following table summarizes the significant unobservable inputs used in the Level 3 measurement of long-lived assets held and used and equity method investments measured on a nonrecurring basis during the year ended December 31, 2022 (in millions, except range amounts):

December 31, 2022	Fair Value	Valuation Technique	Unobservable Input	Range (Weighted Average)
Long-lived assets held and used:				
Maritza	\$ 452	Discounted cash flow	Annual revenue growth	(66)% to 11% (-11%)
			Annual variable margin	(66)% to 23% (-1%)
			Discount rate	20% to 25% (21%)
TEG TEP	311	Discounted cash flow	Annual revenue growth	(15)% to 2% (0%)
			Annual variable margin	36% to 43% (37%)
			Discount rate	13% to 20% (15%)
Equity method investments:				
sPower	432	Discounted cash flow	Annual dividend growth	(36)% to 41% (2%)
			Discount rate	7 %
Total	\$ 1,195			

Financial Instruments not Measured at Fair Value in the Consolidated Balance Sheets

The following table presents (in millions) the carrying amount, fair value, and fair value hierarchy of the Company's financial assets and liabilities that are not measured at fair value in the Consolidated Balance Sheets as of the periods indicated, but for which fair value is disclosed:

			December 31, 2022				
			Carrying Amount	Fair Value			Level 3
				Total	Level 1	Level 2	
Assets:	Accounts receivable — noncurrent ⁽¹⁾		\$ 301	\$ 340	\$ —	\$ —	\$ 340
Liabilities:	Non-recourse debt		19,429	18,527	—	17,089	1,438
	Recourse debt		3,894	3,505	—	3,505	—
December 31, 2021							
			Carrying Amount	Fair Value			Level 3
				Total	Level 1	Level 2	
			Assets: Accounts receivable — noncurrent ⁽²⁾	\$ 55	\$ 117	\$ —	\$ 117
Assets:	Non-recourse debt		14,811	16,091	—	16,065	26
Liabilities:	Recourse debt		3,754	3,818	—	3,818	—

⁽¹⁾ These amounts primarily relate to amounts impacted by the Stabilization Fund enacted by the Chilean government, and future premium payments on a heat rate call option entered into on behalf of the Southland Energy CCGT units. The premium payments are expected to be received in 2024. These amounts are included in *Other noncurrent assets* in the accompanying Condensed Consolidated Balance Sheets. See Note 7—*Financing Receivables* for further information.

(2) These amounts primarily relate to amounts due from CAMMESA, the administrator of the wholesale electricity market in Argentina, and amounts impacted by the Stabilization Fund enacted by the Chilean government, and are included in *Other noncurrent assets* in the accompanying Condensed Consolidated Balance Sheets. The fair value and carrying amount of the Argentina receivables exclude VAT of \$2 million as of December 31, 2021. See Note 7—*Financing Receivables* for further information.

6. DERIVATIVE INSTRUMENTS AND HEDGING ACTIVITIES

Volume of Activity — The following table presents the Company's maximum notional (in millions) over the remaining contractual period by type of derivative as of December 31, 2022, regardless of whether they are in qualifying hedging relationships, and the dates through which the maturities for each type of derivative range:

Interest Rate and Foreign Currency Derivatives	Maximum Notional Translated to USD	Latest Maturity
Interest rate (LIBOR, SOFR and EURIBOR)	\$ 6,040	2059
Cross-currency swaps (Brazilian Reais)	293	2034
Foreign currency:		
Euro	198	2025
Chilean peso	167	2025
Colombian peso	57	2024
Brazilian real	32	2024
Argentine peso	5	2026
Commodity Derivatives	Maximum Notional	Latest Maturity
Natural Gas (in MMBtu)	71	2030
Power (in MWhs)	15	2040
Coal (in Tons or Metric Tonnes)	6	2027

Accounting and Reporting — Assets and Liabilities — The following tables present the fair value of assets and liabilities related to the Company's derivative instruments as of the periods indicated (in millions):

Fair Value	December 31, 2022			December 31, 2021		
	Designated	Not Designated	Total	Designated	Not Designated	Total
Assets						
Interest rate derivatives	\$ 313	\$ 1	\$ 314	\$ 53	\$ —	\$ 53
Cross-currency derivatives	—	—	—	5	—	5
Foreign currency derivatives	27	59	86	28	109	137
Commodity derivatives	—	245	245	6	32	38
Total assets	\$ 340	\$ 305	\$ 645	\$ 92	\$ 141	\$ 233
Liabilities						
Interest rate derivatives	\$ 6	\$ —	\$ 6	\$ 288	\$ 6	\$ 294
Cross-currency derivatives	42	—	42	11	—	11
Foreign currency derivatives	9	11	20	23	12	35
Commodity derivatives	59	347	406	11	33	44
Total liabilities	\$ 116	\$ 358	\$ 474	\$ 333	\$ 51	\$ 384

Fair Value	December 31, 2022		December 31, 2021	
	Assets	Liabilities	Assets	Liabilities
Current	\$ 271	\$ 168	\$ 85	\$ 83
Noncurrent	374	306	148	301
Total	\$ 645	\$ 474	\$ 233	\$ 384

Credit Risk-Related Contingent Features	December 31, 2022	December 31, 2021
	Assets	Liabilities
Present value of liabilities subject to collateralization	\$ 104	\$ —
Cash collateral held by third parties or in escrow	42	—

Earnings and Other Comprehensive Income (Loss) — The following table presents the pre-tax gains (losses) recognized in AOCL and earnings related to all derivative instruments for the periods indicated (in millions):

	Years Ended December 31,		
	2022	2021	2020
Cash flow hedges			
Gains (losses) recognized in AOCL			
Interest rate derivatives	\$ 869	\$ 51	\$ (511)
Cross-currency derivatives	—	(11)	3
Foreign currency derivatives	17	(34)	25
Commodity derivatives	16	(1)	5
Total	<u>\$ 902</u>	<u>\$ 5</u>	<u>\$ (478)</u>
Gains (losses) reclassified from AOCL to earnings			
Interest rate derivatives	\$ (72)	\$ (419)	\$ (75)
Cross-currency derivatives	—	(15)	(5)
Foreign currency derivatives	2	(62)	(9)
Commodity derivatives	2	4	(2)
Total	<u>\$ (68)</u>	<u>\$ (492)</u>	<u>\$ (91)</u>
Gains (Losses) on fair value hedging relationship			
Cross Currency contracts			
Derivatives designated as hedging instruments	\$ (35)	\$ (6)	\$ —
Hedged items	26	4	—
Total	<u>\$ (9)</u>	<u>\$ (2)</u>	<u>\$ —</u>
Loss reclassified from AOCL to earnings due to impairment of assets			
Gain reclassified from AOCL to earnings due to discontinuance of hedge accounting			
Gain (losses) recognized in earnings related to			
Not designated as hedging instruments:			
Interest rate derivatives	\$ 4	\$ 105	\$ (1)
Foreign currency derivatives	21	29	68
Commodity derivatives and other	(43)	(28)	(68)
Total	<u>\$ (18)</u>	<u>\$ 106</u>	<u>\$ (1)</u>

AOCL is expected to decrease pre-tax income from continuing operations for the twelve months ended December 31, 2023 by \$13 million, primarily due to interest rate and commodity derivatives.

7. FINANCING RECEIVABLES

Receivables with contractual maturities of greater than one year are considered financing receivables. The following table presents financing receivables by country as of the dates indicated (in millions).

	December 31, 2022			December 31, 2021		
	Gross Receivable	Allowance	Net Receivable	Gross Receivable	Allowance	Net Receivable
Chile	\$ 239	\$ —	\$ 239	\$ 17	\$ —	\$ 17
U.S.	46	—	46	—	—	—
Argentina	5	—	5	11	1	10
Other	13	—	13	30	—	30
Total	<u>\$ 303</u>	<u>\$ —</u>	<u>\$ 303</u>	<u>\$ 58</u>	<u>\$ 1</u>	<u>\$ 57</u>

Chile — AES Andes has recorded receivables pertaining to revenues recognized on regulated energy contracts that were impacted by the Stabilization Funds created by the Chilean government in October 2019 and August 2022, in conjunction with the Tariff Stabilization Laws. Historically, the government updated the prices for these contracts every six months to reflect the contracts' indexation to exchange rates and commodities prices. The Tariff Stabilization Laws do not allow the pass-through of these contractual indexation updates to customers beyond the pricing in effect at July 1, 2019, until new lower-cost renewable contracts are incorporated to supply regulated contracts. Consequently, costs incurred in excess of the July 1, 2019 price are accumulated and borne by generators. Through different programs, AES Andes aims to reduce its exposure and has already sold a significant portion of the receivables accumulated as of December 31, 2021.

As of December 31, 2022, \$26 million of current receivables and \$227 million of noncurrent receivables were recorded in *Accounts receivable* and *Other noncurrent assets*, respectively, pertaining to the Stabilization Funds. Additionally, \$12 million of payment deferrals granted to mining customers as part of our green blend agreements were recorded as financing receivables included in Other noncurrent assets at December 31, 2022.

U.S. — AES has recorded a non-current receivable in connection with future premium payments on a heat rate

call option entered into on behalf of the Southland Energy CCGT units. The premium payments are expected to be received in 2024.

Argentina — Collection of the principal and interest on these receivables is subject to various business risks and uncertainties, including, but not limited to, the continued operation of power plants which generate cash for payments of these receivables, regulatory changes that could impact the timing and amount of collections, and economic conditions in Argentina. The Company monitors these risks, including the credit ratings of the Argentine government, on a quarterly basis to assess the collectability of these receivables. The Company accrues interest on these receivables once the recognition criteria have been met. The Company's collection estimates are based on assumptions that it believes to be reasonable, but are inherently uncertain. Actual future cash flows could differ from these estimates.

As a result of energy market reforms in 2004 and 2010, AES Argentina entered into three agreements with the Argentine government, referred to as the FONINVEMEM Agreements, to contribute a portion of their accounts receivable into a fund for financing the construction of combined cycle and gas-fired plants. These receivables accrue interest and are collected in monthly installments over 10 years once the related plant begins operations.

The FONINVEMEM receivables are denominated in Argentine pesos, but indexed to USD, which represents a foreign currency derivative. Due to differences between spot rates, used to remeasure the receivables, and discounted forward rates, used to value the foreign currency derivative, these two items will not perfectly offset over the life of the receivable. Once settled, the foreign currency derivative will offset the accumulated unrealized foreign currency losses resulting from the devaluation of the FONINVEMEM receivable. As of December 31, 2022 and 2021, the amount of the foreign currency-related derivative assets associated with the FONINVEMEM financing receivables that were excluded from the table above had a fair value of \$64 million and \$108 million, respectively.

The receivables under the FONINVEMEM Agreements have been actively collected since the related plants commenced operations in 2010 and 2016. In assessing the collectability of the receivables under these agreements, the Company also considers historic collection evidence in accordance with the agreements.

8. INVESTMENTS IN AND ADVANCES TO AFFILIATES

The following table summarizes the relevant effective equity ownership interest and carrying values for the Company's investments accounted for under the equity method as of the periods indicated:

December 31, Affiliate	Country	2022		2021	
		Carrying Value (in millions)		2022	Ownership Interest %
sPower ⁽¹⁾	United States	\$ 432	\$ 492	50 %	50 %
Fluence	United States	205	304	34 %	34 %
Grupo Energía Gas Panamá	Panama	82	41	49 %	49 %
Uplight	United States	81	103	29 %	29 %
Energía Natural Dominicana Enadom ⁽²⁾	Dominican Republic	64	53	43 %	43 %
Mesa La Paz	Mexico	32	48	50 %	50 %
Barry ⁽³⁾	United Kingdom	—	—	100 %	100 %
Other affiliates ⁽⁴⁾	Various	56	39		
Total		\$ 952	\$ 1,080		

⁽¹⁾ In February 2021, the sPower and AES Renewable Holdings development platforms were merged to form AES Clean Energy Development. See Note 25—Acquisitions for further information.

⁽²⁾ The Company's ownership in Energía Natural Dominicana Enadom is held through Andres, an 85%-owned consolidated subsidiary. Andres owns 50% of Energía Natural Dominicana Enadom, resulting in an AES effective ownership of 43%.

⁽³⁾ Represents a VIE in which the Company holds a variable interest, but is not the primary beneficiary.

⁽⁴⁾ Includes Bosforo, Tucano and various other equity method investments.

sPower — In February 2021, the Company substantially completed the merger of the sPower and AES Renewable Holdings development platforms to form AES Clean Energy Development, a consolidated entity, which will serve as the development vehicle for all future renewable projects in the U.S. Since the sPower development platform was carved-out of AES' existing equity method investment, this transaction resulted in a \$102 million decrease in the carrying value of the sPower investment and the Company recognized a gain of \$214 million in *Other income*.

In December 2021, AES acquired an additional 25% ownership in specifically identified projects of the sPower development platform. As a result, the Company recognized a gain of \$35 million in *Other income*. Subsequent to the transaction, AES has a 75% ownership interest in specifically identified projects of sPower through its ownership of AES Clean Energy Development, and 50% ownership interest in the sPower equity method investment. See Note

25—*Acquisitions* for further information. As the Company still does not control sPower after these transactions, it continues to be accounted for as an equity method investment.

In December 2022, the Company agreed to sell 49% of its indirect interest in a portfolio of sPower's operating assets ("OpCo B"). At the time the purchase and sale agreement was signed, a loss was expected upon closing the transaction, which occurred on February 28, 2023. The expected loss on sale was identified as a triggering event and the Company evaluated whether its investment in sPower was other-than-temporarily impaired. Based on management's estimate of fair value of \$432 million, the Company recognized an other-than-temporary impairment of \$175 million in *Other non-operating expense* in December 2022.

sPower primarily holds operating assets where the tax credits associated with underlying projects have already been allocated to tax equity partners. The application of HLBV accounting increases the carrying value of these investments, as earnings are initially disproportionately allocated to the sponsor entity. Since sPower does not have any ongoing development or other value creation activities following the transfer of these activities to AES Clean Energy Development, the impairment adjusts the carrying value to the fair market value of the operating assets. sPower is reported in the US and Utilities SBU reportable segment.

Alto Maipo — In May 2022, Alto Maipo emerged from bankruptcy in accordance with Chapter 11 of the U.S. Bankruptcy Code. Alto Maipo, as restructured, is considered a VIE. As the Company lacks the power to make significant decisions, it does not meet the criteria to be considered the primary beneficiary of Alto Maipo and therefore will not consolidate the entity. The Company has elected the fair value option to account for its investment in Alto Maipo as management believes this approach will better reflect the economics of its equity interest. As of December 31, 2022, the fair value is insignificant. Alto Maipo is reported in the South America SBU reportable segment.

Fluence — In June 2021, Fluence issued new shares to the Qatar Investment Authority ("QIA") for \$125 million, which following the completion of the transaction, represented a 13.6% ownership interest in Fluence. As a result of the transaction, which AES has accounted for as a partial disposition, AES' ownership interest in Fluence decreased from 50% to 43.2%, and the Company recognized a gain of \$60 million in *Loss on disposal and sale of business interests*.

On November 1, 2021, Fluence completed its IPO of 35,650,000 of its Class A common stock at a price of \$28 per share, including the exercise of the underwriters' option. Fluence received approximately \$936 million in proceeds, after expenses, as a result of the transaction. AES' ownership interest in Fluence decreased to 34.2%. The Company recognized a gain of \$325 million in *Loss on disposal and sale of business interests*. AES' ownership interest further decreased to 33.5% as of December 31, 2022 as a result of the settlement of share based awards at Fluence. As the Company still does not control Fluence after these transactions, it continues to be accounted for as an equity method investment and is reported as part of Corporate and Other.

Uplight — In July 2021, the Company closed on a transaction involving existing and new shareholders of Uplight. As part of the transaction, the Company contributed \$37 million to Uplight; however, AES's ownership interest in Uplight decreased from 32.3% to 29.6% primarily due to larger contributions from other investors. The transaction was accounted for as a partial disposition in which AES recognized a loss of \$25 million in *Loss on disposal and sale of business interests*, mainly as a result of the settlement of share based awards at Uplight as well as the expenses associated with the transaction.

In October 2021, the Company contributed an additional \$23 million to Uplight. AES' ownership interest decreased to 29.4% as a result of equity granted to retained executives at a company acquired by Uplight. As the Company still does not control Uplight after the transaction, it continues to be accounted for as an equity method investment and is reported as part of Corporate and Other.

Gas Natural Atlántico II — In September 2021, the Company acquired the remaining equity interest in Gas Natural Atlántico II, S. de R.L., a partnership whose purpose is to construct transmission lines for Colon. After additional assets were acquired, the Company remeasured the investment at the acquisition-date fair value, resulting in the recognition of a \$6 million gain, recorded in *Other income*. The partnership, previously recorded as an equity method investment, is now consolidated by AES and is reported in the MCAC SBU reportable segment.

Grupo Energía Gas Panamá — In April 2021, Grupo Energía Gas Panamá, a joint venture between AES and InterEnergy Power & Gas Limited, completed the acquisition of the Gatun combined cycle natural gas development project. AES holds a 49% ownership interest in the affiliate. The Company contributed \$44 million to the joint venture as of December 31, 2021 and has contributed a total of \$45 million as of December 31, 2022. As the Company does not control the joint venture, it is accounted for as an equity method investment and is reported in

the MCAC SBU reportable segment.

Guacolda — In September 2020, Guacolda management reviewed the recoverability of the Guacolda asset group and determined the undiscounted cash flows did not exceed the carrying amount. Impairment indicators were identified primarily as a result of inability to re-contract Guacolda's generation after expiration of its existing PPAs driven by lower energy prices in Chile and reduced forecasted cash flows resulting from decarbonization initiatives of the Chilean Government. Guacolda recognized a long-lived asset impairment at the investee level, which negatively impacted the Company's *Net equity in losses of affiliates* by \$127 million. As a result, the Company's basis in its investment in Guacolda was reduced to zero and the equity method of accounting was suspended.

In February 2021, AES Andes entered into an agreement to sell its 50% ownership interest in Guacolda for \$34 million. On July 20, 2021, the Company completed the sale, resulting in a pre-tax gain on sale of \$34 million, recorded in *Loss on disposal and sale of business interests*. Prior to its sale, the Guacolda equity method investment was reported in the South America SBU reportable segment.

Barry — The Company holds a 100% ownership interest in AES Barry Ltd. ("Barry"), a dormant entity in the U.K. that disposed of its generation and other operating assets. Due to a debt agreement, no material financial or operating decisions can be made without the banks' consent, and the Company does not control Barry. As of December 31, 2022 and 2021, other long-term liabilities included \$39 million and \$44 million, respectively, related to this debt agreement.

Summarized Financial Information — The following tables summarize financial information of the Company's 50%-or-less-owned affiliates and majority-owned unconsolidated subsidiaries that are accounted for using the equity method (in millions):

Years ended December 31,	50%-or-less Owned Affiliates			Majority-Owned Unconsolidated Subsidiaries					
	2022	2021	2020	2022	2021	2020			
Revenue	\$ 1,780	\$ 1,316	\$ 1,880	\$ 1	\$ 1	\$ 1			
Operating margin (loss)	(361)	(53)	213	(1)	(1)	(3)			
Net income (loss)	(527)	(242)	(538)	—	(3)	(4)			
Net income (loss) attributable to affiliates	(405)	(40)	(411)	—	(3)	(4)			
December 31,		2022		2021		2022		2021	
Current assets	\$ 2,223	\$ 1,180		\$ 125	\$ 122				
Noncurrent assets	7,522	6,497		643	771				
Current liabilities	1,931	1,414		118	126				
Noncurrent liabilities	4,040	3,602		677	793				
Stockholders' equity	2,978	1,792		(26)	(26)				
Noncontrolling interests	796	869		(1)	—				

At December 31, 2022, retained earnings included \$288 million related to the undistributed losses of the Company's 50%-or-less owned affiliates. Distributions received from these affiliates were \$47 million, \$25 million, and \$14 million for the years ended December 31, 2022, 2021, and 2020, respectively. As of December 31, 2022, the underlying equity in the net assets of our equity affiliates exceeded the aggregate carrying amount of our investments in equity affiliates by \$202 million.

9. GOODWILL AND OTHER INTANGIBLE ASSETS

Goodwill — The following table summarizes the carrying amount of goodwill by reportable segment for the years ended December 31, 2022 and 2021 (in millions):

	US and Utilities	South America	MCAC	Eurasia	Corporate and Other	Total
Balance as of December 31, 2021						
Goodwill	\$ 3,127	\$ 644	\$ 16	\$ —	\$ 1	\$ 3,788
Accumulated impairment losses	(2,611)	—	—	—	—	(2,611)
Net balance	516	644	16	—	1	1,177
Impairment losses	(133)	(644)	—	—	—	(777)
Goodwill acquired during the year	—	—	—	—	3	3
Goodwill derecognized during the year	(40)	—	—	—	(1)	(41)
Balance as of December 31, 2022						
Goodwill	3,087	644	16	—	3	3,750
Accumulated impairment losses	(2,744)	(644)	—	—	—	(3,388)
Net balance	\$ 343	\$ —	\$ 16	\$ —	\$ 3	\$ 362

AES Andes — During the fourth quarter of 2022, the Company performed the annual goodwill impairment test for the AES Andes reporting unit. The fair value of the reporting unit was determined under the income approach using a discounted cash flow valuation model. The estimated fair value was less than its carrying amount and as a result the Company recognized impairment expense of \$644 million, reducing the goodwill balance of AES Andes to zero. The decrease in fair value since the date of our last impairment test was primarily driven by a higher discount rate resulting from increased interest rates and country risk premiums, as well as a decrease in forecasted energy prices and other unfavorable macroeconomic assumptions in Colombia.

AES El Salvador — During the fourth quarter of 2022, the Company performed the annual goodwill impairment test for the El Salvador reporting unit. The Company performed a quantitative impairment test and utilized the income approach. The estimated fair value was less than its carrying amount and as a result the Company recognized goodwill impairment expense of \$133 million, reducing the goodwill balance of AES El Salvador to zero. Since the date of our last impairment test in 2021, the Company has seen market participants substantially increase return expectations for the perceived country risk for El Salvador. The impact of the increase has substantially increased our discount rate, resulting in a full impairment.

Other Intangible Assets — The following table summarizes the balances comprising *Other intangible assets* in the accompanying Consolidated Balance Sheets (in millions) as of the periods indicated:

	December 31, 2022			December 31, 2021		
	Gross Balance	Accumulated Amortization	Net Balance	Gross Balance	Accumulated Amortization	Net Balance
Subject to Amortization						
Internal-use software	\$ 582	\$ (307)	\$ 275	\$ 457	\$ (279)	\$ 178
Contracts	342	(40)	302	183	(48)	135
Project development rights ⁽¹⁾	991	(17)	974	819	(8)	811
Emissions allowances ⁽²⁾	37	—	37	18	—	18
Concession rights	207	(50)	157	195	(33)	162
Other ⁽³⁾	57	(20)	37	111	(17)	94
Subtotal	2,216	(434)	1,782	1,783	(385)	1,398
Indefinite-Lived Intangible Assets						
Land use rights	42	—	42	28	—	28
Water rights	—	—	—	3	—	3
Transmission rights	16	—	16	19	—	19
Other	1	—	1	2	—	2
Subtotal	59	—	59	52	—	52
Total	\$ 2,275	\$ (434)	\$ 1,841	\$ 1,835	\$ (385)	\$ 1,450

⁽¹⁾ Includes emission offset fee to the Air Quality Management District ("AQMD") in order to transfer emission offsets from retired legacy Southland units to the new CCGT.

⁽²⁾ Acquired or purchased emissions allowances are finite-lived intangible assets that are expensed when utilized and included in net income for the year.

⁽³⁾ Includes management rights, renewable energy credits and incentives, and other individually insignificant intangible assets.

The following tables summarize other intangible assets acquired during the periods indicated (in millions):

December 31, 2022	Amount	Subject to Amortization/Indefinite-Lived	Weighted Average Amortization Period (in years)	Amortization Method
Internal-use software	\$ 136	Subject to Amortization	14	Straight-line
Contracts	196	Subject to Amortization	23	Straight-line
Project development rights	67	Subject to Amortization	4	Straight-line
Emissions allowances	35	Subject to Amortization	Various	As utilized
Land use rights	13	Indefinite-Lived	N/A	N/A
Transmission rights	—	Indefinite-Lived	N/A	N/A
Other	1	Various	N/A	N/A
Total	\$ 448			

December 31, 2021	Amount	Subject to Amortization/Indefinite-Lived	Weighted Average Amortization Period (in years)	Amortization Method
Internal-use software	\$ 89	Subject to Amortization	6	Straight-line
Contracts	35	Subject to Amortization	12	Straight-line
Project development rights	667	Subject to Amortization	35	Straight-line
Emissions allowances	22	Subject to Amortization	Various	As utilized
Transmission rights	—	Indefinite-Lived	N/A	N/A
Concession rights ⁽¹⁾	7	Subject to Amortization	12	Straight-line
Other	2	Various	N/A	N/A
Total	<u>\$ 822</u>			

⁽¹⁾ Represents the fair value assigned to the extension of the Tietê hydroelectric plants' concession agreement with ANEEL. See Note 13—Contingencies for further information.

The following table summarizes the estimated amortization expense by intangible asset category for 2023 through 2027:

(in millions)	2023	2024	2025	2026	2027
Internal-use software	\$ 29	\$ 28	\$ 27	\$ 26	\$ 25
Contracts	20	17	16	16	16
Concession rights	17	16	16	16	16
Other	5	6	7	7	7
Total	<u>\$ 71</u>	<u>\$ 67</u>	<u>\$ 66</u>	<u>\$ 65</u>	<u>\$ 64</u>

Intangible asset amortization expense was \$71 million, \$69 million and \$54 million for the years ended December 31, 2022, 2021 and 2020, respectively.

10. REGULATORY ASSETS AND LIABILITIES

The Company has recorded regulatory assets and liabilities (in millions) that it expects to pass through to its customers in accordance with, and subject to, regulatory provisions as follows:

December 31,	2022	2021	Recovery/Refund Period
Regulatory assets			
Current regulatory assets:			
AES Indiana deferred fuel and purchased power costs	\$ 80	\$ 9	1 year
El Salvador energy pass through costs recovery	78	80	Quarterly
Other	79	79	1 year
Total current regulatory assets	<u>237</u>	<u>168</u>	
Noncurrent regulatory assets:			
AES Indiana Petersburg Units 1 and 2 retirement costs	287	300	Over life of assets
AES Indiana and AES Ohio defined benefit pension obligations ⁽¹⁾	194	191	Various
AES Indiana environmental costs	73	76	Various
AES Indiana deferred Midwest ISO costs	34	48	4 years
AES Indiana deferred fuel and purchased power costs	21	84	2 years
Other	115	135	Various
Total noncurrent regulatory assets	<u>724</u>	<u>834</u>	
Total regulatory assets	<u>\$ 961</u>	<u>\$ 1,002</u>	
Regulatory liabilities			
Current regulatory liabilities:			
Overcollection of costs to be passed back to customers	\$ 46	\$ 18	1 year
Other	18	1	Various
Total current regulatory liabilities	<u>64</u>	<u>19</u>	
Noncurrent regulatory liabilities:			
AES Indiana and AES Ohio accrued costs of removal and AROs	657	868	Over life of assets
AES Indiana and AES Ohio income taxes payable to customers through rates	134	158	Various
Other	22	30	Various
Total noncurrent regulatory liabilities	<u>813</u>	<u>1,056</u>	
Total regulatory liabilities	<u>\$ 877</u>	<u>\$ 1,075</u>	

⁽¹⁾ Past expenditures on which the Company earns a rate of return.

Our regulatory assets and current regulatory liabilities primarily consist of under or overcollection of costs that are generally non-controllable, such as purchased electricity, energy transmission, fuel costs, and other sector costs. These costs are recoverable or refundable as defined by the laws and regulations in our markets. Our regulatory assets also include defined pension and postretirement benefit obligations equal to the previously

unrecognized actuarial gains and losses and prior service costs that are expected to be recovered through future rates. Additionally, our regulatory assets include the carrying value of AES Indiana's Petersburg Unit 1 at its retirement date and the expected carrying value of Petersburg Unit 2 at its anticipated retirement date, which are amortized over the life of the assets beginning on the dates of retirement. Other current and noncurrent regulatory assets primarily consist of:

- Undercollections on rate riders such as demand side management costs and deferred Midwest ISO costs at AES Indiana and competitive bidding and energy efficiency costs at AES Ohio;
- Deferred TDSIC costs and unamortized premiums reacquired or redeemed on long-term debt, which are amortized over the lives of the original issuances, at AES Indiana; and
- Vegetation management costs, decoupling deferral, and storm costs at AES Ohio.

Our noncurrent regulatory liabilities primarily consist of obligations for removal costs which do not have an associated legal retirement obligation. Our noncurrent regulatory liabilities also include deferred income taxes related to differences in income recognition between tax laws and accounting methods, which will be passed through to our regulated customers via a decrease in future retail rates.

In the accompanying Consolidated Balance Sheets, current regulatory assets and liabilities are reflected in *Other current assets* and *Accrued and other liabilities*, respectively, and noncurrent regulatory assets and liabilities are reflected in *Other noncurrent assets* and *Other noncurrent liabilities*, respectively. All of the regulatory assets and liabilities as of December 31, 2022 and December 31, 2021 are related to the US and Utilities SBU.

11. DEBT

NON-REOURSE DEBT — The following table summarizes the carrying amount and terms of non-recourse debt at our subsidiaries as of the periods indicated (in millions):

NON-REOURSE DEBT	Weighted Average Interest Rate	Maturity	December 31,	
			2022	2021
Variable Rate:				
Bank loans	7.42%	2023 - 2041	\$ 3,971	\$ 2,345
Notes and bonds	1.48%	2023 - 2045	2,137	1,121
Debt to (or guaranteed by) multilateral, export credit agencies or development banks ⁽¹⁾	6.59%	2023 - 2023	4	79
Other	6.64%	2023 - 2030	1,234	125
Fixed Rate:				
Bank loans	6.12%	2023 - 2057	461	359
Notes and bonds	5.05%	2023 - 2079	11,130	10,914
Debt to (or guaranteed by) multilateral, export credit agencies or development banks ⁽¹⁾	6.75%	2024 - 2024	3	3
Other	4.95%	2023 - 2061	798	79
Unamortized (discount) premium & debt issuance (costs), net			(309)	(214)
Subtotal			\$ 19,429	\$ 14,811
Less: Current maturities ⁽²⁾			(1,752)	(1,361)
Noncurrent maturities ⁽²⁾⁽³⁾			\$ 17,677	\$ 13,450

⁽¹⁾ Multilateral loans include loans funded and guaranteed by bilaterals, multilaterals, development banks and other similar institutions.

⁽²⁾ Excludes \$6 million and \$6 million (current) and \$169 million and \$128 million (noncurrent) finance lease liability included in the respective non-recourse debt line items on the Consolidated Balance Sheet as of December 31, 2022 and 2021, respectively. See Note 14—Leases for further information.

⁽³⁾ Excludes \$25 million of failed sale-leaseback transaction liabilities included in the non-recourse debt line items on the Consolidated Balance Sheet as of December 31, 2021.

The interest rate on variable rate debt represents the total of a variable component that is based on changes in an interest rate index and a fixed component. The Company has interest rate swaps and option agreements that economically fix the variable component of the interest rates on the portion of the variable rate debt being hedged in an aggregate notional principal amount of approximately \$1.3 billion on non-recourse debt outstanding at December 31, 2022.

Non-recourse debt as of December 31, 2022 is scheduled to reach maturity as shown below (in millions):

December 31,	Annual Maturity
2023	\$ 1,761
2024	2,687
2025	2,237
2026	1,040
2027	2,720
Thereafter	9,293
Unamortized (discount) premium & debt issuance (costs), net	(309)
Total	<u>\$ 19,429</u>

As of December 31, 2022, AES subsidiaries with facilities under construction had a total of approximately \$283 million of committed but unused credit facilities available to fund construction and other related costs. Excluding these facilities under construction, AES subsidiaries had approximately \$1.4 billion in various unused committed credit lines to support their working capital, debt service reserves and other business needs. These credit lines can be used for borrowings, letters of credit, or a combination of these uses.

Significant transactions — During the year ended December 31, 2022, the Company's subsidiaries had the following significant debt transactions:

Subsidiary	Transaction Period	Issuances	Repayments	Loss on Extinguishment of Debt
AES Andes ⁽¹⁾	Q1, Q2, Q3, Q4	\$ 999	\$ (217)	\$ —
AES Brasil	Q1, Q2, Q4	779	(201)	—
AES Clean Energy ⁽²⁾	Q2, Q3, Q4	1,153	(815)	(12)
AES Indiana	Q2, Q4	550	(200)	—
United Kingdom	Q1	710	(350)	—
Netherlands/Panama	Q1	500	—	—
El Salvador	Q2	348	(345)	—
AES Ohio	Q2	140	—	—
AES Dominicana Renewable Energy	Q3	120	—	—
Bulgaria	Q4	159	—	—

⁽¹⁾ Issuances and repayments relate to AES Andes S.A. and AES Colombia.

⁽²⁾ Issuances and repayments relate to AES Clean Energy Development and AES Renewable Holdings entities.

AES Clean Energy — In December 2022, AES Renewable Holdings OpCo 1, LLC executed a term loan in the amount of \$632 million due in 2027. The proceeds were used to prepay the outstanding principal of \$692 million of its six credit facilities. As a result of this transaction, the Company recognized a loss on extinguishment of debt of \$12 million.

Netherlands and Panama — In March 2022, AES Hispanola Holdings BV, a Netherlands based company, and Colon, as co-borrowers, executed a \$500 million bridge loan due in 2023. The Company allocated \$450 million and \$50 million of the proceeds from the agreement to AES Hispanola Holdings BV and Colon, respectively.

United Kingdom — On January 6, 2022, Mercury Chile HoldCo LLC (“Mercury Chile”), a UK based company, executed a \$350 million bridge loan and used the proceeds, as well as an additional capital contribution of \$196 million from the Parent Company, to purchase the minority interest in AES Andes through intermediate holding companies (see Note 17—*Equity* for further information). On January 24, 2022, Mercury Chile issued \$360 million aggregate principal of 6.5% senior secured notes due in 2027 and used the proceeds from the issuance to fully prepay the \$350 million bridge loan.

Joint and Several Liability Arrangements — In December 2022, AES Clean Energy Development, AES Renewable Holdings, and sPower, an equity method investment, collectively referred to as the Issuers, entered into an agreement whereby long-term notes will be issued from time to time to finance or refinance operating wind, solar, and storage projects that are owned by the Issuers. On December 13, 2022, the Issuers entered into the Note Purchase Agreement for the issuance of up to \$647 million of 6.55% Senior Notes due in 2047. The Notes were sold on December 14, 2022, at par for \$647 million. Each of the Issuers is considered a “Co-Issuer” and will be jointly and severally liable with each other Co-Issuer for all obligations under the facility. As a result of the issuance, AES Clean Energy Development recorded a liability of \$37 million, which represents its share of the Notes issued. As of December 31, 2022, the aggregate carrying amount of the Notes attributable to AES Clean Energy Development and AES Renewable Holdings was \$37 million and is reflected within *Non-recourse debt* in the accompanying Consolidated Balance Sheets.

In 2021, AES Clean Energy Development, AES Renewable Holdings, and sPower, collectively referred to as the Borrowers, executed two Credit Agreements with aggregate commitments of \$1.2 billion and maturity dates in December 2024 and September 2025. The Borrowers executed amendments to the revolving credit facilities, which resulted in an aggregate increase in the commitments of \$1.3 billion, bringing the total commitments under the new agreements to \$2.5 billion. There was no change to the maturity dates under the amendments. Each of the Borrowers is considered a “Co-Borrower” and will be jointly and severally liable with each other Co-Borrower for all obligations under the facilities. As a result of the amendments and increases in commitments used, AES Clean Energy Development and AES Renewable Holdings recorded, in aggregate, an increase in liabilities of \$964 million in 2022, resulting in total commitments used under the revolving credit facilities, as of December 31, 2022, of \$1.3 billion, which is reflected within *Non-recourse debt* in the accompanying Consolidated Balance Sheets. As of December 31, 2022, the aggregate commitments used under the revolving credit facilities for the Co-Borrowers was \$1.8 billion.

Non-Recourse Debt Covenants, Restrictions and Defaults — The terms of the Company's non-recourse debt include certain financial and nonfinancial covenants. These covenants are limited to subsidiary activity and vary

among the subsidiaries. These covenants may include, but are not limited to, maintenance of certain reserves and financial ratios, minimum levels of working capital and limitations on incurring additional indebtedness.

As of December 31, 2022 and 2021, approximately \$424 million and \$370 million, respectively, of restricted cash was maintained in accordance with certain covenants of the non-recourse debt agreements. Of these amounts, \$285 million and \$175 million, respectively, were included within *Restricted cash* and \$139 million and \$195 million, respectively, were included within *Debt service reserves and other deposits* in the accompanying Consolidated Balance Sheets.

Various lender and governmental provisions restrict the ability of certain of the Company's subsidiaries to transfer their net assets to the Parent Company. Such restricted net assets of subsidiaries amounted to approximately \$1.2 billion at December 31, 2022.

The following table summarizes the Company's subsidiary non-recourse debt in default (in millions) as of December 31, 2022. Due to the defaults, these amounts are included in the current portion of non-recourse debt:

Subsidiary	Primary Nature of Default	December 31, 2022	
		Debt in Default	Net Assets
AES Puerto Rico	Covenant	\$ 143	\$ (178)
AES Illumina (Puerto Rico)	Covenant	27	27
AES Jordan Solar	Covenant	7	10
Total		<u>\$ 177</u>	

The above defaults are not payment defaults. In Puerto Rico, the subsidiary non-recourse debt defaults were triggered by failure to comply with covenants or other requirements contained in the non-recourse debt documents due to the bankruptcy of the offtaker.

The AES Corporation's recourse debt agreements include cross-default clauses that will trigger if a subsidiary or group of subsidiaries for which the non-recourse debt is in default provides 20% or more of the Parent Company's total cash distributions from businesses for the four most recently completed fiscal quarters. As of December 31, 2022, the Company had no defaults which resulted in or were at risk of triggering a cross-default under the recourse debt of the Parent Company. In the event the Parent Company is not in compliance with the financial covenants of its revolving credit facility, restricted payments will be limited to regular quarterly shareholder dividends at the then-prevailing rate. Payment defaults and bankruptcy defaults would preclude the making of any restricted payments.

RECOURSE DEBT — The following table summarizes the carrying amount and terms of recourse debt of the Company as of the periods indicated (in millions):

	Interest Rate	Final Maturity	December 31, 2022	December 31, 2021
Senior Variable Rate Term Loan	SOFR + 1.125%	2024	200	—
Senior Unsecured Note	3.30%	2025	900	900
Drawings on revolving credit facility	SOFR + 1.75%	2027	325	365
Senior Unsecured Note	1.375%	2026	800	800
Senior Unsecured Note	3.95%	2030	700	700
Senior Unsecured Note	2.45%	2031	1,000	1,000
Other ⁽¹⁾	CDI + 7.00%	2022	—	25
Unamortized (discount) premium & debt issuance (costs), net			(31)	(36)
Subtotal			\$ 3,894	\$ 3,754
Less: Current maturities			—	(25)
Noncurrent maturities			\$ 3,894	\$ 3,729

⁽¹⁾ Represents project-level limited recourse debt at AES Holdings Brasil Ltda.

The following table summarizes the principal amounts due under our recourse debt for the next five years and thereafter (in millions):

December 31,	Net Principal Amounts Due
2023	\$ —
2024	200
2025	900
2026	800
2027	325
Thereafter	1,700
Unamortized (discount) premium & debt issuance (costs), net	(31)
Total recourse debt	<u>\$ 3,894</u>

In September 2022, AES executed an amendment to its revolving credit facility. The aggregate commitment under the new agreement is \$1.5 billion and matures in August 2027. Prior to this amendment, the credit agreement had an aggregate commitment of \$1.25 billion and a maturity date in September 2026. As of December 31, 2022, AES had outstanding drawings under its revolving credit facility of \$325 million.

In September 2022, the AES Corporation entered into a term loan agreement, under which AES can obtain term loans in an aggregate principal amount of up to \$200 million, with all term loans to mature no later than September 30, 2024. On September 30, 2022 the AES Corporation borrowed \$200 million under this agreement with a maturity date of September 30, 2024.

In July 2021, AES offered to exchange up to \$800 million of the newly registered 1.375% Senior Notes due in 2026 for up to \$800 million of the existing unregistered 1.375% Senior Notes due in 2026 and up to \$1 billion of our newly registered 2.45% Senior Notes due in 2031 for up to \$1 billion of the existing unregistered 2.45% Senior Notes due in 2031. The terms of the new notes are identical in all material respects to the terms of the old notes with the exception that the new notes have been registered under the Securities Act of 1933, as amended. In August 2021, \$798 million and \$997 million of the 2026 and 2031 Notes were exchanged under the offer, respectively. Although not all investors participated in the exchange, there was no change to the outstanding indebtedness.

Recourse Debt Covenants and Guarantees — The Company's obligations under the revolving credit facility and indentures governing the senior notes due 2025 and 2030 are currently unsecured following the achievement of two investment grade ratings and the release of security in accordance with the terms of the facility and the notes. If the Company's credit rating falls below "Investment Grade" from at least two of Fitch Investors Service Inc., Standard & Poor's Ratings Services or Moody's Investors Service, Inc., as determined in accordance with the terms of the revolving credit facility and indenture dated May 15, 2020 (BBB-, or in the case of Moody's Investor Services, Inc. Baa3), then the obligations under the revolving credit facility and the indentures governing the senior notes due 2025 and 2030 become, subject to certain exceptions, secured by (i) all of the capital stock of domestic subsidiaries owned directly by the Company or certain subsidiaries and 65% of the capital stock of certain foreign subsidiaries owned directly by the Company and certain subsidiaries, and (ii) certain intercompany receivables, certain intercompany notes and certain intercompany tax sharing agreements.

The revolving credit facility contains customary covenants and restrictions on the Company's ability to engage in certain activities, including, but not limited to, limitations on liens; restrictions on mergers and acquisitions and the disposition of assets; and other financial reporting requirements.

The revolving credit facility also contains one financial covenant, evaluated quarterly, requiring the Company to maintain a maximum ratio of recourse debt to adjusted operating cash flow of 5.75 times.

The terms of the Company's senior notes contain certain customary covenants, including limitations on the Company's ability to incur liens or enter into sale and leaseback transactions.

12. COMMITMENTS

The Company enters into long-term contracts for construction projects, maintenance and service, transmission of electricity, operations services and purchases of electricity and fuel. In general, these contracts are subject to variable quantities or prices and are terminable only in limited circumstances. The following table shows the future minimum commitments for continuing operations under these contracts as of December 31, 2022 for 2023 through 2027 and thereafter as well as actual purchases under these contracts for the years ended December 31, 2022, 2021, and 2020 (in millions):

Actual purchases during the year ended December 31,	Electricity Purchase Contracts	Fuel Purchase Contracts	Other Purchase Contracts
2020	\$ 756	\$ 1,573	\$ 1,506
2021	709	2,070	1,261
2022	1,156	3,375	3,602
Future commitments for the year ending December 31,			
2023	\$ 1,190	\$ 3,702	\$ 4,642
2024	873	2,624	477
2025	639	1,706	303
2026	588	1,099	215
2027	586	1,117	189
Thereafter	5,924	3,134	1,515
Total	\$ 9,800	\$ 13,382	\$ 7,341

13. CONTINGENCIES

Guarantees and Letters of Credit — In connection with certain project financings, acquisitions and dispositions, power purchases, and other agreements, the Parent Company has expressly undertaken limited obligations and commitments, most of which will only be effective or will be terminated upon the occurrence of future events. In the normal course of business, the Parent Company has entered into various agreements, mainly guarantees and letters of credit, to provide financial or performance assurance to third parties on behalf of AES businesses. These agreements are entered into primarily to support or enhance the creditworthiness otherwise achieved by a business on a stand-alone basis, thereby facilitating the availability of sufficient credit to accomplish their intended business purposes. Most of the contingent obligations relate to future performance commitments which the Company or its businesses expect to fulfill within the normal course of business. The expiration dates of these guarantees vary from less than one year to no more than 16 years.

The following table summarizes the Parent Company's contingent contractual obligations as of December 31, 2022. Amounts presented in the following table represent the Parent Company's current undiscounted exposure to guarantees and the range of maximum undiscounted potential exposure. The maximum exposure is not reduced by the amounts, if any, that could be recovered under the recourse or collateralization provisions in the guarantees.

Contingent Contractual Obligations	Amount (in millions)	Number of Agreements	Maximum Exposure Range for Each Agreement (in millions)
Guarantees and commitments	\$ 2,406	81	< \$1 — 400
Letters of credit under the unsecured credit facilities	128	39	< \$1 — 36
Letters of credit under bilateral agreements	123	2	\$59 — 64
Letters of credit under the revolving credit facility	34	16	< \$1 — 15
Surety bonds	2	2	< \$1 — 1
Total	\$ 2,693	140	

During the year ended December 31, 2022, the Company paid letter of credit fees ranging from 1% to 3% per annum on the outstanding amounts of letters of credit.

Environmental — The Company periodically reviews its obligations as they relate to compliance with environmental laws, including site restoration and remediation. For the periods ended December 31, 2022 and 2021, the Company recognized liabilities of \$10 million and \$4 million, respectively, for projected environmental remediation costs. Due to the uncertainties associated with environmental assessment and remediation activities, future costs of compliance or remediation could be higher or lower than the amount currently accrued. Moreover, where no liability has been recognized, it is reasonably possible that the Company may be required to incur remediation costs or make expenditures in amounts that could be material but could not be estimated as of December 31, 2022. In aggregate, the Company estimates the range of potential losses related to environmental matters, where estimable, to be up to \$12 million. The amounts considered reasonably possible do not include amounts accrued as discussed above.

Litigation — The Company is involved in certain claims, suits and legal proceedings in the normal course of business. The Company accrues for litigation and claims when it is probable that a liability has been incurred and the amount of loss can be reasonably estimated. The Company has recognized aggregate liabilities for all claims of approximately \$22 million and \$23 million as of December 31, 2022 and 2021, respectively. These amounts are reported on the Consolidated Balance Sheets within *Accrued and other liabilities* and *Other noncurrent liabilities*. A significant portion of these accrued liabilities relate to regulatory matters and commercial disputes in international jurisdictions. There can be no assurance that these accrued liabilities will be adequate to cover all existing and future claims or that we will have the liquidity to pay such claims as they arise.

Where no accrued liability has been recognized, it is reasonably possible that some matters could be decided unfavorably to the Company and could require the Company to pay damages or make expenditures in amounts that could be material but could not be estimated as of December 31, 2022. The material contingencies where a loss is reasonably possible primarily include disputes with offtakers, suppliers and EPC contractors; alleged breaches of contract; alleged violation of laws and regulations; income tax and non-income tax matters with tax authorities; and regulatory matters. In aggregate, the Company estimates the range of potential losses, where estimable, related to these reasonably possible material contingencies to be between \$51 million and \$88 million. The amounts considered reasonably possible do not include the amounts accrued, as discussed above. These material contingencies do not include income tax-related contingencies which are considered part of our uncertain tax positions. See Note 23—*Income Taxes* of this Form 10-K for further information.

Tietê GSF Settlement — In December 2020, ANEEL published a regulation establishing the terms and conditions for compensation for the non-hydrological risk charged to hydro generators through the incorrect application of the GSF mechanism between 2013 and 2018. In accordance with the regulation, Tietê will be compensated in the form of a concession extension period, initially determined to be 2.7 years, which will be amortized from the date of the agreement until the end of the new concession period. As of December 31, 2020, the compensation to be received from the concession extension was estimated to have a fair value of \$184 million, based on a preliminary time-value equivalent calculation made by the CCEE, and was recorded as a reversal of *Non-Regulated Cost of Sales* on the Consolidated Statements of Operations for the year ended December 31, 2020. In March 2021, the CCEE's final calculation of fair value was \$190 million and the Company recognized an additional reversal of *Non-Regulated Cost of Sales* of \$6 million. In August 2021, ANEEL published Resolution 2.919/2021, establishing an extension for the end of the concession originally granted to AES Brasil's hydroelectric plants, from 2029 to 2032. On April 14, 2022, the amended term was finalized and agreed upon by ANEEL and AES.

14. LEASES

LESSEE — Right-of-use assets are long-term by nature. The following table summarizes the amounts recognized on the Consolidated Balance Sheets related to lease asset and liability balances as of the periods indicated (in millions):

	Consolidated Balance Sheet Classification	December 31, 2022	December 31, 2021
Assets			
Right-of-use assets — finance leases	Electric generation, distribution assets and other	\$ 160	\$ 125
Right-of-use assets — operating leases	Other noncurrent assets	356	278
Total right-of-use assets		\$ 516	\$ 403
Liabilities			
Finance lease liabilities (current)	Non-recourse debt (current liabilities)	\$ 6	\$ 6
Finance lease liabilities (noncurrent)	Non-recourse debt (noncurrent liabilities)	169	128
Total finance lease liabilities		175	134
Operating lease liabilities (current)	Accrued and other liabilities	26	20
Operating lease liabilities (noncurrent)	Other noncurrent liabilities	374	294
Total operating lease liabilities		400	314
Total lease liabilities		\$ 575	\$ 448

The following table summarizes supplemental balance sheet information related to leases as of the periods indicated:

Lease Term and Discount Rate	December 31, 2022	December 31, 2021
Weighted-average remaining lease term — finance leases	33 years	32 years
Weighted-average remaining lease term — operating leases	25 years	23 years
Weighted-average discount rate — finance leases	4.59 %	4.65 %
Weighted-average discount rate — operating leases	6.22 %	6.70 %

The following table summarizes the components of lease expense recognized in *Cost of Sales* on the Consolidated Statements of Operations for the periods indicated (in millions):

Components of Lease Cost	Twelve Months Ended December 31,	
	2022	2021
Operating lease cost	\$ 46	\$ 36
Finance lease cost:		
Amortization of right-of-use assets	8	4
Interest on lease liabilities	8	4
Short-term lease costs	28	21
Variable lease cost	1	1
Total lease cost	\$ 91	\$ 66

Operating cash outflows from operating leases included in the measurement of lease liabilities were \$54 million and \$39 million for the twelve months ended December 31, 2022 and 2021, respectively, and operating cash outflows from finance leases were \$22 million and \$2 million for the twelve months ended December 31, 2022 and 2021, respectively. Right-of-use assets obtained in exchange for new operating lease liabilities were \$14 million for the twelve months ended December 31, 2022.

The following table shows the future lease payments under operating and finance leases for continuing operations together with the present value of the net lease payments as of December 31, 2022 for 2023 through 2027 and thereafter (in millions):

	Maturity of Lease Liabilities	
	Finance Leases	Operating Leases
2023	\$ 10	\$ 36
2024	9	35
2025	9	33
2026	9	32
2027	9	30
Thereafter	310	650
Total	356	816
Less: Imputed interest	(181)	(416)
Present value of lease payments	\$ 175	\$ 400

LESSOR — The Company has operating leases for certain generation contracts that contain provisions to provide capacity to a customer, which is a stand-ready obligation to deliver energy when required by the customer. Capacity payments are generally considered lease elements as they cover the majority of available output from a facility. The allocation of contract payments between the lease and non-lease elements is made at the inception of the lease. Lease payments from such contracts are recognized as lease revenue on a straight-line basis over the lease term, whereas variable lease payments are recognized when earned.

The following table presents lease revenue from operating leases in which the Company is the lessor, recognized in *Revenue* on the Consolidated Statements of Operations for the periods indicated (in millions):

Lease Income	Twelve Months Ended December 31,	
	2022	2021
Total lease revenue	\$ 527	\$ 595
Less: Variable lease revenue	(49)	(75)
Total non-variable lease revenue	\$ 478	\$ 520

The following table presents the underlying gross assets and accumulated depreciation of operating leases included in *Property, Plant and Equipment* on the Consolidated Balance Sheets as of the periods indicated (in millions):

Lease Assets	December 31, 2022	December 31, 2021
Gross assets	\$ 1,319	\$ 2,423
Accumulated depreciation	(139)	(765)
Net assets	\$ 1,180	\$ 1,658

The option to extend or terminate a lease is based on customary early termination provisions in the contract, such as payment defaults, bankruptcy, or lack of performance on energy delivery. The Company has not recognized any early terminations as of December 31, 2022. Certain leases may provide for variable lease payments based on usage or index-based (e.g., the U.S. Consumer Price Index) adjustments to lease payments.

The following table shows the future lease receipts as of December 31, 2022 for 2023 through 2027 and thereafter (in millions):

	Future Cash Receipts for	
	Sales-Type Leases	Operating Leases
2023	\$ 25	\$ 387
2024	25	387
2025	25	388
2026	25	279
2027	25	203
Thereafter	367	545
Total	492	\$ 2,189
Less: Imputed interest	(264)	
Present value of total lease receipts		\$ 228

Battery Storage Lease Arrangements — The Company constructs and operates projects consisting only of a stand-alone battery energy storage system ("BESS") facility, as well as projects that pair a BESS with solar energy systems. These projects allow more flexibility on when to provide energy to the grid. The Company will enter into PPAs for the full output of the facility that allow customers the ability to determine when to charge and discharge the BESS. These arrangements include both lease and non-lease elements under ASC 842, with the BESS component typically constituting a sales-type lease. The Company recognized lease income on sales-type leases through variable payments of \$2 million and \$3 million and interest income of \$23 million and \$15 million for the years ended December 31, 2022 and 2021, respectively. During the second quarter of 2022, the Company recognized a full allowance of \$20 million on a sales-type lease receivable at AES Gilbert. See Note 21—*Other Income and Expense* for further information.

Prior to January 1, 2022, due to the variable-based nature of lease payments under certain contracts, the Company recorded a loss at commencement of sales-type leases of \$13 million for the year ended December 31, 2021. These amounts are recognized in *Other expense* in the Condensed Consolidated Statement of Operations. See Note 21—*Other Income and Expense* for further information. Effective January 1, 2022, the Company adopted ASU 2021-05 in which lessors classify and account for certain leases with primarily variable-based lease payments as operating leases. The Company adopted this standard on a prospective basis. See Note 1—*General and Summary of Significant Accounting Policies* for further information.

15. BENEFIT PLANS

Defined Contribution Plans — The Company sponsors four defined contribution plans ("the DC Plans"). Two plans cover U.S. non-union employees; one for Parent Company and certain US and Utilities SBU business employees, and one for AES Ohio employees. The remaining two plans include union and non-union employees at AES Indiana and union employees at AES Ohio. The DC Plans are qualified under section 401 of the Internal Revenue Code. Most U.S. employees of the Company are eligible to participate in the appropriate plan except for those employees who are covered by a collective bargaining agreement, unless such agreement specifically provides that the employee is considered an eligible employee under a plan. Within the DC Plans, the Company provides matching contributions in addition to other non-matching contributions. Participants are fully vested in their own contributions. The Company's contributions vest over various time periods ranging from immediate up to five years. For the years ended December 31, 2022, 2021 and 2020, costs for defined contribution plans were approximately \$31 million, \$26 million and \$21 million, respectively.

Defined Benefit Plans — Certain of the Company's subsidiaries have defined benefit pension plans covering substantially all of their respective employees ("the DB Plans"). Pension benefits are based on years of credited service, age of the participant, and average earnings. Of the 28 active DB Plans as of December 31, 2022, five are at U.S. subsidiaries and the remaining plans are at foreign subsidiaries.

The following table reconciles the Company's funded status, both domestic and foreign, as of the periods indicated (in millions):

	2022		2021	
	U.S.	Foreign	U.S.	Foreign
Change in projected benefit obligation:				
Benefit obligation as of January 1	\$ 1,225	\$ 173	\$ 1,331	\$ 218
Service cost	14	4	14	6
Interest cost	28	17	24	15
Plan amendments	—	—	8	—
Plan curtailments	—	—	—	(23)
Plan settlements	—	—	—	(1)
Benefits paid	(65)	(13)	(101)	(10)
Divestitures	—	(1)	—	—
Actuarial (gain) loss	(288)	(11)	(51)	(16)
Effect of foreign currency exchange rate changes	—	8	—	(16)
Benefit obligation as of December 31	<u>\$ 914</u>	<u>\$ 177</u>	<u>\$ 1,225</u>	<u>\$ 173</u>
Change in plan assets:				
Fair value of plan assets as of January 1	\$ 1,218	\$ 106	\$ 1,249	\$ 112
Actual return on plan assets	(250)	7	60	9
Employer contributions	8	5	10	4
Plan settlements	—	—	—	(1)
Benefits paid	(65)	(13)	(101)	(10)
Effect of foreign currency exchange rate changes	—	9	—	(8)
Fair value of plan assets as of December 31	<u>\$ 911</u>	<u>\$ 114</u>	<u>\$ 1,218</u>	<u>\$ 106</u>
Reconciliation of funded status:				
Funded status as of December 31	<u>\$ (3)</u>	<u>\$ (63)</u>	<u>\$ (7)</u>	<u>\$ (67)</u>

The following table summarizes the amounts recognized on the Consolidated Balance Sheets related to the funded status of the DB Plans, both domestic and foreign, as of the periods indicated (in millions):

December 31,	2022		2021	
	U.S.	Foreign	U.S.	Foreign
Amounts Recognized on the Consolidated Balance Sheets				
Noncurrent assets	\$ 34	\$ 7	\$ 49	\$ 7
Accrued benefit liability—current	—	(8)	—	(7)
Accrued benefit liability—noncurrent	(37)	(62)	(56)	(67)
Net amount recognized at end of year	<u>\$ (3)</u>	<u>\$ (63)</u>	<u>\$ (7)</u>	<u>\$ (67)</u>

The following table summarizes the Company's U.S. and foreign accumulated benefit obligation as of the periods indicated (in millions):

December 31,	2022		2021	
	U.S.	Foreign	U.S.	Foreign
Accumulated benefit obligation				
Information for pension plans with an accumulated benefit obligation in excess of plan assets:	\$ 900	\$ 170	\$ 1,199	\$ 165
Projected benefit obligation	\$ 340	\$ 169	\$ 458	\$ 165
Accumulated benefit obligation	333	163	442	159
Fair value of plan assets	304	98	402	91
Information for pension plans with a projected benefit obligation in excess of plan assets:				
Projected benefit obligation	\$ 340	\$ 169	\$ 458	\$ 165
Fair value of plan assets	304	98	402	91

The following table summarizes the significant weighted average assumptions used in the calculation of benefit obligation and net periodic benefit cost, both domestic and foreign, as of the periods indicated:

December 31,		2022		2021	
		U.S.	Foreign	U.S.	Foreign
Benefit Obligation:	Discount rate	5.41 %	13.23 %	2.82 %	10.45 %
	Rate of compensation increase	2.75 %	11.06 %	2.75 %	7.76 %
Periodic Benefit Cost:	Discount rate	2.82 %	10.45 % ⁽¹⁾	2.45 %	7.53 % ⁽¹⁾
	Expected long-term rate of return on plan assets	4.50 %	6.36 %	4.91 %	8.02 %
	Rate of compensation increase	2.75 %	7.76 %	2.75 %	5.69 %

⁽¹⁾ Includes an inflation factor that is used to calculate future periodic benefit cost, but is not used to calculate the benefit obligation.

The Company establishes its estimated long-term return on plan assets considering various factors, which include the targeted asset allocation percentages, historic returns, and expected future returns.

The measurement of pension obligations, costs, and liabilities is dependent on a variety of assumptions. These assumptions include estimates of the present value of projected future pension payments to all plan participants, taking into consideration the likelihood of potential future events such as salary increases and demographic experience. These assumptions may have an effect on the amount and timing of future contributions.

The assumptions used in developing the required estimates include the following key factors: discount rates, salary growth, retirement rates, inflation, expected return on plan assets, and mortality rates. The effects of actual results differing from the Company's assumptions are accumulated and amortized over future periods and, therefore, generally affect the Company's recognized expense in such future periods. Unrecognized gains or losses are amortized using the "corridor approach," under which the net gain or loss in excess of 10% of the greater of the projected benefit obligation or the market-related value of the assets, if applicable, is amortized.

Sensitivity of the Company's pension funded status to the indicated increase or decrease in the discount rate and long-term rate of return on plan assets assumptions is shown below. Note that these sensitivities may be asymmetric and are specific to the base conditions at year-end 2022. They also may not be additive, so the impact of changing multiple factors simultaneously cannot be calculated by combining the individual sensitivities shown. The funded status as of December 31, 2022 is affected by the assumptions as of that date. Pension expense for 2022 is affected by the December 31, 2021 assumptions. The impact on pension expense from a one percentage point change in these assumptions is shown in the following table (in millions):

Increase of 1% in the discount rate	\$	(1)
Decrease of 1% in the discount rate		4
Increase of 1% in the long-term rate of return on plan assets		(13)
Decrease of 1% in the long-term rate of return on plan assets		13

The following table summarizes the components of the net periodic benefit cost, both domestic and foreign, for the years indicated (in millions):

December 31,	2022		2021		2020	
	U.S.	Foreign	U.S.	Foreign	U.S.	Foreign
Components of Net Periodic Benefit Cost:						
Service cost	\$ 14	\$ 4	\$ 14	\$ 6	\$ 12	\$ 6
Interest cost	28	17	24	15	35	14
Expected return on plan assets	(53)	(7)	(59)	(8)	(58)	(7)
Amortization of prior service cost	4	—	4	—	5	—
Amortization of net loss	8	1	15	3	14	2
Curtailment (gain) loss recognized	—	—	—	(17)	—	—
Total pension cost	\$ 1	\$ 15	\$ (2)	\$ (1)	\$ 8	\$ 15

The following table summarizes the amounts reflected in AOCL, including AOCL attributable to noncontrolling interests, on the Consolidated Balance Sheet as of December 31, 2022, that have not yet been recognized as components of net periodic benefit cost (in millions):

December 31, 2022	Accumulated Other Comprehensive Income (Loss)	
	U.S.	Foreign
Prior service cost	\$ (3)	\$ 3
Unrecognized net actuarial loss	(20)	(27)
Total	\$ (23)	\$ (24)

The following table summarizes the Company's target allocation for 2022 and pension plan asset allocation, both domestic and foreign, as of the periods indicated:

Asset Category	Target Allocations		Percentage of Plan Assets as of December 31,			
			2022		2021	
	U.S.	Foreign	U.S.	Foreign	U.S.	Foreign
Equity securities	22%	12%	22.17 %	3.53 %	31.26 %	14.76 %
Debt securities	78%	82%	77.28 %	92.14 %	68.37 %	82.40 %
Real estate	—%	2%	— %	1.09 %	— %	1.11 %
Other	—%	4%	0.55 %	3.24 %	0.37 %	1.73 %
Total pension assets			100.00 %	100.00 %	100.00 %	100.00 %

The U.S. DB Plans seek to achieve the following long-term investment objectives:

- maintenance of sufficient income and liquidity to pay retirement benefits and other lump sum payments;
- long-term rate of return in excess of the annualized inflation rate;
- long-term rate of return, net of relevant fees, that meets or exceeds the assumed actuarial rate; and
- long-term competitive rate of return on investments, net of expenses, that equals or exceeds various benchmark rates.

The asset allocation is reviewed periodically to determine a suitable asset allocation which seeks to manage risk through portfolio diversification and takes into account the above-stated objectives, in conjunction with current funding levels, cash flow conditions, and economic and industry trends. The following table summarizes the Company's U.S. DB Plan assets by category of investment and level within the fair value hierarchy as of the periods indicated (in millions):

U.S. Plans	December 31, 2022				December 31, 2021			
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Equity securities: ⁽¹⁾	\$ —	\$ 202	\$ —	\$ 202	\$ —	\$ 381	\$ —	\$ 381
Debt securities: ⁽¹⁾	—	704	—	704	—	833	—	833
Cash and cash equivalents	5	—	—	5	4	—	—	4
Total plan assets	\$ 5	\$ 906	\$ —	\$ 911	\$ 4	\$ 1,214	\$ —	\$ 1,218

⁽¹⁾ For the U.S. plans, the balances under the equity securities and debt securities categories represent investments through common collective trusts, for which the underlying investments are equity and debt securities.

The investment strategy of the foreign DB Plans seeks to maximize return on investment while minimizing risk. The assumed asset allocation has less exposure to equities in order to closely match market conditions and near term forecasts. The following table summarizes the Company's foreign DB plan assets by category of investment and level within the fair value hierarchy as of the periods indicated (in millions):

Foreign Plans	December 31, 2022				December 31, 2021			
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Equity securities:	Mutual funds	\$ —	\$ 3	\$ —	\$ 3	\$ 15	\$ —	\$ —
	Private equity	—	—	1	1	—	—	1
Debt securities:	Mutual funds ⁽¹⁾	35	70	—	105	18	69	—
Real estate:	Real estate	—	—	1	1	—	—	1
Other:	Other assets	1	2	1	4	1	—	1
	Total plan assets	\$ 36	\$ 75	\$ 3	\$ 114	\$ 34	\$ 69	\$ 3
		<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
		<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>

⁽¹⁾ Mutual funds categorized as debt securities consist of mutual funds for which debt securities are the primary underlying investment.

The following table summarizes the estimated cash flows for U.S. and foreign expected employer contributions and expected future benefit payments, both domestic and foreign (in millions):

	U.S.	Foreign
Expected employer contribution in 2023	\$ 8	\$ 10
Expected benefit payments for fiscal year ending:		
2023	68	18
2024	69	16
2025	69	17
2026	69	19
2027	69	21
2028 - 2032	342	125

16. REDEEMABLE STOCK OF SUBSIDIARIES

The following table is a reconciliation of changes in redeemable stock of subsidiaries (in millions):

December 31,		2022	2021
Balance at the beginning of the period		\$ 1,257	\$ 872
Net loss		(87)	(6)
Other comprehensive income		40	19
Adjustments to redemption value		—	4
Distributions to holders of redeemable stock of subsidiaries		(64)	—
Acquisitions and reclassification of redeemable stock of subsidiaries		(60)	(211)
Contributions from holders of redeemable stock of subsidiaries		67	579
Sales of redeemable stock of subsidiaries		168	—
Balance at the end of the period		<u>\$ 1,321</u>	<u>\$ 1,257</u>

The following table summarizes the Company's redeemable stock of subsidiaries balances as of the periods indicated (in millions):

December 31,		2022	2021
IPALCO common stock		\$ 782	\$ 700
AES Clean Energy Development common stock		436	497
AES Clean Energy Development tax equity partnerships		86	—
Potengi common and preferred stock		17	—
AES Indiana preferred stock		—	60
Total redeemable stock of subsidiaries		<u>\$ 1,321</u>	<u>\$ 1,257</u>

AES Indiana — AES Indiana had \$60 million of cumulative preferred stock outstanding as of December 31, 2021, which represented five series of preferred stock. The redemption of the preferred shares was considered to be not solely within the control of the issuer and the preferred stock was considered temporary equity. In December 2022, AES Indiana redeemed all of its outstanding preferred shares for \$60 million. The preferred shares were retired upon redemption as there is no intention for the shares to be reissued. AES Indiana is reported in the US and Utilities SBU reportable segment.

AES Clean Energy Development Tax Equity Partnerships — The majority of solar projects under AES Clean Energy Development have been financed with tax equity structures, in which tax equity investors receive a portion of the economic attributes of the facilities, including tax attributes, that vary over the life of the projects. In some cases, these agreements contain certain partnership rights, though not currently in effect, that would enable the tax equity investor to exit in the future. As a result, the minority ownership interest is considered temporary equity.

In 2022, AES Clean Energy Development, through multiple transactions, sold noncontrolling interests in multiple project companies to tax equity partners, resulting in a \$157 million increase to *Redeemable stock of subsidiaries*. AES Clean Energy Development is reported in the US and Utilities SBU reportable segment.

IPALCO — In December 2021, CDPQ made equity capital contributions of \$34 million to AES U.S. Investments, subsequently contributed to IPALCO by AES U.S. Investments, and \$48 million to IPALCO as part of a capital call to raise proceeds for AES Indiana's TDSIC and replacement generation projects. In December 2022, CDPQ made additional capital contributions of \$77 million. The Company and CDPQ made capital contributions on a proportional share basis; therefore, the capital calls did not change CDPQ or AES' ownership interests in IPALCO. IPALCO is reported in the US and Utilities SBU reportable segment.

Potengi — In March 2022, Tucano Holding I (“Tucano”), a subsidiary of AES Brasil, issued new shares in the Potengi wind development project. BRF S.A. (“BRF”) acquired shares representing 24% of the equity in the project for \$12 million, reducing the Company’s indirect ownership interest in Potengi to 35.5%. As the Company maintained control after the transaction, Potengi continues to be consolidated by the Company. As part of the transaction, BRF was given an option to sell its entire ownership interest at the conclusion of the PPA term. As a result, the minority ownership interest is considered temporary equity, which will be adjusted for earnings or losses allocated to the noncontrolling interest under ASC 810. Any subsequent changes in the redemption value of the exit rights will be recognized against permanent equity in accordance with ASC 480-10-S99, as it is probable that the shares will become redeemable. Potengi is reported in the South America SBU reportable segment.

Colon — In September 2021, the Company acquired the remaining 49.9% minority ownership interest in Colon, reducing the value of the Colon temporary equity to zero. See Note 17—*Equity* for further information. Colon is reported in the MCAC SBU reportable segment.

AES Clean Energy Development — On February 1, 2021, the Company substantially completed the merger of the sPower and AES Renewable Holdings development platforms to form AES Clean Energy Development, which will serve as the development vehicle for all future renewable projects in the U.S. As part of the transaction, AIMCo, our existing partner in the sPower equity method investment, received a 25% minority ownership interest in the newly formed entity along with certain partnership rights, though not currently in effect, that would enable AIMCo to exit in the future. As a result, the minority ownership interest is considered temporary equity.

During the second quarter of 2021, the Company recorded measurement period adjustments to the estimated fair values of the sPower and AES Renewable Holdings development platforms and the value of the partnership rights initially recorded in the first quarter of 2021, which resulted in an \$81 million increase in the value of the temporary equity. The temporary equity will be adjusted for earnings or losses allocated to the noncontrolling interest under ASC 810. Any subsequent changes in the redemption value of the exit rights will be recognized against permanent equity in accordance with ASC 480-10-S99, as it is probable that the shares will become redeemable. See Note 25—*Acquisitions* for further information. AES Clean Energy Development is reported in the US and Utilities SBU reportable segment.

17. EQUITY

Equity Units

In March 2021, the Company issued 10,430,500 Equity Units with a total notional value of \$1,043 million. Each Equity Unit has a stated amount of \$100 and was initially issued as a Corporate Unit, consisting of a forward stock purchase contract (“2024 Purchase Contracts”) and a 10% undivided beneficial ownership interest in one share of 0% Series A Cumulative Perpetual Convertible Preferred Stock, issued without par and with a liquidation preference of \$1,000 per share (“Series A Preferred Stock”).

Upon reconsideration of the nature of the Equity Units, the Company re-evaluated its accounting assessment and concluded that the Equity Units should be accounted for as one unit of account based on the economic linkage between the 2024 Purchase Contracts and the Series A Preferred Stock, as well as the Company’s assessment of the applicable accounting guidance relating to combining freestanding instruments. The Equity Units represent mandatorily convertible preferred stock. Accordingly, the shares associated with the combined instrument are reflected in diluted earnings per share using the if-converted method.

In the fourth quarter of 2021, the Company also corrected the classification of certain amounts in the Consolidated Balance Sheet and Statement of Changes in Equity to reflect the 2024 Purchase Contracts and Series A Preferred Stock as one unit of account. The corrections have no impact on the Company’s net earnings, total assets, cash flows, or segment information.

In conjunction with the issuance of the Equity Units, the Company received approximately \$1 billion in proceeds, net of underwriting costs and commissions, before offering expenses. The proceeds for the issuance of 1,043,050 shares are attributed to the Series A Preferred Stock for \$838 million and \$205 million for the present value of the quarterly payments due to holders of the 2024 Purchase Contracts (“Contract Adjustment Payments”). The proceeds will be used for the development of the AES renewable businesses, U.S. utility businesses, LNG infrastructure, and for other developments determined by management.

The Series A Preferred Stock will initially not bear any dividends and the liquidation preference of the convertible preferred stock will not accrete. The Series A Preferred Stock has no maturity date and will remain outstanding unless converted by holders or redeemed by the Company. Holders of the shares of the convertible preferred stock will have limited voting rights.

The Series A Preferred Stock is pledged as collateral to support holders' purchase obligations under the 2024 Purchase Contracts and can be remarketed. In connection with any successful remarketing, the Company may increase the dividend rate, increase the conversion rate, and modify the earliest redemption date for the convertible preferred stock. After any successful remarketing in connection with which the dividend rate on the convertible preferred stock is increased, the Company will pay cumulative dividends on the convertible preferred stock, if declared by the board of directors, quarterly in arrears from the applicable remarketing settlement date.

Holders of Corporate Units may create Treasury Units or Cash Settled Units from their Corporate Units as provided in the Purchase Contract Agreement by substituting Treasury securities or cash, respectively, for the Convertible Preferred Stock comprising a part of the Corporate Units.

The Company may not redeem the Series A Preferred Stock prior to March 22, 2024. At the election of the Company, on or after March 22, 2024, the Company may redeem for cash, all or any portion of the outstanding shares of the Series A Preferred Stock at a redemption price equal to 100% of the liquidation preference, plus any accumulated and unpaid dividends.

The 2024 Purchase Contracts obligate the holders to purchase, on February 15, 2024, for a price of \$100 in cash, a maximum number of 57,292,650 shares of the Company's common stock (subject to customary anti-dilution adjustments). The 2024 Purchase Contract holders may elect to settle their obligation early, in cash. The Series A Preferred Stock is pledged as collateral to guarantee the holders' obligations to purchase common stock under the terms of the 2024 Purchase Contracts. The initial settlement rate determining the number of shares that each holder must purchase will not exceed the maximum settlement rate and is determined over a market value averaging period preceding February 15, 2024.

The initial maximum settlement rate of 3.864 was calculated using an initial reference price of \$25.88, equal to the last reported sale price of the Company's common stock on March 4, 2021. As of December 31, 2022, due to the customary anti-dilution provisions, the maximum settlement rate was 3.8691, equivalent to a reference price of \$25.85. If the applicable market value of the Company's common stock is less than or equal to the reference price, the settlement rate will be the maximum settlement rate; and if the applicable market value of common stock is greater than the reference price, the settlement rate will be a number of shares of the Company's common stock equal to \$100 divided by the applicable market value. Upon successful remarketing of the Series A Preferred Stock ("Remarketed Series A Preferred Stock"), the Company expects to receive additional cash proceeds of \$1 billion and issue shares of Remarketed Series A Preferred Stock.

The Company pays Contract Adjustment Payments to the holders of the 2024 Purchase Contracts at a rate of 6.875% per annum, payable quarterly in arrears on February 15, May 15, August 15, and November 15, commencing on May 15, 2021. The \$205 million present value of the Contract Adjustment Payments at inception reduced the Series A Preferred Stock. As each quarterly Contract Adjustment Payment is made, the related liability is reduced and the difference between the cash payment and the present value will accrue to interest expense, approximately \$5 million over the three-year term. As of December 31, 2022, the present value of the Contract Adjustment Payments was \$89 million.

The holders can settle the purchase contracts early, for cash, subject to certain exceptions and conditions in the prospectus supplement. Upon early settlement of any purchase contracts, the Company will deliver the number of shares of its common stock equal to 85% of the number of shares of common stock that would have otherwise been deliverable.

Equity Transactions with Noncontrolling Interests

AES Clean Energy Tax Equity Partnerships — The majority of solar projects under AES Clean Energy have been financed with tax equity structures, in which tax equity investors receive a portion of the economic attributes of the facilities, including tax attributes, that vary over the life of the projects.

In 2022, AES Clean Energy Development, through multiple transactions, sold noncontrolling interests in multiple project companies to tax equity partners, resulting in a \$230 million increase to NCI. In 2022, 2021 and 2020, AES Renewable Holdings completed similar sales of noncontrolling interests to tax equity partners, resulting in an \$88 million, \$127 million, and \$144 million increase to NCI, respectively. AES Clean Energy Development and AES Renewable Holdings are reported in the US and Utilities SBU reportable segment.

Southland Energy — In November 2020, the Company completed the sale of 35% of its ownership interest in the Southland Energy assets for \$424 million, which decreased the Company's economic interest to 65%. However, under the terms of the purchase and sale agreement, the Company was entitled to all earnings or losses until March 1, 2021, and any distributions related thereto. This transaction resulted in a \$275 million increase in Parent Company Stockholder's Equity due to an increase in additional paid-in-capital of \$266 million, net of tax and transaction costs, and the reclassification of accumulated other comprehensive losses from AOCL to NCI of \$9 million.

In December 2022, the Company completed the sale of an additional 14.9% ownership interest for \$157 million, which decreased the Company's economic interest to 50.1%. This transaction resulted in a \$91 million increase in Parent Company Stockholder's Equity due to an increase in additional paid-in-capital of \$94 million, net of tax and transaction costs, partially offset by the reclassification of accumulated other comprehensive income from AOCL to NCI of \$3 million. As the Company maintained control after these transactions, Southland Energy continues to be consolidated by the Company within the US and Utilities SBU reportable segment.

AES Brasil — In August 2020, AES Holdings Brasil Ltda. ("AHB") completed the acquisition of an additional 18.5% ownership in AES Brasil for \$240 million. During the fourth quarter of 2020, through multiple transactions, AHB acquired another 1.3% ownership in AES Brasil for \$16 million. In aggregate, these transactions increased the Company's economic interest in AES Brasil to 44.1% and resulted in a \$214 million decrease in Parent Company Stockholder's Equity due to a decrease in additional paid-in-capital of \$94 million and the reclassification of accumulated other comprehensive losses from NCI to AOCL of \$120 million.

In addition, AHB committed to migrate AES Tietê to the Novo Mercado, which is a listing segment of the Brazilian stock exchange that requires equity capital to be composed only of common shares. On December 18, 2020, the AES Tietê board approved a proposal for the corporate reorganization and exchange of shares issued by AES Tietê with newly issued shares of AES Brasil, a formerly wholly-owned entity of AES Tietê, with the intent to list AES Brasil on Novo Mercado as the 100% shareholder of AES Tietê. The reorganization and the exchange of shares was completed on March 26, 2021, and the shares issued by AES Brasil started trading on Novo Mercado on March 29, 2021. The Company maintains majority representation on AES Brasil's board of directors.

Through multiple transactions in 2021, AHB acquired an additional 1.6% ownership in AES Brasil for \$17 million. These transactions increased the Company's economic interest in AES Brasil to 45.7% and resulted in a \$13 million decrease in Parent Company Stockholder's Equity due to a decrease in additional paid-in-capital of \$6 million and the reclassification of accumulated other comprehensive losses from NCI to AOCL of \$7 million.

In October 2021, AES Brasil concluded a follow-on offering for the issuance of 93 million newly issued shares, which further increased the Company's indirect beneficial interest in AES Brasil to 46.7% and resulted in a \$7 million increase in Parent Company Stockholder's Equity due to an increase in additional paid-in capital.

In September 2022, AES Brasil commenced a private placement offering for its existing shareholders to subscribe for up to 116 million newly issued shares, of which 107 million were subscribed. AES Holdings Brasil Ltda. and noncontrolling interest holders subscribed for 54 million and 53 million shares, respectively, thereby increasing AES' indirect beneficial interest in AES Brasil to 47.4% and resulting in additional capital contributions from noncontrolling interest holders of \$98 million, an increase in additional paid-in capital of \$10 million, and the reclassification of accumulated other comprehensive losses from NCI to AOCL of \$3 million. AES Brasil is reported in the South America SBU reportable segment.

Chile Renovables — In July 2021, AES Andes completed the sale of a 49% ownership interest in Chile Renovables SpA ("Chile Renovables"), a subsidiary which owns the Los Cururos wind facility, to Global Infrastructure Management, LLC ("GIP") for \$53 million. AES Andes retained a 51% ownership interest in Chile Renovables and the transaction decreased the Company's indirect ownership in the subsidiary to 34%. As part of the transaction, AES Andes will contribute a specified pipeline of renewable development projects to Chile Renovables as the projects reach commercial operations, and GIP will make additional contributions to maintain its 49% ownership interest.

In January 2022, AES Andes completed the sale of Andes Solar 2a to Chile Renovables for \$37 million, resulting in an increase to NCI of \$28 million and an increase to additional paid-in capital of \$9 million. In June 2022, the sale of Los Olmos was completed for \$80 million, resulting in an increase to NCI of \$68 million and an increase to additional paid-in capital of \$12 million. As the Company maintained control after these transactions, Chile Renovables continues to be consolidated by the Company within the South America SBU reportable segment.

Guaimbê Holding — In April 2021, Guaimbê Solar Holding S.A (“Guaimbê Holding”), a subsidiary of AES Brasil which wholly owned the Guaimbê solar complex and the Alto Sertão II wind facility, issued preferred shares representing 19.9% ownership in the subsidiary for total proceeds of \$158 million. The transaction decreased the Company's indirect ownership interest in the operational entities from 45.3% to 36.3%.

In January 2022, the Ventus wind complex and AGV solar complex were incorporated by Guaimbê Holding. Guaimbê Holding issued additional preferred shares representing 3.5% ownership in the subsidiary for total proceeds of \$63 million. The transaction further decreased the Company's indirect ownership interest to 35.8%. As the Company maintained control after these transactions, Guaimbê Holding continues to be consolidated by the Company within the South America SBU reportable segment.

AES Andes — On December 29, 2020, AES Andes commenced a preemptive rights offering for its existing shareholders to subscribe for up to 1.98 billion of newly issued shares to fund its renewable growth program. The period ended on February 5, 2021 and Inversiones Cachagua SpA, an AES subsidiary, subscribed for 1.35 billion shares at a cost of \$205 million, increasing AES' indirect beneficial interest in AES Andes from 67% to 67.1%. The noncontrolling interest holders subscribed for 629 million shares, resulting in additional capital contributions of \$94 million.

In December 2021, AES Andes sold shares acquired in the 2020 share buyback program as required by the holding period terms of the program, resulting in a decline in the Company's indirect beneficial interest in AES Andes from 67.1% to 67%. This transaction resulted in a \$3 million decrease in Parent Company Stockholder's Equity due to a decrease in additional paid-in-capital.

In January 2022, Cachagua completed a tender offer for the shares of AES Andes held by minority shareholders for \$522 million, net of transaction costs. Upon completion, AES' indirect beneficial interest in AES Andes increased from 67.1% to 98%. Through multiple transactions in 2022 following the tender offer, Cachagua acquired an additional 1% ownership in AES Andes for \$22 million, further increasing AES' indirect beneficial interest to 99%. The tender offer and these follow-on transactions resulted in a \$172 million decrease to Parent Company Stockholder's Equity due to a decrease in additional paid-in capital of \$96 million and the reclassification of accumulated other comprehensive losses from NCI to AOCL of \$76 million. AES Andes is reported in the South America SBU reportable segment.

Colon — In September 2021, the Company acquired the remaining 49.9% minority ownership interest in Colon, becoming its sole owner. In conjunction with the acquisition, a note payable was recorded that is expected to be satisfied over two installments by the end of 2023. This transaction resulted in a \$12 million decrease in Parent Company Stockholders' Equity due to a decrease in additional paid-in-capital of \$8 million and the reclassification of accumulated other comprehensive losses from *Redeemable stock of subsidiaries* to AOCL of \$4 million. Colon is reported in the MCAC SBU reportable segment.

Cochrane — In September 2020, AES Andes completed the sale of a portion of its stake in Cochrane. The transaction included the issuance of preferred shares and the sale of 5% of its stake in the subsidiary for \$113 million, which decreased the Company's economic interest in Cochrane to 38%. The preferred shareholders have the preferential right to receive an annual amount equal to \$12 million, from any dividends or distributions of capital, until reaching the original investment of \$113 million plus a specified rate of return. As the Company maintained control after the sale, Cochrane continues to be consolidated by the Company within the South America SBU reportable segment.

The following table summarizes the net income (loss) attributable to The AES Corporation and all transfers (to) from noncontrolling interests for the periods indicated (in millions):

	December 31,		
	2022	2021	2020
Net income (loss) attributable to The AES Corporation	\$ (546)	\$ (409)	\$ 46
Transfers from noncontrolling interest:			
Increase (decrease) in The AES Corporation's paid-in capital for sale of subsidiary shares	78	(7)	260
Increase (decrease) in The AES Corporation's paid-in-capital for purchase of subsidiary shares	(78)	(9)	(89)
Net transfers (to) from noncontrolling interest	—	(16)	171
Change from net income (loss) attributable to The AES Corporation and transfers (to) from noncontrolling interests	<u>\$ (546)</u>	<u>\$ (425)</u>	<u>\$ 217</u>

Deconsolidations

Alto Maipo — In November 2021, Alto Maipo SpA filed a voluntary petition for relief under Chapter 11 of the U.S. Bankruptcy Code. The Company determined it no longer had control over Alto Maipo and deconsolidated the business, which increased Parent Company Stockholder's Equity by \$182 million due to the disposition of \$177 million of accumulated other comprehensive loss and \$5 million of accumulated deficit. See Note 24—*Held-for-Sale and Dispositions* for further information.

Accumulated Other Comprehensive Loss — The changes in AOCL by component, net of tax and noncontrolling interests, for the periods indicated were as follows (in millions):

	Foreign currency translation adjustment, net	Derivative gains (losses), net	Unfunded pension obligations, net	Total
Balance at December 31, 2020	\$ (1,644)	\$ (699)	\$ (54)	\$ (2,397)
Other comprehensive income (loss) before reclassifications	(86)	(7)	23	(70)
Amount reclassified to earnings	3	254	1	258
Other comprehensive income (loss)	(83)	247	24	188
Reclassification from NCI due to share sales and repurchases	(7)	(4)	—	(11)
Balance at December 31, 2021	<u>\$ (1,734)</u>	<u>\$ (456)</u>	<u>\$ (30)</u>	<u>\$ (2,220)</u>
Other comprehensive income (loss) before reclassifications	(37)	645	10	618
Amount reclassified to earnings	—	44	—	44
Other comprehensive income (loss)	(37)	689	10	662
Reclassification from NCI due to share sales and repurchases	(57)	(22)	(3)	(82)
Balance at December 31, 2022	<u>\$ (1,828)</u>	<u>\$ 211</u>	<u>\$ (23)</u>	<u>\$ (1,640)</u>

Reclassifications out of AOCL are presented in the following table. Amounts for the periods indicated are in millions and those in parenthesis indicate debits to the Consolidated Statements of Operations.

Details About AOCL Components	Affected Line Item in the Consolidated Statements of Operations	December 31,		
		2022	2021	2020
Foreign currency translation adjustments, net				
Gain on disposal and sale of business interests	\$ —	\$ (3)	\$ (192)	
Net income attributable to The AES Corporation	\$ —	\$ (3)	\$ (192)	
Derivative gains (losses), net				
Non-regulated revenue	\$ (1)	\$ (1)	\$ (1)	
Non-regulated cost of sales	(1)	1	(3)	
Interest expense	(58)	(85)	(60)	
Gain on disposal and sale of business interests	—	(362)	—	
Asset impairment expense	(16)	(13)	(10)	
Foreign currency transaction gains (losses)	2	(15)	(7)	
Income from continuing operations before taxes and equity in earnings of affiliates	(74)	(475)	(81)	
Income tax benefit (expense)	9	105	17	
Net equity in losses of affiliates	6	(17)	(10)	
Income from continuing operations	(59)	(387)	(74)	
Less: Net loss (income) attributable to noncontrolling interests and redeemable stock of subsidiaries	15	133	2	
Net income attributable to The AES Corporation	\$ (44)	\$ (254)	\$ (72)	
Amortization of defined benefit pension actuarial losses, net				
Regulated cost of sales	\$ —	\$ —	\$ (1)	
Non-regulated cost of sales	(1)	(1)	1	
Other expense	(1)	(3)	—	
Income from continuing operations before taxes and equity in earnings of affiliates	(2)	(4)	—	
Income tax expense	1	3	—	
Income from continuing operations	(1)	(1)	—	
Less: Income from continuing operations attributable to noncontrolling interests and redeemable stock of subsidiaries	1	—	—	
Net income attributable to The AES Corporation	\$ —	\$ (1)	\$ —	
Total reclassifications for the period, net of income tax and noncontrolling interests	\$ (44)	\$ (258)	\$ (264)	

Common Stock Dividends — The Parent Company paid dividends of \$0.1580 per outstanding share to its common stockholders during the first, second, third and fourth quarters of 2022 for dividends declared in December 2021, February 2022, July 2022, and October 2022, respectively.

On December 2, 2022, the Board of Directors declared a quarterly common stock dividend of \$0.1659 per share payable on February 15, 2023 to shareholders of record at the close of business on February 1, 2023.

Stock Repurchase Program — No shares were repurchased in 2022. The cumulative repurchases from the commencement of the Stock Repurchase Program in July 2010 through December 31, 2022 totaled 154.3 million shares for a total cost of \$1.9 billion, at an average price per share of \$12.12 (including a nominal amount of commissions). As of December 31, 2022, \$264 million remained available for repurchase under the Stock Repurchase Program.

The common stock repurchased has been classified as treasury stock and accounted for using the cost method. A total of 150,046,537 and 151,923,418 shares were held as treasury stock at December 31, 2022 and December 31, 2021, respectively. Restricted stock units under the Company's employee benefit plans are issued from treasury stock. The Company has not retired any common stock repurchased since it began the Stock Repurchase Program in July 2010.

18. SEGMENTS AND GEOGRAPHIC INFORMATION

The segment reporting structure uses the Company's management reporting structure as its foundation to reflect how the Company manages the businesses internally and is mainly organized by geographic regions which provides a socio-political-economic understanding of our business. The management reporting structure is organized by four SBUs led by our President and Chief Executive Officer: US and Utilities, South America, MCAC, and Eurasia SBUs. Using the accounting guidance on segment reporting, the Company determined that its four operating segments are aligned with its four reportable segments corresponding to its SBUs.

Corporate and Other — Included in "Corporate and Other" are the results of the AES self-insurance company and certain equity affiliates, corporate overhead costs which are not directly associated with the operations of our four reportable segments, and certain intercompany charges such as self-insurance premiums which are fully

eliminated in consolidation.

The Company uses Adjusted PTC as its primary segment performance measure. Adjusted PTC, a non-GAAP measure, is defined by the Company as pre-tax income from continuing operations attributable to The AES Corporation excluding gains or losses of the consolidated entity due to (a) unrealized gains or losses related to derivative transactions and equity securities; (b) unrealized foreign currency gains or losses; (c) gains, losses, benefits and costs associated with dispositions and acquisitions of business interests, including early plant closures, and gains and losses recognized at commencement of sales-type leases; (d) losses due to impairments; (e) gains, losses and costs due to the early retirement of debt; and (f) net gains at Angamos, one of our businesses in the South America SBU, associated with the early contract terminations with Minera Escondida and Minera Spence. Adjusted PTC also includes net equity in earnings of affiliates on an after-tax basis adjusted for the same gains or losses excluded from consolidated entities. The Company has concluded Adjusted PTC better reflects the underlying business performance of the Company and is the most relevant measure considered in the Company's internal evaluation of the financial performance of its segments. Additionally, given its large number of businesses and complexity, the Company concluded that Adjusted PTC is a more transparent measure that better assists investors in determining which businesses have the greatest impact on the Company's results.

Revenue and Adjusted PTC are presented before inter-segment eliminations, which includes the effect of intercompany transactions with other segments except for interest, charges for certain management fees, and the write-off of intercompany balances, as applicable. All intra-segment activity has been eliminated within the segment. Inter-segment activity has been eliminated within the total consolidated results.

The following tables present financial information by segment for the periods indicated (in millions):

Year Ended December 31,	Total Revenue		
	2022	2021	2020
US and Utilities SBU	\$ 5,013	\$ 4,335	\$ 3,918
South America SBU	3,539	3,541	3,159
MCAC SBU	2,868	2,157	1,766
Eurasia SBU	1,217	1,123	828
Corporate and Other	119	116	231
Eliminations	(139)	(131)	(242)
Total Revenue	\$ 12,617	\$ 11,141	\$ 9,660
Reconciliation from Income (Loss) from Continuing Operations before Taxes and Equity in Earnings of Affiliates:			
Year Ended December 31,	Total Adjusted PTC		
	2022	2021	2020
Loss from continuing operations before taxes and equity in earnings of affiliates	\$ (169)	\$ (1,064)	\$ 488
Add: Net equity in losses of affiliates	(71)	(24)	(123)
Less: Income from continuing operations before taxes, attributable to noncontrolling interests and redeemable stock of subsidiaries	(96)	644	(192)
Pre-tax contribution	(336)	(444)	173
Unrealized derivative and equity securities losses (gains)	128	(1)	3
Unrealized foreign currency losses (gains)	42	14	(10)
Disposition/acquisition losses	40	861	112
Impairment losses	1,658	1,153	928
Loss on extinguishment of debt	35	91	223
Net gains from early contract terminations at Angamos	—	(256)	(182)
Total Adjusted PTC	\$ 1,567	\$ 1,418	\$ 1,247
Year Ended December 31,			
Year Ended December 31,	Total Adjusted PTC		
	2022	2021	2020
US and Utilities SBU	\$ 570	\$ 660	\$ 505
South America SBU	573	423	534
MCAC SBU	559	314	287
Eurasia SBU	192	196	177
Corporate and Other	(326)	(182)	(256)
Eliminations	(1)	7	—
Total Adjusted PTC	\$ 1,567	\$ 1,418	\$ 1,247

Year Ended December 31,	Total Assets			Depreciation and Amortization			Capital Expenditures		
	2022	2021	2020	2022	2021	2020	2022	2021	2020
US and Utilities SBU	\$ 20,531	\$ 16,512	\$ 14,464	\$ 574	\$ 549	\$ 534	\$ 3,352	\$ 1,115	\$ 1,099
South America SBU	9,423	7,728	11,329	267	273	294	1,071	833	650
MCAC SBU	4,760	4,545	4,847	155	155	164	127	143	183
Eurasia SBU	2,870	3,466	3,621	44	66	63	23	20	9
Corporate and Other	779	712	342	13	13	13	11	29	19
Total	<u>\$ 38,363</u>	<u>\$ 32,963</u>	<u>\$ 34,603</u>	<u>\$ 1,053</u>	<u>\$ 1,056</u>	<u>\$ 1,068</u>	<u>\$ 4,584</u>	<u>\$ 2,140</u>	<u>\$ 1,960</u>
Year Ended December 31,	Interest Income			Interest Expense					
	2022	2021	2020	2022	2021	2020	2022	2021	2020
US and Utilities SBU	\$ 50	\$ 28	\$ 17	\$ 359	\$ 362	\$ 371			
South America SBU	177	100	64	342	239	237			
MCAC SBU	8	7	14	150	139	157			
Eurasia SBU	151	161	171	107	98	113			
Corporate and Other	3	2	2	159	73	160			
Total	<u>\$ 389</u>	<u>\$ 298</u>	<u>\$ 268</u>	<u>\$ 1,117</u>	<u>\$ 911</u>	<u>\$ 1,038</u>			
Year Ended December 31,	Investments in and Advances to Affiliates			Net Equity in Earnings (Losses) of Affiliates					
	2022	2021	2020	2022	2021	2020	2022	2021	2020
US and Utilities SBU	\$ 453	\$ 510	\$ 568	\$ 54	\$ 83	\$ (8)			
South America SBU	22	19	13	2	—	(80)			
MCAC SBU	180	144	168	(14)	(23)	(11)			
Eurasia SBU	11	—	1	—	2	4			
Corporate and Other	286	407	85	(113)	(86)	(28)			
Total	<u>\$ 952</u>	<u>\$ 1,080</u>	<u>\$ 835</u>	<u>\$ (71)</u>	<u>\$ (24)</u>	<u>\$ (123)</u>			

The following table presents information, by country, about the Company's consolidated operations for each of the three years ended December 31, 2022, 2021, and 2020, and as of December 31, 2022 and 2021 (in millions). Revenue is recorded in the country in which it is earned and assets are recorded in the country in which they are located.

Year Ended December 31,	Total Revenue			Long-Lived Assets ⁽¹⁾	
	2022	2021	2020	2022	2021
United States ⁽²⁾	\$ 4,093	\$ 3,531	\$ 3,243	\$ 13,833	\$ 11,034
Non-U.S.:					
Chile	2,064	2,297	2,092	2,730	2,241
Dominican Republic	1,591	1,087	896	1,013	892
El Salvador	902	792	666	395	371
Bulgaria	790	700	444	487	1,020
Panama	678	595	519	1,880	1,907
Mexico	595	471	349	409	614
Brazil	560	471	401	1,811	1,215
Argentina	501	390	308	461	470
Colombia	417	383	358	308	349
Vietnam ⁽³⁾	323	320	285	1	—
Jordan	102	98	96	41	42
Other Non-U.S.	1	6	3	26	28
Total Non-U.S.	<u>8,524</u>	<u>7,610</u>	<u>6,417</u>	<u>9,562</u>	<u>9,149</u>
Total	<u>\$ 12,617</u>	<u>\$ 11,141</u>	<u>\$ 9,660</u>	<u>\$ 23,395</u>	<u>\$ 20,183</u>

⁽¹⁾ For purposes of this disclosure, long-lived assets implies hard assets that cannot be readily removed, and thus excludes intangibles. Long-lived assets disclosed above include amounts recorded in *Property, plant and equipment, net* and right-of-use assets for operating leases recorded in *Other noncurrent assets* on the Consolidated Balance Sheets.

⁽²⁾ Includes Puerto Rico revenues of \$293 million, \$311 million, and \$298 million for the years ended December 31, 2022, 2021, and 2020, respectively, and long-lived assets of \$96 million and \$79 million as of December 31, 2022 and 2021, respectively.

⁽³⁾ The Mong Duong II power project is operated under a BOT contract. Future expected payments for the construction performance obligation are recognized in *Loan receivable* on the Consolidated Balance Sheets. See Note 20—Revenue for further information.

19. SHARE-BASED COMPENSATION

RESTRICTED STOCK

Restricted Stock Units — The Company issues RSUs under its long-term compensation plan. The RSUs are generally granted based upon a percentage of the participant's base salary. Most RSUs have a three-year vesting period and vest evenly in annual increments over that period. In all circumstances, RSUs granted by AES do not entitle the holder the right, or obligate AES, to settle the RSU in cash or other assets of AES.

For the years ended December 31, 2022, 2021, and 2020, RSUs issued had a grant date fair value equal to the closing price of the Company's stock on the grant date. The Company does not discount the grant date fair values to reflect any post-vesting restrictions. RSUs granted to employees during the years ended December 31, 2022, 2021, and 2020 had grant date weighted average fair values per RSU of \$20.92, \$26.46, and \$20.75, respectively.

The 2021 and 2022 RSUs awarded to certain executives have a performance condition related to the achievement of environmental, social and governance goals for the three-year periods ending December 31, 2023 and December 31, 2024, respectively. This performance condition can adjust the final number of units that vest to increase or decrease by up to 15% of the total units for all three years. The adjustment will be reflected in the number of units that vest at the end of the three-year performance period.

The following table summarizes the components of the Company's stock-based compensation related to its employee RSUs recognized in the Company's consolidated financial statements (in millions):

December 31,	2022	2021	2020
RSU expense before income tax	\$ 16	\$ 12	\$ 10
Tax benefit	(2)	(2)	(2)
RSU expense, net of tax	\$ 14	\$ 10	\$ 8
Total value of RSUs converted ⁽¹⁾	\$ 8	\$ 13	\$ 11
Total fair value of RSUs vested	\$ 13	\$ 10	\$ 10

⁽¹⁾ Amount represents fair market value on the date of conversion.

Cash was not used to settle RSUs or compensation cost capitalized as part of the cost of an asset for the years ended December 31, 2022, 2021, and 2020. As of December 31, 2022, total unrecognized compensation cost related to RSUs of \$25 million is expected to be recognized over a weighted average period of approximately 2.16 years. There were no modifications to RSU awards during the year ended December 31, 2022.

A summary of the activity of RSUs for the year ended December 31, 2022 follows (RSUs in thousands):

	RSUs	Weighted Average Grant Date Fair Values	Weighted Average Remaining Vesting Term
Nonvested at December 31, 2021	1,558	\$ 24.14	
Vested	(576)	22.33	
Forfeited and expired	(102)	23.72	
Granted	821	20.92	
Nonvested at December 31, 2022	1,701	\$ 23.22	1.97
Expected to vest at December 31, 2022	1,572	\$ 23.25	

The Company initially recognizes compensation cost on the estimated number of instruments for which the requisite service is expected to be rendered. In 2022, AES has estimated a weighted average forfeiture rate of 5.27% for RSUs granted in 2022. This estimate will be revised if subsequent information indicates that the actual number of instruments forfeited is likely to differ from previous estimates. Based on the estimated forfeiture rate, the Company expects to expense \$16 million on a straight-line basis over a weighted average period of three years years.

The following table summarizes the RSUs that vested and were converted during the periods indicated (RSUs in thousands):

Year Ended December 31,	2022	2021	2020
RSUs vested during the year	576	634	806
RSUs converted during the year, net of shares withheld for taxes	380	452	547
Shares withheld for taxes	196	182	259

OTHER SHARE BASED COMPENSATION

The Company has three other share-based award programs. The Company has recorded expense of \$23 million, \$14 million, and \$21 million for 2022, 2021, and 2020, respectively, related to these programs.

Stock options — AES grants options to purchase shares of common stock under stock option plans to non-employee directors. Under the terms of the plans, the Company may issue options to purchase shares of the Company's common stock at a price equal to 100% of the market price at the date the option is granted. Stock options issued in 2020, 2021, and 2022 have a three-year vesting schedule and vest in one-third increments over

the three-year period. The stock options have a contractual term of 10 years. In all circumstances, stock options granted by AES do not entitle the holder the right, or obligate AES, to settle the stock option in cash or other assets of AES.

Performance Stock Units — In 2020, 2021, and 2022, the Company issued PSUs to officers under its long-term compensation plan. PSUs are stock units which include performance conditions. For 2020, 2021, and 2022, performance conditions are based on the Company's Parent Free Cash Flow target. The performance conditions determine the vesting and final share equivalent per PSU and can result in earning an award payout range of 0% to 200%, depending on the achievement. The Company believes it is probable that the performance condition will be met and will continue to be evaluated throughout the performance period. In all circumstances, PSUs granted by AES do not entitle the holder the right, or obligate AES, to settle the stock units in cash or other assets of AES.

Performance Cash Units — In 2020, 2021, and 2022, the Company issued PCUs to its officers under its long-term compensation plan. The value for the 2020, 2021, and 2022 units is dependent on the market condition of total stockholder return on AES common stock as compared to the total stockholder return of the Standard and Poor's 500 Utilities Sector Index, Standard and Poor's 500 Index, and MSCI Emerging Markets Latin America Index over a three-year measurement period. Since PCUs are settled in cash, they qualify for liability accounting and periodic measurement is required.

20. REVENUE

The following table presents our revenue from contracts with customers and other revenue for the periods indicated (in millions):

	Year Ended December 31, 2022						
	US and Utilities SBU	South America SBU	MCAC SBU	Eurasia SBU	Corporate, Other and Eliminations	Total	
Regulated Revenue							
Revenue from contracts with customers	\$ 3,507	\$ —	\$ —	\$ —	\$ —	\$ 3,507	
Other regulated revenue	31	—	—	—	—	31	
Total regulated revenue	3,538	—	—	—	—	3,538	
Non-Regulated Revenue							
Revenue from contracts with customers	1,374	3,514	2,770	1,002	(21)	8,639	
Other non-regulated revenue ⁽¹⁾	101	25	98	215	1	440	
Total non-regulated revenue	1,475	3,539	2,868	1,217	(20)	9,079	
Total revenue	\$ 5,013	\$ 3,539	\$ 2,868	\$ 1,217	\$ (20)	\$ 12,617	
	Year Ended December 31, 2021						
	US and Utilities SBU	South America SBU	MCAC SBU	Eurasia SBU	Corporate, Other and Eliminations	Total	
Regulated Revenue							
Revenue from contracts with customers	\$ 2,831	\$ —	\$ —	\$ —	\$ —	\$ 2,831	
Other regulated revenue	37	—	—	—	—	37	
Total regulated revenue	2,868	—	\$ —	—	—	2,868	
Non-Regulated Revenue							
Revenue from contracts with customers	1,132	3,531	2,057	881	(15)	7,586	
Other non-regulated revenue ⁽¹⁾	335	10	100	242	—	687	
Total non-regulated revenue	1,467	3,541	2,157	1,123	(15)	8,273	
Total revenue	\$ 4,335	\$ 3,541	\$ 2,157	\$ 1,123	\$ (15)	\$ 11,141	

	Year Ended December 31, 2020					
	US and Utilities SBU	South America SBU	MCAC SBU	Eurasia SBU	Corporate, Other and Eliminations	Total
Regulated Revenue						
Revenue from contracts with customers	\$ 2,626	\$ —	\$ —	\$ —	\$ —	\$ 2,626
Other regulated revenue	35	—	—	—	—	35
Total regulated revenue	2,661	—	—	—	—	2,661
Non-Regulated Revenue						
Revenue from contracts with customers	1,015	3,151	1,668	594	(10)	6,418
Other non-regulated revenue ⁽¹⁾	242	8	98	234	(1)	581
Total non-regulated revenue	1,257	3,159	1,766	828	(11)	6,999
Total revenue	\$ 3,918	\$ 3,159	\$ 1,766	\$ 828	\$ (11)	\$ 9,660

⁽¹⁾ Other non-regulated revenue primarily includes lease and derivative revenue not accounted for under ASC 606.

Contract Balances — The timing of revenue recognition, billings, and cash collections results in accounts receivable and contract liabilities. The contract liabilities from contracts with customers were \$337 million and \$216 million as of December 31, 2022 and December 31, 2021, respectively.

During the years ended December 31, 2022 and 2021, we recognized revenue of \$36 million and \$410 million, respectively, that was included in the corresponding contract liability balance at the beginning of the periods.

In August 2020, AES Andes reached an agreement with Minera Escondida and Minera Spence to early terminate two PPAs of the Angamos coal-fired plant in Chile, further accelerating AES Andes' decarbonization strategy. As a result of the termination payment, Angamos recognized a contract liability of \$655 million, of which \$55 million was derecognized each month through the end of the remaining performance obligation in August 2021.

A significant financing arrangement exists for our Mong Duong plant in Vietnam. The plant was constructed under a BOT contract and will be transferred to the Vietnamese government after the completion of a 25 year PPA. The performance obligation to construct the facility was substantially completed in 2015. Contract consideration related to the construction, but not yet collected through the 25 year PPA, was reflected on the Consolidated Balance Sheet. As of December 31, 2021, Mong Duong met the held-for-sale criteria and the loan receivable balance of \$1.2 billion, net of CECL reserve of \$30 million, was classified as held-for-sale assets. Of the loan receivable balance, \$91 million was classified as *Current held-for-sale assets*, and \$1.1 billion was classified as *Noncurrent held-for-sale assets*. As of December 31, 2022, Mong Duong no longer met the held-for-sale criteria, as such, the loan receivable balance of \$1.1 billion, net of CECL reserve of \$28 million, was classified as a *Loan receivable* on the Consolidated Balance Sheet. See Note 24—*Held-for-Sale and Dispositions* for further information.

Remaining Performance Obligations — The transaction price allocated to remaining performance obligations represents future consideration for unsatisfied (or partially unsatisfied) performance obligations at the end of the reporting period. As of December 31, 2022, the aggregate amount of transaction price allocated to remaining performance obligations was \$9 million, primarily consisting of fixed consideration for the sale of renewable energy credits ("RECs") in long-term contracts in the U.S. We expect to recognize revenue on approximately one-fifth of the remaining performance obligations in 2023 and 2024, with the remainder recognized thereafter.

21. OTHER INCOME AND EXPENSE

Other income generally includes gains on insurance recoveries in excess of property damage, gains on asset sales and liability extinguishments, favorable judgments on contingencies, allowance for funds used during construction, and other income from miscellaneous transactions. Other expense generally includes losses on asset

sales and dispositions, losses on legal contingencies, and losses from other miscellaneous transactions. The components are summarized as follows (in millions):

	Year Ended December 31,	2022	2021	2020
Other Income				
Gain on remeasurement of investment ⁽¹⁾	\$ 22	\$ —	\$ —	\$ —
Insurance proceeds ⁽²⁾	12	—	—	—
AFUDC (US Utilities)	10	8	5	—
Liquidated damages under a power sales agreement	10	—	—	—
Legal settlements ⁽³⁾	6	53	—	—
Gain on remeasurement to acquisition-date fair value ⁽⁴⁾	5	254	—	—
Non-service pension income	5	10	—	—
Gain on acquired customer contracts	5	—	—	—
Gain on remeasurement of contingent consideration ⁽⁵⁾	3	28	—	—
Gain on sale of assets ⁽⁶⁾	—	24	46	—
Gain on pension curtailment	—	11	—	—
Other	24	22	24	—
Total other income	\$ 102	\$ 410	\$ 75	—
Other Expense				
Cost of disposition of business interests ⁽⁷⁾	\$ 15	\$ —	\$ —	\$ —
Loss on sale and disposal of assets	13	14	7	—
Legal contingencies and settlements	8	2	15	—
Loss on commencement of sales-type leases ⁽⁸⁾	5	13	—	—
Loss on sale of receivables ⁽⁹⁾	—	9	20	—
Other	27	22	11	—
Total other expense	\$ 68	\$ 60	\$ 53	—

⁽¹⁾ Related to the remeasurement of our existing investment in 5B, accounted for using the measurement alternative.

⁽²⁾ Primarily related to insurance recoveries associated with property damage at TermoAndes.

⁽³⁾ For the year ended December 31, 2021, primarily related to settlement of legal arbitration at Alto Maipo.

⁽⁴⁾ For the year ended December 31, 2021, related to the remeasurement of our existing equity interest in sPower's development platform as part of the step acquisition to form AES Clean Energy Development. See Note 25—Acquisitions for further information.

⁽⁵⁾ For the year ended December 31, 2021, primarily related to the remeasurement of contingent consideration on the Great Cove Solar acquisition at AES Clean Energy. See Note 25—Acquisitions for further information.

⁽⁶⁾ For the year ended December 31, 2020, primarily associated with the gain on sale of Redondo Beach land at Southland. See Note 24—Held-for-Sale and Dispositions for further information.

⁽⁷⁾ Cost of disposition of a business interest at AES Gilbert due to a fire incident in April 2022, including the recognition of an allowance on the sales-type lease receivable.

⁽⁸⁾ Related to losses recognized at commencement of sales-type leases at AES Renewable Holdings. See Note 14—Leases for further information.

⁽⁹⁾ Associated with loss on sale of Stabilization Fund receivables at AES Andes. See Note 7—Financing Receivables for further information.

22. ASSET IMPAIRMENT EXPENSE

Year ended December 31, (in millions)	2022	2021	2020
Mariza	\$ 468	\$ —	\$ —
TEG TEP	193	—	—
Jordan	76	—	—
Ventanas 3 & 4	—	649	—
Puerto Rico	—	475	—
Angamos	—	155	564
Buffalo Gap III	—	91	—
Buffalo Gap II	—	73	—
Mountain View I & II	—	67	—
Buffalo Gap I	—	29	—
Estrella del Mar I	—	11	30
Ventanas 1 & 2	—	—	213
Hawaii	—	—	38
Other	26	25	19
Total	\$ 763	\$ 1,575	\$ 864

TEG TEP—On October 1, 2022, the Company performed the annual goodwill impairment test for the TEG TEP reporting unit. The quantitative impairment test resulted in an estimated fair value of the reporting unit which was less than its carrying amount. The failure of the goodwill impairment test was identified as an impairment indicator for the long-lived assets of the TEG TEP reporting unit. The Company performed an impairment analysis as of October 1, 2022, in which it was determined that the carrying amount of the asset group was not recoverable. The TEG TEP asset group was determined to have a fair value of \$311 million using the income approach. As a

result, the Company recognized pre-tax asset impairment expense of \$193 million. Subsequent to the asset impairment being recorded, the Company re-performed the goodwill test and no impairment was noted. TEG TEP is reported in the MCAC SBU reportable segment.

Jordan — In November 2020, the Company signed an agreement to sell 26% ownership interest in Amman East and IPP4 for \$58 million and as of December 31, 2022, the generation plants were classified as held-for-sale. Due to the delay in closing the transaction, the carrying amount of the asset group in subsequent periods exceeded the agreed-upon sales price and total pre-tax impairment expense of \$76 million was recorded during 2022. See Note 24—*Held-for-Sale and Dispositions* for further information. Jordan is reported in the Eurasia SBU reportable segment.

Maritza — In May 2022, the Council for the European Union approved Bulgaria's National Recovery and Resilience plan which commits the country to cease generating electricity from coal beyond 2038. As this plan is expected to prohibit the Company from operating the Maritza coal-fired plant through its estimated useful life, it was determined that an indicator of impairment had occurred. The Company reassessed the useful life of the facility and performed an impairment analysis as of April 30, 2022, in which it was determined that the carrying amount of the asset group was not recoverable. The Maritza asset group was determined to have a fair value of \$452 million using the income approach. As a result, the Company recognized pre-tax asset impairment expense of \$468 million. Maritza is reported in the Eurasia SBU reportable segment.

Buffalo Gap — During the fourth quarter of 2021, due to an expired PPA and volatile spot prices in the ERCOT market, management concluded that the carrying value of the long-lived assets of Buffalo Gap I, II, and III wind generation facilities may not be recoverable. As such, the Company performed an impairment analysis and determined that the fair value of each asset group, using the income approach, was zero for Buffalo Gap I, II and III. As a result, the Company recognized pre-tax asset impairment expense of \$29 million, \$73 million, and \$91 million at Buffalo Gap I, II, and III, respectively. Buffalo Gap is reported in the US and Utilities SBU reportable segment.

Ventanas and Angamos — In August 2020, AES Andes reached an agreement with Minera Escondida and Minera Spence to early terminate two PPAs of the Angamos coal-fired plant in Chile, further accelerating AES Andes' decarbonization strategy. AES Andes also announced its intention to accelerate the retirement of the Ventanas 1 and Ventanas 2 coal-fired plants. Management will no longer be pursuing a contracting strategy for these assets and the plants will primarily be utilized as peaker plants and for grid stability. Due to these developments, the Company performed an impairment analysis and determined that the carrying amounts of these asset groups were not recoverable. The Angamos asset group was determined to have a fair value of \$306 million, using the income approach. As a result, the Company recognized pre-tax asset impairment expense of \$564 million and \$213 million at Angamos and Ventanas 1 & 2, respectively.

In July 2021, AES Andes entered into an agreement committing to accelerate the retirement of the Ventanas 3, Ventanas 4, Angamos 1, and Angamos 2 coal-fired plants in Chile. Due to these strategic developments, the Company performed impairment analyses as of June 30, 2021, and determined that the carrying amounts of the asset groups were not recoverable. The Ventanas 3 & 4 and Angamos asset groups were determined to have fair values of \$12 million and \$86 million, respectively, using the income approach. As a result, the Company recognized pre-tax asset impairment expense of \$649 million and \$155 million, respectively. Ventanas and Angamos are reported in the South America SBU reportable segment.

Mountain View I & II — In April 2021, the Company approved plans to execute a repowering project for the Mountain View I & II wind facility and signed two new PPAs for the energy and capacity related to the repowered asset. As the repowering will result in decommissioning the majority of the existing wind turbines in advance of their depreciable lives, the execution of the new PPAs was identified as an impairment indicator. The asset group was determined to have a fair value of \$11 million using the income approach. As a result, the Company recognized pre-tax asset impairment expense of \$67 million. Mountain View I & II is reported in the US and Utilities SBU reportable segment.

Puerto Rico — New factors arose in the first quarter of 2021 associated with the economic costs and operational and reputational risks of disposal of coal combustion residuals off island. In addition, new legislative initiatives surrounding the prohibition of coal generation assets in Puerto Rico were introduced. Collectively, these factors along with management's decision on how to best achieve our stated decarbonization goals resulted in an indicator of impairment at our asset group in Puerto Rico. As such, management performed a recoverability test in accordance with ASC 360 and concluded that Puerto Rico's undiscounted cash flows did not exceed the carrying

value of the asset group. The fair value of the asset group was determined to be \$73 million, resulting in pre-tax impairment expense of \$475 million. Puerto Rico is reported in the US and Utilities SBU reportable segment.

Estrella del Mar I — In August 2020, the Estrella del Mar I power barge was disconnected from the Panama grid. Upon disconnection, the Company concluded that the barge was no longer part of the AES Panama asset group and performed an impairment analysis. The Company determined that the carrying amount of the asset was not recoverable and recognized asset impairment expense of \$30 million. In September 2021, the Company recognized additional asset impairment expense of \$11 million due to a change in the estimated market value of the power barge. See Note 24—*Held-for-Sale and Dispositions* for further information. Estrella del Mar I is reported in the MCAC SBU reportable segment.

Hawaii — In July 2020, the Hawaii State Legislature passed Senate Bill 2629 which will prohibit AES Hawaii from generating electricity from coal after December 31, 2022. Therefore, management further reassessed the economic useful life of the generation facility and a decrease in the useful life was identified as an impairment indicator. The Company performed an impairment analysis and determined that the carrying amount of the asset group was not recoverable. As a result, the Company recognized asset impairment expense of \$38 million during the third quarter of 2020. The Company retired the generation facility in August 2022. Hawaii is reported in the US and Utilities SBU reportable segment.

23. INCOME TAXES

Income Tax Provision — The following table summarizes the expense for income taxes on continuing operations for the periods indicated (in millions):

		2022	2021	2020
Federal:	Current	\$ 3	\$ (2)	\$ (8)
	Deferred	(18)	42	(17)
State:	Current	2	1	—
	Deferred	1	18	2
Foreign:	Current	256	273	458
	Deferred	21	(465)	(219)
Total		\$ 265	\$ (133)	\$ 216

Effective and Statutory Rate Reconciliation — The following table summarizes a reconciliation of the U.S. statutory federal income tax rate to the Company's effective tax rate as a percentage of income from continuing operations before taxes for the periods indicated:

	2022	2021	2020
Statutory Federal tax rate	21 %	21 %	21 %
State taxes, net of Federal tax benefit	(1)%	(6)%	(6)%
Taxes on foreign earnings	(42)%	(2)%	15 %
Valuation allowance	(10)%	7 %	16 %
Uncertain tax positions	7 %	16 %	— %
Change in tax law	— %	(1)%	3 %
U.S. Investment Tax Credit	— %	— %	(8)%
Alto Maipo deconsolidation	— %	(17)%	— %
Noncontrolling interest on Buffalo Gap impairments	— %	(3)%	— %
Nondeductible goodwill impairments	(127)%	— %	— %
Other—net	(5)%	(2)%	3 %
Effective tax rate	(157)%	13 %	44 %

For 2022, included in the (42)% taxes on foreign earnings is the impact of favorable LNG sales at certain MCAC businesses and inflation and foreign currency impacts at certain Argentine businesses. The (127)% nondeductible goodwill impairments relates to the impairments at AES Andes and AES El Salvador. Not included in the 2022 effective tax rate is \$27 million of income tax expense recorded to additional paid-in capital related to the Company's sale of 14.9% of its ownership interest in the Southland Energy assets. See Note 17—*Equity* for details of the sale.

For 2021, included in the 7% for valuation allowance is approximately \$93 million related to the release of valuation allowance at one of our Brazilian subsidiaries. Included in the 16% uncertain tax positions is approximately \$176 million of income tax benefit related to effective settlement resulting from the exam closure of the Company's U.S. 2017 tax return, the focus of which was on the TCJA one-time transition tax. The (17)% included in the Alto Maipo deconsolidation item above primarily reflects the lack of tax benefit for approximately

\$775 million of the \$2,074 million pretax Alto Maipo deconsolidation loss. Also included in this item is approximately \$41 million of tax benefit related to resulting tax over book outside basis difference in Alto Maipo, which is offset by \$41 million of tax expense in the valuation allowance line item. The (3)% Buffalo Gap impairments item relates to the amounts of impairment allocated to tax equity noncontrolling interest which are nondeductible.

For 2020, the 15% taxes on foreign earnings item includes \$20 million of tax benefit associated with the Company's equity investment in Guacolda. Included in the 2020 (8)% U.S. investment tax credit is \$35 million of benefit associated with the Na Pua Makani wind facility. Not included in the 2020 effective tax rate is \$75 million of income tax expense recorded to additional paid-in-capital related to the Company's sale of 35% of its ownership interest in the Southland Energy assets. See Note 17—*Equity* for details of the sale.

Income Tax Receivables and Payables — The current income taxes receivable and payable are included in *Other current assets* and *Accrued and other liabilities*, respectively, on the accompanying Consolidated Balance Sheets. The noncurrent income taxes receivable and payable are included in *Other noncurrent assets* and *Other noncurrent liabilities*, respectively, on the accompanying Consolidated Balance Sheets. The following table summarizes the income taxes receivable and payable as of the periods indicated (in millions):

December 31,	2022	2021
Income taxes receivable—current	\$ 107	\$ 184
Income taxes receivable—noncurrent	69	2
Total income taxes receivable	<u>\$ 176</u>	<u>\$ 186</u>
Income taxes payable—current	\$ 104	\$ 133
Income taxes payable—noncurrent	—	—
Total income taxes payable	<u>\$ 104</u>	<u>\$ 133</u>

Deferred Income Taxes — Deferred income taxes reflect the net tax effects of (a) temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes and (b) operating loss and tax credit carryforwards. These items are stated at the enacted tax rates that are expected to be in effect when taxes are actually paid or recovered.

As of December 31, 2022, the Company had federal net operating loss carryforwards for tax return purposes of approximately \$1.4 billion, of which approximately \$30 million expire in 2036 and \$1.37 billion carry forward indefinitely. The Company also had federal general business tax credit carryforwards of approximately \$70 million, of which \$14 million expire in years 2023 to 2032 and \$56 million expire in years 2035 to 2042. Additionally, the Company had state net operating loss carryforwards as of December 31, 2022 of approximately \$6.1 billion expiring primarily in years 2023 to 2042. As of December 31, 2022, the Company had foreign net operating loss carryforwards of approximately \$2.1 billion that expire at various times beginning in 2023 and some of which carry forward without expiration.

Valuation allowances increased \$49 million during 2022 to \$577 million at December 31, 2022. This net increase was primarily the result of valuation allowance established at acquisition of a Brazilian subsidiary.

Valuation allowances decreased \$106 million during 2021 to \$528 million at December 31, 2021. This net decrease was primarily due to the release of valuation allowance at one of our Brazilian subsidiaries.

The Company believes that it is more likely than not that the net deferred tax assets as shown below will be realized when future taxable income is generated through the reversal of existing taxable temporary differences and income that is expected to be generated by businesses that have long-term contracts or a history of generating taxable income.

The following table summarizes deferred tax assets and liabilities, as of the periods indicated (in millions):

December 31,	2022	2021
Differences between book and tax basis of property	\$ (903)	\$ (961)
Investment in U.S. tax partnerships	(582)	(629)
Other taxable temporary differences	(350)	(418)
Total deferred tax liability	<u>(1,835)</u>	<u>(2,008)</u>
Operating loss carryforwards	1,129	979
Capital loss carryforwards	62	77
Bad debt and other book provisions	57	380
Tax credit carryforwards	62	68
Other deductible temporary differences	282	464
Total gross deferred tax asset	1,592	1,968
Less: Valuation allowance	<u>(577)</u>	<u>(528)</u>
Total net deferred tax asset	<u>1,015</u>	<u>1,440</u>
Net deferred tax liability	<u>\$ (820)</u>	<u>\$ (568)</u>

The Company considers undistributed earnings of certain foreign subsidiaries to be indefinitely reinvested outside of the U.S. Except for the one-time transition tax in the U.S., no taxes have been recorded with respect to our indefinitely reinvested earnings in accordance with the relevant accounting guidance for income taxes. Should the earnings be remitted as dividends, the Company may be subject to additional foreign withholding and state income taxes. Under the TCJA, future distributions from foreign subsidiaries will generally be subject to a federal dividends received deduction in the U.S. As of December 31, 2022, the cumulative amount of U.S. GAAP foreign un-remitted earnings upon which additional income taxes have not been provided is approximately \$3 billion. It is not practicable to estimate the amount of any additional taxes which may be payable on the undistributed earnings.

Income from operations in certain countries is subject to reduced tax rates as a result of satisfying specific commitments regarding employment and capital investment. The Company's income tax benefits related to the tax status of these operations are estimated to be \$27 million, \$27 million and \$33 million for the years ended December 31, 2022, 2021 and 2020, respectively. The per share effect of these benefits after noncontrolling interests was \$0.02, \$0.02 and \$0.03 for the years ended December 31, 2022, 2021 and 2020, respectively. Included in the Company's income tax benefits is the benefit related to our operations in Vietnam, which is estimated to be \$18 million, \$16 million and \$16 million for the years ended December 31, 2022, 2021 and 2020, respectively. The per share effect of these benefits related to our operations in Vietnam after noncontrolling interest was \$0.01 for each of the years ended December 31, 2022, 2021 and 2020.

The following table shows the income (loss) from continuing operations, before income taxes, net equity in earnings of affiliates and noncontrolling interests, for the periods indicated (in millions):

December 31,	2022	2021	2020
U.S.	\$ 22	\$ 622	\$ (135)
Non-U.S.	(191)	(1,686)	623
Total	\$ (169)	\$ (1,064)	\$ 488

Uncertain Tax Positions — Uncertain tax positions have been classified as noncurrent income tax liabilities unless they are expected to be paid within one year. The Company's policy for interest and penalties related to income tax exposures is to recognize interest and penalties as a component of the provision for income taxes in the Consolidated Statements of Operations. The following table shows the total amount of gross accrued income taxes related to interest and penalties included in the Consolidated Balance Sheets for the periods indicated (in millions):

December 31,	2022	2021
Interest related	\$ 2	\$ 2
Penalties related	—	1

The following table shows the expense/(benefit) related to interest and penalties on unrecognized tax benefits for the periods indicated (in millions):

December 31,	2022	2021	2020
Total benefit for interest related to unrecognized tax benefits	\$ —	\$ 1	\$ —
Total expense for penalties related to unrecognized tax benefits	—	1	—

We are potentially subject to income tax audits in numerous jurisdictions in the U.S. and internationally until the applicable statute of limitations expires. Tax audits by their nature are often complex and can require several years to complete. The following is a summary of tax years potentially subject to examination in the significant tax and

business jurisdictions in which we operate:

Jurisdiction	Tax Years Subject to Examination
Argentina	2016-2022
Brazil	2016-2022
Chile	2019-2022
Colombia	2016-2022
Dominican Republic	2019-2022
EI Salvador	2019-2022
Netherlands	2016-2022
Panama	2019-2022
United Kingdom	2019-2022
United States (Federal)	2017-2022

As of December 31, 2022, 2021 and 2020, the total amount of unrecognized tax benefits was \$107 million, \$122 million and \$458 million, respectively. The total amount of unrecognized tax benefits that would benefit the effective tax rate as of December 31, 2022, 2021 and 2020 is \$107 million, \$122 million and \$439 million, respectively, of which \$2 million, \$4 million, and \$33 million, respectively, would be in the form of tax attributes that warrant a full valuation allowance. Further, the total amount of unrecognized tax benefit that would benefit the effective tax rate as of 2022 would be reduced by approximately \$34 million of tax expense related to remeasurement from 35% to 21%.

The total amount of unrecognized tax benefits anticipated to result in a net decrease to unrecognized tax benefits within 12 months of December 31, 2022 is estimated to be between zero and \$10 million, primarily relating to statute of limitation lapses and tax exam settlements.

The following is a reconciliation of the beginning and ending amounts of unrecognized tax benefits for the periods indicated (in millions):

	2022	2021	2020
Balance at January 1	\$ 122	\$ 458	\$ 465
Additions for current year tax positions	4	28	—
Additions for tax positions of prior years	—	14	3
Reductions for tax positions of prior years	(16)	—	(6)
Settlements	(3)	(377)	—
Lapse of statute of limitations	—	(1)	(4)
Balance at December 31	<u>\$ 107</u>	<u>\$ 122</u>	<u>\$ 458</u>

The 2021 settlement amount of \$377 million above primarily relates to effective settlement of historic unrecognized tax benefits as a result of the exam closure of the Company's U.S. 2017 tax return, the focus of which was on the TCJA one-time transition tax assessed on cumulative foreign earnings and profits. This amount is based on the pre-TCJA income tax rate of 35% though the actual impact to the Company's income tax expense is an income tax benefit computed at 21%.

The Company and certain of its subsidiaries are currently under examination by the relevant taxing authorities for various tax years. The Company regularly assesses the potential outcome of these examinations in each of the taxing jurisdictions when determining the adequacy of the amount of unrecognized tax benefit recorded. While it is often difficult to predict the final outcome or the timing of resolution of any particular uncertain tax position, we believe we have appropriately accrued for our uncertain tax benefits. However, audit outcomes and the timing of audit settlements and future events that would impact our previously recorded unrecognized tax benefits and the range of anticipated increases or decreases in unrecognized tax benefits are subject to significant uncertainty. It is possible that the ultimate outcome of current or future examinations may exceed our provision for current unrecognized tax benefits in amounts that could be material, but cannot be estimated as of December 31, 2022. Our effective tax rate and net income in any given future period could therefore be materially impacted.

24. HELD-FOR-SALE AND DISPOSITIONS

Held-for-Sale

Mong Duong — In December 2020, the Company entered into an agreement to sell its entire 51% ownership interest in Mong Duong, a coal-fired plant in Vietnam, and 51% equity interest in Mong Duong Finance Holdings B.V., an SPV accounted for as an equity affiliate. As a result, the Mong Duong plant and SPV were classified as held-for-sale, but did not meet the criteria to be reported as discontinued operations. The transaction was not closed by December 31, 2022 and the agreement was terminated by the parties. As of December 31, 2022, the Mong Duong plant and SPV no longer met the held-for-sale criteria and were reclassified to held and used. Mong Duong is reported in the Eurasia SBU reportable segment.

Jordan — In November 2020, the Company signed an agreement to sell 26% ownership interest in IPP1 and IPP4 for \$58 million. The sale is expected to close in 2023. After completion of the sale, the Company will retain a 10% ownership interest in IPP1 and IPP4, which will be accounted for as an equity method investment. As of December 31, 2022, the generation plants were classified as held-for-sale, but did not meet the criteria to be reported as discontinued operations. On a consolidated basis, the carrying value of the plants held-for-sale as of December 31, 2022 was \$164 million. Jordan is reported in the Eurasia SBU reportable segment.

Excluding any impairment charges, pre-tax income attributable to AES of businesses held-for-sale as of December 31, 2022 was as follows (in millions):

Year Ended December 31,	2022	2021	2020
Jordan	(6)	21	20

Dispositions

Colon transmission line — In December 2021, Gas Natural Atlántico II S. de. R.L., completed the sale of its transmission line to Empresa de Transmision Electrica, S.A., a government entity in charge of transmission of energy in Panama, for \$51 million, resulting in a pre-tax gain on sale of \$6 million, reported in *Other income* on the Consolidated Statement of Operations. The sale did not meet the criteria to be reported as discontinued operations. Prior to its sale, the Colon transmission line was reported in the MCAC SBU reportable segment.

Alto Maipo — In November 2021, Alto Maipo SpA filed a voluntary petition for relief under Chapter 11 of the U.S. Bankruptcy Code. Therefore, the Company determined it no longer had control over Alto Maipo, resulting in its deconsolidation. The Company recorded a pre-tax loss on deconsolidation of \$2,074 million in *Loss on disposal and sale of business interests* on the Consolidated Statement of Operations. As Alto Maipo represents a component of AES Andes' single reporting unit, the carrying value of the net assets of Alto Maipo included an allocation of \$224 million of AES Andes' consolidated goodwill balance of \$868 million prior to deconsolidation. The Company allocated AES Andes' goodwill based on the relative fair value of the component, which was determined based on the relative fair values of the business to be disposed and the portion of the reporting unit to be retained. Subsequent to the deconsolidation of Alto Maipo, the company evaluated the remaining Andes Reporting Unit goodwill and determined the goodwill was not at-risk.

The deconsolidation did not meet the criteria to be reported as discontinued operations. After deconsolidation, the Company's retained investment in Alto Maipo was recognized as a financial asset with zero fair value, utilizing a restructuring model of cash flows and a cost of equity of 21%. Prior to deconsolidation, Alto Maipo was reported in the South America SBU reportable segment. See Note 5—*Fair Value*, Note 8—*Investments In and Advances to Affiliates*, Note 9—*Goodwill and Other Intangible Assets*, and Note 17—*Equity* for further information.

Estrella del Mar I — In November 2021, the Company completed the sale of the Estrella del Mar I power barge for \$6 million. The sale did not meet the criteria to be reported as discontinued operations. Prior to its sale, Estrella del Mar I was reported in the MCAC SBU reportable segment. See Note 22—*Asset Impairment Expense* for further information.

AES Tietê Inova Soluções — In June 2021, the Company completed the sale of its ownership in AES Inova Soluções, an investment platform in distributed solar generation, for \$20 million, resulting in a pre-tax loss on sale of \$1 million. The sale did not meet the criteria to be reported as discontinued operations. Prior to its sale, AES Tietê Inova Soluções was reported in the South America SBU reportable segment.

Itabo — In April 2021, the Company completed the sale of its 43% ownership interest in Itabo, a coal-fired plant and gas turbine in Dominican Republic, for \$88 million, resulting in a pre-tax gain on sale of \$4 million. The sale did not meet the criteria to be reported as discontinued operations. Prior to its sale, Itabo was reported in the MCAC SBU reportable segment.

Uruguaiana — In September 2020, the Company completed the sale of its entire interest in AES Uruguaiana, resulting in a pre-tax loss on sale of \$95 million, primarily due to the write-off of cumulative translation adjustments. As part of the sale agreement, the Company has guaranteed payment of certain contingent liabilities and provided indemnifications to the buyer which were estimated to have a fair value of \$22 million. The sale did not meet the criteria to be reported as discontinued operations. Prior to its sale, Uruguaiana was reported in the South America SBU reportable segment.

Kazakhstan Hydroelectric — Affiliates of the Company (the “Affiliates”) previously operated Shulbinsk HPP and Ust-Kamenogorsk HPP (the “HPPs”), two hydroelectric plants in Kazakhstan, under a concession agreement with the Republic of Kazakhstan (“ROK”). In April 2017, the ROK initiated the process to transfer these plants back to the ROK. The ROK indicated that arbitration would be necessary to determine the correct Return Share Transfer Payment (“RST”) and, rather than paying the Affiliates, deposited the RST into an escrow account. In exchange, the Affiliates transferred 100% of the shares in the HPPs to the ROK, under protest and with a full reservation of rights. In February 2018, the Affiliates initiated the arbitration process in international court to recover at least \$75 million of the RST placed in escrow, based on the September 30, 2017 RST calculation.

In May 2020, the arbitrator issued a final decision in favor of the Affiliates, awarding the Affiliates a net amount of damages of approximately \$45 million, which has been collected. AES recorded the remaining \$30 million as a loss on sale during the quarter ended June 30, 2020. Prior to their transfer, the Kazakhstan HPPs were reported in the Eurasia SBU reportable segment.

Redondo Beach Land — In March 2020, the Company completed the sale of land held by AES Redondo Beach, a gas-fired generating facility in California. The land's carrying value was \$24 million, resulting in a pre-tax gain on sale of \$41 million, reported in *Other income* on the Consolidated Statement of Operations. AES Redondo Beach will lease back the land from the purchaser for the remainder of the generation facility's useful life. Redondo Beach is reported in the US and Utilities SBU reportable segment.

The following table summarizes, excluding any impairment charge or gain/loss on sale, the pre-tax income attributable to AES of disposed businesses for the periods indicated (in millions):

Year Ended December 31,	2021	2020
Alto Maipo	\$ 35	\$ 11
Itabo	5	41
Estrella de Mar I	—	5
Total	\$ 40	\$ 57

25. ACQUISITIONS

Cubico II — On November 30, 2022, the Company, through its subsidiary AES Brasil Energia S.A ("AES Brasil") acquired 100% of shares of an operational wind complex comprised of (i) Ventos de São Tomé Holding S.A., (ii) Ventos de São Tito Holdings S.A., and (iii) REB Empreendimentos e Administradora de Bens S.A. The transaction was accounted for as an asset acquisition that did not meet the definition of a business. The assets acquired and liabilities assumed were recorded at their relative fair values. The total purchase price for the acquisition was \$185 million. The Cubico II wind complex is recorded in the South America SBU reportable segment.

Agua Clara — On June 17, 2022, the Company, through its subsidiaries AES Dominicana Renewable Energy and AES Andres DR, S.A., acquired 85% of the equity interests in Agua Clara, S.A.S., a wind project, for consideration of \$98 million. The transaction was accounted for as an asset acquisition that did not meet the definition of a business. As Agua Clara is not a VIE, any difference between the fair value of the assets and consideration transferred was allocated to PP&E on a relative fair value basis. Agua Clara is reported in the MCAC SBU reportable segment.

Tunica Windpower, LLC — On June 17, 2022, the Company entered into an agreement for the purchase of 100% of the membership interests in Tunica Windpower, LLC. The transaction was accounted for as an asset acquisition of variable interest entities that did not meet the definition of a business. The assets acquired and liabilities assumed were recorded at their fair values, which equaled the fair value of the consideration paid of approximately \$22 million, including contingent consideration of \$7 million. The contingent consideration will be updated quarterly with any prospective changes in fair value recorded through earnings. Tunica Windpower is reported in the US and Utilities SBU reportable segment.

Windsor PV1, LLC — On May 27, 2022, the Company entered into an agreement for the purchase of 100% of the membership interests in Windsor PV1, LLC, an early development-stage solar project. The transaction was accounted for as an asset acquisition of variable interest entities that did not meet the definition of a business. The assets acquired and liabilities assumed were recorded at their fair values, which equaled the fair value of the consideration paid of approximately \$17 million, including contingent consideration of \$5 million. The contingent consideration will be updated quarterly with any prospective changes in fair value recorded through earnings. Windsor is reported in the US and Utilities SBU reportable segment.

New York Wind — In November 2021, AES Clean Energy Development, LLC completed the acquisition of Cogentrix Valcour Intermediate Holdings, LLC for \$352 million cash consideration, including customary purchase price adjustments, plus the assumption of \$126 million of non-recourse debt. The transaction includes operating wind assets spread across six sites and will complement AES Clean Energy's existing operating and development solar and energy storage assets in the state of New York. The transaction was accounted for as a business combination, therefore, the assets acquired and liabilities assumed at acquisition date were recorded at their fair values, which resulted in the recognition of \$199 million of goodwill. This goodwill represents the opportunity to repower the acquired assets and thus obtain additional cash flows from the asset group. The Company has recorded preliminary amounts for the purchase price allocation in 2021. New York Wind is reported in the US and Utilities SBU reportable segment.

In the first quarter of 2022, the Company finalized the purchase price allocation related to the acquisition of Cogentrix Valcour Intermediate Holdings, LLC. There were no significant adjustments made to the preliminary purchase price allocation recorded in the fourth quarter of 2021 when the acquisition was completed. New York Wind is reported in the US and Utilities SBU reportable segment.

Hardy Hills Solar — In December 2021, AES Indiana completed the acquisition of Hardy Hills solar project, which included assets of \$52 million primarily consisting of a development project intangible asset. The transaction was accounted for as an asset acquisition of a variable interest entity that did not meet the definition of a business; therefore, the individual assets and liabilities were recorded at their fair values. A \$6 million gain was recorded in *Other income* on the Consolidated Statement of Operations for the difference between the consideration transferred and the assets and liabilities recognized. The total consideration included \$3 million of contingent consideration dependent on the amount of certain future costs incurred by the project. Hardy Hills Solar is reported in the US and Utilities SBU reportable segment.

Community Energy — In December 2021, AES Clean Energy Development, LLC completed the acquisition of Community Energy, LLC for \$217 million cash consideration, including customary purchase price adjustments, plus the assumption of \$38 million of non-recourse debt. At closing, the Company made a cash payment of \$232 million, which included \$15 million of the assumed non-recourse debt. The transaction was accounted for as a business combination; therefore, the assets acquired and liabilities assumed at the acquisition date were recorded at their fair values, which resulted in the recognition of \$90 million of goodwill. Community Energy is reported in the US and Utilities SBU reportable segment.

In the first quarter of 2022, the Company finalized the purchase price allocation related to the acquisition of Community Energy, LLC. There were no significant adjustments made to the preliminary purchase price allocation recorded in the fourth quarter of 2021 when the acquisition was completed. Community Energy is reported in the US and Utilities SBU reportable segment.

sPower Projects — In December 2021, AES Clean Energy Development Holdings, LLC entered into an agreement with AIMCo, our minority partner in AES Clean Energy Development, LLC and our partner in the sPower equity method investment. As part of this transaction, AES acquired an additional 25% ownership interest in specifically identified projects of sPower from AIMCo, in exchange for a 25% ownership interest in the Mountain View and Laurel Mountain wind operating projects, plus \$28 million cash.

The transaction was accounted for as an asset acquisition. The sPower projects received were remeasured at their acquisition-date fair values, resulting in the recognition of a \$35 million gain, recorded in *Other Income* on the Consolidated Statement of Operations. See Note 8—*Investments in and Advances to Affiliates* for further information. The Company recorded \$3 million in additional paid-in-capital, representing the difference between the fair value of the consideration transferred and the recognition of the noncontrolling interest.

Subsequent to the closing of the transaction, AES holds a 75% ownership interest in the Mountain View and Laurel Mountain wind operating projects and a 75% ownership interest in specifically identified projects of sPower through its ownership of AES Clean Energy Development, LLC, and 50% ownership interest in the sPower equity method investment. AIMCo holds the remaining 25% minority interest in AES Clean Energy Development, LLC and 50% ownership interest in sPower. sPower projects are reported in the US and Utilities SBU reportable segment.

Serra Verde Wind Complex — In July 2021, AES Brasil completed the acquisition of the Serra Verde Wind Complex for \$18 million, subject to customary working capital adjustments, of which \$6 million was paid in cash and the remaining \$12 million will be paid in two annual installments ending on July 19, 2023. The transaction was accounted for as an asset acquisition of variable interest entities that did not meet the definition of a business; therefore, the assets acquired and liabilities assumed were recorded at their fair values, which equaled the fair value of the consideration. Serra Verde is reported in the South America SBU reportable segment.

Cajuína Wind Complex — In May 2021, AES Brasil completed the acquisition of the Cajuína Wind Complex phase I for \$22 million, subject to customary working capital adjustments. On July 29, 2021, AES Brasil completed the acquisition of the Cajuína Wind Complex phase II for \$24 million, subject to customary working capital adjustments, including \$3 million of contingent consideration. The Company made initial cash payments of \$6 million for each acquisition and the remaining balances will be paid in three annual installments ending on March 31, 2024 and on July 29, 2024, respectively. These transactions were accounted for as asset acquisitions of variable interest entities that did not meet the definition of a business; therefore, the assets acquired and liabilities assumed were recorded at their fair values, which equaled the fair value of the consideration. Cajuína is reported in the South America SBU reportable segment.

Cubico I — In April 2021, AES Brasil completed the acquisition of the Cubico I wind complex for \$109 million, subject to customary working capital adjustments. The transaction was accounted for as an asset acquisition, therefore the consideration transferred, plus transaction costs, were allocated to the individual assets acquired and liabilities assumed based on their relative fair values. Cubico I is reported in the South America SBU reportable segment.

AES Clean Energy Development — In February 2021, the Company substantially completed the merger of the sPower and AES Renewable Holdings development platforms to form AES Clean Energy Development, which will serve as the development vehicle for all future renewable projects in the U.S. As part of the transaction, AES acquired an additional 25% ownership interest in the sPower development platform from AIMCo, our existing partner in the sPower equity method investment, in exchange for a 25% ownership interest in specifically identified development entities of AES Renewable Holdings, certain future exit rights in the new partnership, and \$7 million of cash.

The sPower development platform was carved-out of AES' existing equity method investment. AES' basis in the portion of assets transferred was \$102 million, and the contribution to AES Clean Energy Development resulted in a corresponding decrease in the carrying value of the sPower investment. See Note 8—*Investments in and Advances to Affiliates* for further information.

During the first quarter of 2021, the sPower development assets transferred were remeasured at their acquisition-date preliminary fair values, resulting in the recognition of a \$36 million gain, recorded in *Other income* on the Consolidated Statement of Operations. The Company recorded \$81 million in *Goodwill* as of the acquisition date, representing the difference between the fair value of the consideration transferred, the noncontrolling interest in the sPower development platform, and the acquisition-date fair value of the Company's previously held equity interest and the fair value of the identifiable assets acquired and liabilities assumed.

During the second quarter of 2021, the Company recorded measurement period adjustments as result of additional facts and circumstances that existed as of the date of the acquisition but were not yet known as of the time of the valuation performed in the first quarter of 2021. As a result, the estimated acquisition-date carrying value and fair values of the sPower development assets transferred were increased, which resulted in the recognition of an additional \$178 million gain, for an updated gain of \$214 million. Furthermore, the estimated goodwill as of the acquisition date was reduced to \$45 million, as a result of adjustments to the fair value of the consideration paid and updates to the fair values of separately identifiable intangible assets. The Company finalized the purchase price allocation in the third quarter of 2021, which did not result in any material measurement period adjustments.

Subsequent to the closing of the transaction, AES holds a 75% ownership interest in AES Clean Energy Development. AIMCo holds the remaining 25% minority interest along with certain partnership rights, though currently not in effect, that would enable AIMCo to exit in the future. AIMCo's minority interest is recorded as temporary equity in *Redeemable stock of subsidiaries* on the Consolidated Balance Sheet. See Note 16—*Redeemable Stock of Subsidiaries* for further information. AES Clean Energy Development is reported in the US and Utilities SBU reportable segment.

Great Cove Solar— In January 2021 and May 2021, AES Clean Energy Development, LLC completed the acquisitions of Great Cove I and II, respectively. The fair value of the initial consideration paid to acquire Great Cove I and Great Cove II was \$13 million and \$24 million, which included contingent consideration liabilities of \$6 million and \$22 million, respectively. These acquisitions were accounted for as asset acquisitions of variable interest entities that did not meet the definition of a business; therefore, the assets acquired and liabilities assumed were recorded at their fair values, which equaled the fair value of the consideration. During the third quarter of 2021, the contingent liabilities which related primarily to certain price adjustment features were remeasured, resulting in contingent consideration assets of \$2 million and \$12 million for Great Cove I and Great Cove II, respectively. This remeasurement resulted in a gain of \$32 million recorded in *Other income* in the Consolidated Statement of Operations during the third quarter of 2021. In October 2021, the Company amended the agreement, resulting in the reclassification of the previously contingent consideration assets to *Prepaid Expenses*. In December 2021, the Company acquired Community Energy, LLC (as further described above), and such remaining prepaid amounts were written off to *Other income* in the Consolidated Statement of Operations. Great Cove Solar is reported in the US and Utilities SBU reportable segment.

Ventus Wind Complex — In December 2020, AES Brasil completed the acquisition of the Ventus Wind Complex ("Ventus") for \$90 million, including \$3 million of working capital adjustments. At closing, the Company made an initial cash payment of \$44 million. The remainder was paid in the second and third quarter of 2021. The transaction was accounted for as an asset acquisition; therefore, the total amount of consideration, plus transaction costs, was allocated to the individual assets and liabilities assumed based on their relative fair values. Ventus is reported in the South America SBU reportable segment.

Penonome I — In May 2020, AES Panama completed the acquisition of the Penonome I wind farm from Goldwind International for \$80 million. The transaction was accounted for as an asset acquisition, therefore the consideration transferred, plus transaction costs, was allocated to the individual assets and liabilities assumed based on their relative fair values. Penonome I is reported in the MCAC SBU reportable segment.

26. EARNINGS PER SHARE

Basic and diluted earnings per share are based on the weighted-average number of shares of common stock and potential common stock outstanding during the period. Potential common stock, for purposes of determining diluted earnings per share, includes the effects of dilutive RSUs, stock options, and equity units. The effect of such potential common stock is computed using the treasury stock method for RSUs and stock options, and is computed using the if-converted method for equity units.

The following table is a reconciliation of the numerator and denominator of the basic and diluted earnings per share computation for income from continuing operations for the years ended December 31, 2022, 2021 and 2020, where income represents the numerator and weighted-average shares represent the denominator.

Year Ended December 31, (in millions, except per share data)	2022			2021			2020		
	Loss	Shares	\$ per Share	Loss	Shares	\$ per Share	Income	Shares	\$ per Share
BASIC EARNINGS (LOSS) PER SHARE									
Income (loss) from continuing operations attributable to The AES Corporation common stockholders	\$ (546)	668	\$ (0.82)	\$ (413)	666	\$ (0.62)	\$ 43	665	\$ 0.06
EFFECT OF DILUTIVE SECURITIES									
Stock options	—	—	—	—	—	—	—	1	—
Restricted stock units	—	—	—	—	—	—	—	2	—
Equity units	—	—	—	—	—	—	—	—	—
DILUTED EARNINGS (LOSS) PER SHARE									
	<u>\$ (546)</u>	<u>668</u>	<u>\$ (0.82)</u>	<u>\$ (413)</u>	<u>666</u>	<u>\$ (0.62)</u>	<u>\$ 43</u>	<u>668</u>	<u>\$ 0.06</u>

For the years ended December 31, 2022 and December 31, 2021, the calculation of diluted earnings per share excluded 5 million outstanding stock awards and 40 million shares underlying our March 2021 Equity Units because their impact would be anti-dilutive given the loss from continuing operations. These shares could potentially dilute basic earnings per share in the future. Had the Company generated income, potential shares of common stock of 3 million and 4 million related to the stock awards and 40 million and 33 million related to the Equity Units, would have been included in diluted weighted-average shares outstanding for the years ended December 31, 2022 and December 31, 2021, respectively.

As described in Note 17—*Equity*, the Company issued 10,430,500 Equity Units in March 2021 with a total notional value of \$1,043 million. Each Equity Unit has a stated amount of \$100 and was initially issued as a Corporate Unit, consisting of a 2024 Purchase Contract and a 10% undivided beneficial ownership interest in one share of Series A Preferred Stock. Prior to February 15, 2024, the Series A Preferred Stock may be converted at the option of the holder only in connection with a fundamental change. On and after February 15, 2024, the Series A Preferred Stock may be converted freely at the option of the holder. Upon conversion, the Company will deliver to the holder with respect to each share of Series A Preferred Stock being converted (i) a share of our Series B Preferred Stock, or, solely with respect to conversions in connection with a redemption, cash and (ii) shares of our common stock, if any, in respect of any conversion value in excess of the liquidation preference of the preferred stock being converted. The conversion rate is initially 31.5428 shares of common stock per one share of Series A Preferred Stock, which is equivalent to an initial conversion price of approximately \$31.70 per share of common stock. As of December 31, 2022, due to customary anti-dilution provisions, the conversion rate was 31.5846, equivalent to a conversion price of approximately \$31.66 per share of common stock. The Series A Preferred Stock and the 2024 Purchase Contracts are being accounted for as one unit of account. In calculating diluted EPS, the Company has applied the if-converted method to determine the impact of the forward purchase feature and considered if there are incremental shares that should be included related to the Series A Preferred conversion value.

27. RISKS AND UNCERTAINTIES

AES is a diversified power generation and utility company organized into four market-oriented SBUs. See additional discussion of the Company's principal markets in Note 18—*Segments and Geographic Information*. Within our four SBUs, we have two primary lines of business: generation and utilities. The generation line of business uses a wide range of fuels and technologies to generate electricity such as coal, gas, hydro, wind, solar, and biomass. Our utilities business comprises businesses that transmit, distribute, and in certain circumstances, generate power. In addition, the Company has operations in the renewables area. These efforts include projects primarily in wind, solar, and energy storage.

Operating and Economic Risks — The Company operates in several developing economies where macroeconomic conditions are typically more volatile than developed economies. Deteriorating market conditions and evolving industry expectations to transition away from fossil fuel sources for generation expose the Company to the risk of decreased earnings and cash flows due to, among other factors, adverse fluctuations in the commodities and foreign currency spot markets, and potential changes in the estimated useful lives of our thermal plants. Additionally, credit markets around the globe continue to tighten their standards, which could impact our ability to finance growth projects through access to capital markets. Currently, the Company has an investment grade rating from both Standard & Poor's and Fitch of BBB- and an investment grade rating from Moody's of Baa3. A downgrade in our current investment grade ratings could affect the Company's ability to finance new and/or existing development projects at competitive interest rates. As of December 31, 2022, the Company had \$1.4 billion of unrestricted cash and cash equivalents.

During 2022, 68% of our revenue was generated outside the U.S. and a significant portion of our international operations is conducted in developing countries. We continue to invest in several developing countries to expand our existing platform and operations. International operations, particularly the operation, financing, and development of projects in developing countries, entail significant risks and uncertainties, including, without limitation:

- economic, social, and political instability in any particular country or region;
- inability to economically hedge energy prices;
- volatility in commodity prices;
- adverse changes in currency exchange rates;
- government restrictions on converting currencies or repatriating funds;
- unexpected changes in foreign laws, regulatory framework, or in trade, monetary or fiscal policies;
- high inflation and monetary fluctuations;
- restrictions on imports of solar panels, wind turbines, coal, oil, gas, or other raw materials required by our generation businesses to operate;
- threatened or consummated expropriation or nationalization of our assets by foreign governments;
- unwillingness of governments, government agencies, similar organizations, or other counterparties to honor their commitments;
- unwillingness of governments, government agencies, courts, or similar bodies to enforce contracts that are economically advantageous to subsidiaries of the Company and economically unfavorable to counterparties, against such counterparties, whether such counterparties are governments or private parties;
- inability to obtain access to fair and equitable political, regulatory, administrative, and legal systems;
- adverse changes in government tax policy;
- potentially adverse tax consequences of operating in multiple jurisdictions;
- difficulties in enforcing our contractual rights, enforcing judgments, or obtaining a just result in local jurisdictions; and
- inability to obtain financing on expected terms.

Any of these factors, individually or in combination with others, could materially and adversely affect our business, results of operations, and financial condition. In addition, our Latin American operations experience volatility in revenue and earnings which have caused and are expected to cause significant volatility in our results of operations and cash flows. The volatility is caused by regulatory and economic difficulties, political instability, indexation of certain PPAs to fuel prices, and currency fluctuations being experienced in many of these countries. This volatility reduces the predictability and enhances the uncertainty associated with cash flows from these businesses.

Our inability to predict, influence or respond appropriately to changes in law or regulatory schemes, including any inability to obtain reasonable increases in tariffs or tariff adjustments for increased expenses, could adversely impact our results of operations or our ability to meet publicly announced projections or analysts' expectations. Furthermore, changes in laws or regulations or changes in the application or interpretation of regulatory provisions in jurisdictions where we operate, particularly our utility businesses where electricity tariffs are subject to regulatory review or approval, could adversely affect our business, including, but not limited to:

- changes in the determination, definition, or classification of costs to be included as reimbursable or pass-through costs;
- changes in the definition or determination of controllable or noncontrollable costs;
- adverse changes in tax law;
- changes in the definition of events which may or may not qualify as changes in economic equilibrium;
- changes in the timing of tariff increases;
- other changes in the regulatory determinations under the relevant concessions; or
- changes in environmental regulations, including regulations relating to GHG emissions in any of our businesses.

Any of the above events may result in lower margins for the affected businesses, which can adversely affect our results of operations.

COVID-19 Pandemic — The COVID-19 pandemic has severely impacted global economic activity, including electricity and energy consumption, and caused significant volatility in financial markets. The magnitude and duration of the COVID-19 pandemic is unknown at this time and may have material and adverse effects on our results of operations, financial condition and cash flows in future periods.

Alto Maipo — On August 27, 2021, Alto Maipo updated its creditors with respect to the construction budget and long-term business plan for the project, which considers different scenarios for spot prices, decarbonization initiatives, and hydrological conditions, among other significant variables. Under some of these scenarios, Alto Maipo may experience reduced future cash flows, which would limit its ability to repay debt. Alto Maipo's management initiated negotiations with its creditors to restructure its obligations and achieve a sustainable long-term capital structure for Alto Maipo. On November 17, 2021, Alto Maipo SpA commenced a reorganization proceeding in accordance with Chapter 11 of the U.S. Bankruptcy Code, through a voluntary petition. Consequently, after the Chapter 11 filing, the Company is no longer considered to have control over Alto Maipo, which resulted in its deconsolidation. The Company recognized an after-tax loss of approximately \$1.2 billion, net of noncontrolling interests, in the Consolidated Statement of Operations in the fourth quarter of 2021, associated with the loss of control attributable to the former controlling interest.

On May 26, 2022, Alto Maipo emerged from bankruptcy in accordance with Chapter 11 of the U.S. Bankruptcy Code. Alto Maipo, as restructured, is considered a VIE. As the Company lacks the power to make significant decisions, it does not meet the criteria to be considered the primary beneficiary of Alto Maipo and therefore will not consolidate this entity. The Company has elected the fair value option to account for its investment in Alto Maipo. If Alto Maipo is unable to meet its obligations under the restructured arrangements as they come due, the creditors may enforce their rights under the credit agreements. These finance agreements are non-recourse with respect to The AES Corporation.

Foreign Currency Risks — AES operates businesses in many foreign countries and such operations could be impacted by significant fluctuations in foreign currency exchange rates. Fluctuations in currency exchange rate between the USD and the following currencies could create significant fluctuations in earnings and cash flows: the Argentine peso, the Brazilian real, the Chilean peso, the Colombian peso, the Dominican peso, the Euro, the Indian rupee, and the Mexican peso.

Concentrations — Due to the geographical diversity of its operations, the Company does not have any significant concentration of customers or sources of fuel supply. Several of the Company's generation businesses rely on PPAs with one or a limited number of customers for the majority of, and in some cases all of, the relevant businesses' output over the term of the PPAs. However, no single customer accounted for 10% or more of total revenue in 2022, 2021 or 2020.

The cash flows and results of operations of our businesses depend on the credit quality of our customers and the continued ability of our customers and suppliers to meet their obligations under PPAs and fuel supply agreements. If a substantial portion of the Company's long-term PPAs and/or fuel supply were modified or terminated, the Company would be adversely affected to the extent that it would be unable to replace such contracts at equally favorable terms.

28. RELATED PARTY TRANSACTIONS

Certain of our businesses in Panama and the Dominican Republic are partially owned by governments either directly or through state-owned institutions. In the ordinary course of business, these businesses enter into energy purchase and sale transactions, and transmission agreements with other state-owned institutions which are controlled by such governments. At two of our generation businesses in Mexico, the offtakers exercise significant influence, but not control, through representation on these businesses' Boards of Directors. These offtakers are also required to hold a nominal ownership interest in such businesses. Furthermore, in 2021, the Company began construction projects with Fluence relating to energy storage. These related party transactions primarily present themselves as construction in progress as seen below. Additionally, the Company provides certain support and management services to several of its affiliates under various agreements.

The Company's Consolidated Statements of Operations included the following transactions with related parties for the periods indicated (in millions):

Years Ended December 31,	2022	2021	2020
Revenue—Non-Regulated	\$ 1,093	\$ 1,159	\$ 1,506
Cost of Sales—Non-Regulated	352	324	504
Interest income	10	12	20
Interest expense	95	88	131

The following table summarizes the balance sheet accounts with related parties included in the Company's Consolidated Balance Sheets as of the periods indicated (in millions):

December 31,	2022	2021
Receivables from related parties	\$ 484	\$ 131
Accounts and notes payable to related parties ⁽¹⁾	1,264	1,421
Construction in progress	714	134

⁽¹⁾ Includes \$1 billion of debt to Mong Duong Finance Holdings B.V., an SPV accounted for as an equity affiliate as of December 31, 2022 (see Note 11—Debt). For the December 31, 2021 balance, the debt balance at the SPV was classified to held-for-sale liabilities on the Consolidated Balance Sheet.

29. SELECTED QUARTERLY FINANCIAL DATA (UNAUDITED)

Quarterly Financial Data — The following tables summarize the unaudited quarterly Condensed Consolidated Statements of Operations for the Company for 2022 and 2021 (amounts in millions, except per share data). Amounts have been restated to reflect discontinued operations in all periods presented and reflect all adjustments necessary in the opinion of management for a fair statement of the results for interim periods.

Quarter Ended 2022	Mar 31	Jun 30	Sep 30	Dec 31
Revenue	\$ 2,852	\$ 3,078	\$ 3,627	\$ 3,060
Operating margin	530	563	892	563
Income (loss) from continuing operations, net of tax ⁽¹⁾	171	(136)	446	(986)
Net income (loss) attributable to The AES Corporation	\$ 115	\$ (179)	\$ 421	\$ (903)
Basic earnings (loss) per share:				
Net income (loss) attributable to The AES Corporation common stockholders	\$ 0.17	\$ (0.27)	\$ 0.63	\$ (1.35)
Diluted earnings (loss) per share:				
Net income (loss) attributable to The AES Corporation common stockholders	\$ 0.16	\$ (0.27)	\$ 0.59	\$ (1.35)
Dividends declared per common share	\$ 0.16	\$ —	\$ 0.16	\$ 0.32
Quarter Ended 2021	Mar 31	Jun 30	Sep 30	Dec 31
Revenue	\$ 2,635	\$ 2,700	\$ 3,036	\$ 2,770
Operating margin	664	728	760	559
Income (loss) from continuing operations, net of tax ⁽²⁾	(29)	(81)	485	(1,330)
Income from discontinued operations, net of tax	—	4	—	—
Net income (loss)	\$ (29)	\$ (77)	\$ 485	\$ (1,330)
Net income (loss) attributable to The AES Corporation	\$ (148)	\$ 28	\$ 343	\$ (632)
Basic earnings (loss) per share:				
Income (loss) from continuing operations attributable to The AES Corporation common stockholders, net of tax	\$ (0.22)	\$ 0.03	\$ 0.52	\$ (0.95)
Income from discontinued operations attributable to The AES Corporation common stockholders, net of tax	—	0.01	—	—
Net income (loss) attributable to The AES Corporation common stockholders	\$ (0.22)	\$ 0.04	\$ 0.52	\$ (0.95)
Diluted earnings (loss) per share:				
Income (loss) from continuing operations attributable to The AES Corporation common stockholders, net of tax	\$ (0.22)	\$ 0.03	\$ 0.48	\$ (0.95)
Income from discontinued operations attributable to The AES Corporation common stockholders, net of tax	—	0.01	—	—
Net income (loss) attributable to The AES Corporation common stockholders	\$ (0.22)	\$ 0.04	\$ 0.48	\$ (0.95)
Dividends declared per common share	\$ 0.15	\$ —	\$ 0.15	\$ 0.31

⁽¹⁾ Includes pre-tax impairment expense of \$482 million, \$50 million, and \$230 million in the second, third, and fourth quarters of 2022, respectively (See Note 22—Asset Impairment Expense), pre-tax goodwill impairment expense of \$777 million in the fourth quarter of 2022 (See Note 9—Goodwill and Other Intangible Assets), and other non-operating expense of \$175 million in the fourth quarter of 2022 (See Note 8—Investments in and Advances to Equity Affiliates).

⁽²⁾ Includes pre-tax impairment expense of \$473 million, \$872 million, and \$201 million in the first, second, and fourth quarters of 2021, respectively (See Note 22—Asset Impairment Expense), and pre-tax loss on sale of business interests of \$1.8 billion, primarily due to the deconsolidation of Alto Maipo, in the fourth quarter of 2021 (See Note 24—Held-for-Sale and Dispositions).

30. SUBSEQUENT EVENTS

sPower — On February 28, 2023, sPower closed the sell-down of a portfolio of operating assets ("OpCo B") for \$196 million. After the sale, the Company's ownership interest in OpCo B decreased from 50% to approximately 26%. See Note 8—*Investments in and Advances to Affiliates* for further information. The sPower equity method investment is reported in the US and Utilities SBU reportable segment.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

Conclusion Regarding the Effectiveness of Disclosure Controls and Procedures

The Company maintains disclosure controls and procedures that are designed to ensure that information required to be disclosed in the reports that the Company files or submits under the Securities Exchange Act of 1934, as amended (the "Exchange Act") is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to the CEO and CFO, as appropriate, to allow timely decisions regarding required disclosures.

The Company carried out the evaluation required by Rules 13a-15(b) and 15d-15(b), under the supervision and with the participation of our management, including the CEO and CFO, of the effectiveness of our "disclosure controls and procedures" (as defined in the Exchange Act Rules 13a-15(e) and 15d-15(e)). Based upon this evaluation, the CEO and CFO concluded that as of December 31, 2022, our disclosure controls and procedures were effective.

Management's Report on Internal Control over Financial Reporting

Management of the Company is responsible for establishing and maintaining adequate internal control over financial reporting, as defined in Rule 13a-15(f) under the Exchange Act. The Company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with GAAP and includes those policies and procedures that:

- pertain to the maintenance of records that in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Company;
- provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with GAAP, and that receipts and expenditures of the Company are being made only in accordance with authorizations of management and directors of the Company; and
- provide reasonable assurance that unauthorized acquisition, use or disposition of the Company's assets that could have a material effect on the financial statements are prevented or detected timely.

Management, including our CEO and CFO, does not expect that our internal controls will prevent or detect all errors and all fraud. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. In addition, any evaluation of the effectiveness of controls is subject to risks that those internal controls may become inadequate in future periods because of changes in business conditions, or that the degree of compliance with the policies or procedures deteriorates.

Management assessed the effectiveness of our internal control over financial reporting as of December 31, 2022. In making this assessment, management used the criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO") in 2013. Based on this assessment, management believes that the Company maintained effective internal control over financial reporting as of December 31, 2022.

The effectiveness of the Company's internal control over financial reporting as of December 31, 2022, has been audited by Ernst & Young LLP, an independent registered public accounting firm, as stated in their report, which appears herein.

Changes in Internal Control Over Financial Reporting:

There were no changes that occurred during the quarter ended December 31, 2022 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and the Board of Directors of The AES Corporation

Opinion on Internal Control over Financial Reporting

We have audited The AES Corporation's internal control over financial reporting as of December 31, 2022, based on criteria established in Internal Control — Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, The AES Corporation (the Company) maintained, in all material respects, effective internal control over financial reporting as of December 31, 2022, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2022 and 2021, the related consolidated statements of operations, comprehensive income (loss), changes in equity, and cash flows for each of the three years in the period ended December 31, 2022, and the related notes and the financial statement schedule listed in the Index at Item 15(a) and our report dated March 1, 2023 expressed an unqualified opinion thereon.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying *Management's Report on Internal Control over Financial Reporting*. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ Ernst & Young LLP

Tysons, Virginia
March 1, 2023

ITEM 9B. OTHER INFORMATION

None.

ITEM 9C. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS

Not applicable.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The following information is incorporated by reference from the Registrant's Proxy Statement for the Registrant's 2023 Annual Meeting of Stockholders which the Registrant expects will be filed on or around March 7, 2023 (the "2023 Proxy Statement"):

- information regarding the directors required by this item found under the heading *Board of Directors - Biographies*;
- information regarding AES' Code of Ethics found under the heading *Corporate Governance at AES - Additional Governance Information*; and
- information regarding AES' Financial Audit Committee found under the heading *Board and Committee Governance - Board Committees - Financial Audit Committee* (the "Audit Committee").

Certain information regarding executive officers required by this Item is presented as a supplementary item in Part I hereof (pursuant to Instruction 3 to Item 401(b) of Regulation S-K). The other information required by this Item, to the extent not included above, will be contained in our 2023 Proxy Statement and is herein incorporated by reference.

ITEM 11. EXECUTIVE COMPENSATION

The information required by Item 402 of Regulation S-K will be contained in the 2023 Proxy Statement under "Director Compensation" and "Executive Compensation" (excluding the information under the caption "Report of the Compensation Committee") and is incorporated herein by reference.

The information required by Item 407(e)(5) of Regulation S-K will be contained under the caption "Report of the Compensation Committee" of the Proxy Statement. Such information shall not be deemed to be "filed."

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

(a) Security Ownership of Certain Beneficial Owners and Management.

See the information contained under the heading *Security Ownership of Certain Beneficial Owners, Directors, and Executive Officers* of the 2023 Proxy Statement, which information is incorporated herein by reference.

(b) Securities Authorized for Issuance under Equity Compensation Plans.

The following table provides information about shares of AES common stock that may be issued under AES' equity compensation plans, as of December 31, 2022:

Securities Authorized for Issuance under Equity Compensation Plans (As of December 31, 2022)

Plan category	(a) Number of securities to be issued upon exercise of outstanding options, warrants and rights	(b) Weighted average exercise price of outstanding options, warrants and rights	(c) Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a))
Equity compensation plans approved by security holders ⁽¹⁾	5,626,386 ⁽²⁾	\$ 13.70	10,314,146
Equity compensation plans not approved by security holders	—	—	—
Total	5,626,386	\$ 13.70	10,314,146

⁽¹⁾ The following equity compensation plans have been approved by The AES Corporation's Stockholders:

(a) The AES Corporation 2003 Long Term Compensation Plan was adopted in 2003 and provided for 17,000,000 shares authorized for issuance thereunder. In 2008, an amendment to the Plan to provide an additional 12,000,000 shares was approved by AES' stockholders, bringing the total authorized shares to 29,000,000. In 2010, an additional amendment to the Plan to provide an additional 9,000,000 shares was approved by AES' stockholders, bringing the total authorized shares to 38,000,000. In 2015, an additional amendment to the Plan to provide an additional 7,750,000 shares was approved by AES' stockholders, bringing the total authorized shares to 45,750,000. The weighted average exercise price of Options outstanding under this plan included in Column (b) is \$13.70 (excluding performance stock units, restricted stock units and director stock units), with 10,314,146 shares available for future issuance.

(b) The AES Corporation Second Amended and Restated Deferred Compensation Plan for directors provided for 2,000,000 shares authorized for issuance. Column (b) excludes the Director stock units granted thereunder. In conjunction with the 2010 amendment to the 2003 Long Term Compensation Plan, ongoing award issuance from this plan was discontinued in 2010 as Director stock units will be issued from the 2003 Long Term Compensation Plan. Any remaining shares under this plan, which are not reserved for

issuance under outstanding awards, are not available for future issuance and thus the amount of 105,341 shares is not included in Column (c) above.

- (2) Includes 3,189,316 (of which 544,386 are vested and 2,644,930 are unvested) shares underlying PSU and RSU awards (assuming 2020, 2021 and 2022 PSUs maximum performance), 1,641,814 shares underlying Director stock unit awards, and 795,256 shares issuable upon the exercise of Stock Option grants, for an aggregate number of 5,626,386 shares.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information regarding related party transactions required by this item will be included in the 2023 Proxy Statement found under the headings *Related Person Policies and Procedures* and *Board and Committee Governance* and are incorporated herein by reference.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information required by this Item 14 will be included in the 2023 Proxy Statement under the headings *Information Regarding The Independent Registered Public Accounting Firm, Audit Fees, Audit Related Fees, and Pre-Approval Policies and Procedures* and is incorporated herein by reference.

PART IV**ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULE**(a) *Financial Statements.*

Financial Statements and Schedules:	Page
Consolidated Balance Sheets as of December 31, 2022 and 2021	128
Consolidated Statements of Operations for the years ended December 31, 2022, 2021 and 2020	129
Consolidated Statements of Comprehensive Income (Loss) for the years ended December 31, 2022, 2021 and 2020	130
Consolidated Statements of Changes in Equity for the years ended December 31, 2022, 2021 and 2020	131
Consolidated Statements of Cash Flows for the years ended December 31, 2022, 2021 and 2020	132
Notes to Consolidated Financial Statements	133
Schedules	S-2-S-7

(b) *Exhibits.*

- 3.1 [Sixth Restated Certificate of Incorporation of The AES Corporation is incorporated herein by reference to Exhibit 3.1 of the Company's Form 10-K for the year ended December 31, 2008.](#)
- 3.2 [By-Laws of The AES Corporation, as amended and incorporated herein by reference to Exhibit 3.1 of the Company's Form 8-K filed on December 10, 2019.](#)
- 3.3 [Certificate of Designations of the Company with respect to the Convertible Preferred Stock, filed with the Secretary of State of the State of Delaware and effective March 10, 2021, incorporated herein by reference to Exhibit 3.1 of the Company's Form 8-K filed on March 11, 2021 \(SEC File No. 001-12291\).](#)
- 3.4 [Certificate of Designations of the Company with respect to the Series B Preferred Stock, filed with the Secretary of State of the State of Delaware and effective March 10, 2021, incorporated herein by reference to Exhibit 3.2 of the Company's Form 8-K filed on March 11, 2021 \(SEC File No. 001-12291\).](#)
- 4 There are numerous instruments defining the rights of holders of long-term indebtedness of the Registrant and its consolidated subsidiaries, none of which exceeds ten percent of the total assets of the Registrant and its subsidiaries on a consolidated basis. The Registrant hereby agrees to furnish a copy of any of such agreements to the Commission upon request. Since these documents are not required filings under Item 601 of Regulation S-K, the Company has elected to file certain of these documents as Exhibits 4.(a)—4.(n).
- 4.(a) [Senior Indenture, dated as of December 8, 1998, between The AES Corporation and Wells Fargo Bank, National Association, as successor to Bank One, National Association \(formerly known as The First National Bank of Chicago\) is incorporated herein by reference to Exhibit 4.01 of the Company's Form 8-K filed on December 11, 1998 \(SEC File No. 001-12291\).](#)
- 4.(b) [Ninth Supplemental Indenture, dated as of April 3, 2003, between The AES Corporation and Wells Fargo Bank, National Association \(as successor by consolidation to Wells Fargo Bank Minnesota, National Association\) is incorporated herein by reference to Exhibit 4.6 of the Company's Form S-4 filed on December 7, 2007.](#)
- 4.(c) [Twenty-Fourth Supplemental Indenture, dated March 15, 2018, between The AES Corporation and Deutsche Bank Trust Company Americas, as Trustee is incorporated herein by reference to Exhibit 4.1 of the Company's Form 8-K filed on March 21, 2018.](#)
- 4.(d) [Indenture, dated May 27, 2020, between THE AES Corporation and Deutsche Bank Trust Company Americas, as Trustee is incorporated herein by reference to Exhibit 4.1 of the Company's Form 8-K filed on May 27, 2020.](#)
- 4.(e) [Twenty-Fifth Supplemental Indenture, dated June 5, 2020, between THE AES Corporation and Deutsche Bank Trust Company Americas, as Trustee is incorporated herein by reference to Exhibit 4.1 of the Company's Form 8-K filed on June 8, 2020.](#)
- 4.(f) [Twenty-Sixth Supplemental Indenture, dated December 4, 2020, between THE AES Corporation and Deutsche Bank Trust Company Americas, as Trustee is incorporated herein by reference to Exhibit 4.1 of the Company's Form 8-K filed on December 4, 2020.](#)
- 4.(g) [Twenty-Seventh Supplemental Indenture, dated December 7, 2020, between THE AES Corporation and Deutsche Bank Trust Company Americas, as Trustee is incorporated herein by reference to Exhibit 4.1 of the Company's Form 8-K filed on December 7, 2020.](#)
- 4.(h) [Description of the Registrant's Securities is incorporated herein by reference to Exhibit 4.\(k\) of the Company's Form 10-K for the year ended December 31, 2020 is incorporated herein by reference to Exhibit 4.\(k\) of the Company's Form 10-K for the year ended December 31, 2020.](#)
- 4.(i) [Purchase Contract and Pledge Agreement, dated March 11, 2021, between the Company and Deutsche Bank Trust Company Americas, as purchase contract agent, collateral agent, custodial agent and securities intermediary, incorporated herein by reference to Exhibit 4.1 of the Company's Form 8-K filed on March 11, 2021 \(SEC File No. 001-12291\).](#)
- 4.(j) [Form of Corporate Unit, incorporated herein by reference as part of Exhibit 4.1 of the Company's Form 8-K filed on March 11, 2021 \(SEC File No. 001-12291\).](#)
- 4.(k) [Form of Treasury Unit, incorporated herein by reference as part of Exhibit 4.1 of the Company's Form 8-K filed on March 11, 2021 \(SEC File No. 001-12291\).](#)
- 4.(l) [Form of Cash Settled Unit, incorporated herein by reference as part of Exhibit 4.1 of the Company's Form 8-K filed on March 11, 2021 \(SEC File No. 001-12291\).](#)
- 4.(m) [Form of Series A Cumulative Perpetual Convertible Preferred Stock Certificate, incorporated herein by reference to Exhibit 4.5 of the Company's Form 8-K filed on March 11, 2021 \(SEC File No. 001-12291\).](#)
- 4.(n) [Form of Series B Cumulative Perpetual Preferred Stock Certificate, incorporated herein by reference to Exhibit 4.6 of the Company's Form 8-K filed on March 11, 2021 \(SEC File No. 001-12291\).](#)

- 10.1 The AES Corporation Profit Sharing and Stock Ownership Plan are incorporated herein by reference to Exhibit 4(c)(1) of the Registration Statement on Form S-8 (Registration No. 33-49262) filed on July 2, 1992. (P)
- 10.2 The AES Corporation Incentive Stock Option Plan of 1991, as amended, is incorporated herein by reference to Exhibit 10.30 of the Company's Form 10-K for the year ended December 31, 1995 (SEC File No. 00019281). (P)
- 10.3 Applied Energy Services, Inc. Incentive Stock Option Plan of 1982 is incorporated herein by reference to Exhibit 10.31 of the Registration Statement on Form S-1 (Registration No. 33-40483). (P)
- 10.4 Deferred Compensation Plan for Executive Officers, as amended, is incorporated herein by reference to Exhibit 10.32 of Amendment No. 1 to the Registration Statement on Form S-1 (Registration No. 33-40483). (P)
- 10.5 [Deferred Compensation Plan for Directors, as amended and restated, on February 17, 2012 is incorporated herein by reference to Exhibit 10.5 of the Company's Form 10-K for the year ended December 31, 2012.](#)
- 10.6 [The AES Corporation Stock Option Plan for Outside Directors, as amended and restated, on December 7, 2007 is incorporated herein by reference to Exhibit 10.6 of the Company's Form 10-K for the year ended December 31, 2012.](#)
- 10.7 The AES Corporation Supplemental Retirement Plan is incorporated herein by reference to Exhibit 10.63 of the Company's Form 10-K for the year ended December 31, 1994 (SEC File No. 00019281). (P)
- 10.7A [Amendment to The AES Corporation Supplemental Retirement Plan, dated March 13, 2008 is incorporated herein by reference to Exhibit 10.9.A of the Company's Form 10-K for the year ended December 31, 2007.](#)
- 10.8 [The AES Corporation 2001 Stock Option Plan is incorporated herein by reference to Exhibit 10.12 of the Company's Form 10-K for the year ended December 31, 2000 \(SEC File No. 001-12291\).](#)
- 10.9 [Second Amended and Restated Deferred Compensation Plan for Directors is incorporated herein by reference to Exhibit 10.13 of the Company's Form 10-K for the year ended December 31, 2000 \(SEC File No. 001-12291\).](#)
- 10.10 [The AES Corporation 2001 Non-Officer Stock Option Plan is incorporated herein by reference to Exhibit 10.12 of the Company's Form 10-K for the year ended December 31, 2002 \(SEC File No. 001-12291\).](#)
- 10.10A [Amendment to the 2001 Stock Option Plan and 2001 Non-Officer Stock Option Plan, dated March 13, 2008 is incorporated herein by reference to Exhibit 10.12A of the Company's Form 10-K for the year ended December 31, 2007.](#)
- 10.11 [The AES Corporation 2003 Long Term Compensation Plan, as Amended and Restated, dated April 23, 2015, is incorporated herein by reference to Exhibit 99.1 of the Company's Form 8-K filed on April 23, 2015.](#)
- 10.12 [Form of AES Nonqualified Stock Option Award Agreement under The AES Corporation 2003 Long Term Compensation Plan \(Outside Directors\) is incorporated herein by reference to Exhibit 10.2 of the Company's Form 8-K filed on April 27, 2010.](#)
- 10.13 [Form of AES Performance Stock Unit Award Agreement under The AES Corporation 2003 Long Term Compensation Plan is incorporated herein by reference to Exhibit 10.13 of the Company's Form 10-K for the year ended December 31, 2015.](#)
- 10.14 [Form of AES Restricted Stock Unit Award Agreement under The AES Corporation 2003 Long Term Compensation Plan is incorporated herein by reference to Exhibit 10.14 of the Company's Form 10-K for the year ended December 31, 2019.](#)
- 10.15 [Form of AES Performance Unit Award Agreement under The AES Corporation 2003 Long Term Compensation Plan is incorporated herein by reference to Exhibit 10.15 of the Company's Form 10-K for the year ended December 31, 2015.](#)
- 10.16 [Form of AES Nonqualified Stock Option Award Agreement under The AES Corporation 2003 Long Term Compensation Plan is incorporated herein by reference to Exhibit 10.4 of the Company's Form 10-Q for the quarter ended June 30, 2015.](#)
- 10.17 [Form of AES Performance Cash Unit Award Agreement under The AES Corporation 2003 Long Term Compensation Plan is incorporated herein by reference to Exhibit 10.17 of the Company's Form 10-K for the year ended December 31, 2019.](#)
- 10.18 [The AES Corporation Restoration Supplemental Retirement Plan, as amended and restated, dated December 29, 2008 is incorporated herein by reference to Exhibit 10.15 of the Company's Form 10-K for the year ended December 31, 2008.](#)
- 10.18A [Amendment to The AES Corporation Restoration Supplemental Retirement Plan, dated December 9, 2011 is incorporated herein by reference to Exhibit 10.17A of the Company's Form 10-K for the year ended December 31, 2012.](#)
- 10.19 [The AES Corporation International Retirement Plan, as amended and restated on December 29, 2008 is incorporated herein by reference to Exhibit 10.16 of the Company's Form 10-K for the year ended December 31, 2008.](#)
- 10.19A [Amendment to The AES Corporation International Retirement Plan, dated December 9, 2011 is incorporated herein by reference to Exhibit 10.18A of the Company's Form 10-K for the year ended December 31, 2012.](#)
- 10.20 [The AES Corporation Severance Plan, as amended and restated on August 4, 2017 is incorporated herein by reference to Exhibit 10.1 of the Company's Form 10-Q for the quarter ended June 30, 2017.](#)
- 10.21 [The AES Corporation Amended and Restated Executive Severance Plan dated October 5, 2018 is incorporated herein by reference to Exhibit 10.1 of the Company's Form 10-Q for the quarter ended September 30, 2018.](#)
- 10.22 [The AES Corporation Performance Incentive Plan, as Amended and Restated on April 23, 2015 is incorporated herein by reference to Exhibit 99.2 of the Company's Form 8-K filed on April 23, 2015.](#)
- 10.23 [The AES Corporation Deferred Compensation Program For Directors dated February 17, 2012 is incorporated herein by reference to Exhibit 10.22 of the Company's Form 10-K filed on December 31, 2011.](#)
- 10.24 [Mutual Agreement, between Andrés Gluski and The AES Corporation dated October 7, 2011 is incorporated herein by reference to Exhibit 10.2 of the Company's Form 10-Q for the period ended September 30, 2011.](#)
- 10.25 [Form of Retroactive Consent to Provide for Double-Trigger Change-In-Control Transactions is incorporated herein by reference to Exhibit 10.7 of the Company's Form 10-Q for the period ended June 30, 2015.](#)

10.26	Separation Agreement by and between The AES Corporation and Lisa Krueger dated January 25, 2022 is incorporated herein by reference to Exhibit 10.26 of the Company's Form 10-K for the period ended December 31, 2021.
10.27	Consultant Agreement by and between The AES Corporation and Lisa Krueger dated January 25, 2022 is incorporated herein by reference to Exhibit 10.27 of the Company's Form 10-K for the period ended December 31, 2021.
10.28	Seventh Amended and Restated Credit and Reimbursement Agreement dated as of December 20, 2019 among The AES Corporation, a Delaware corporation, the Banks listed on the signature pages thereof, Citibank, N.A., as Administrative Agent and Collateral Agent, and Citibank, N.A., Mizuho Bank Ltd. and Crédit Agricole Corporate and Investment Bank, as Joint Lead Arrangers and Joint Book Runners is incorporated herein by reference to Exhibit 10.1.A of the Company's Form 8-K filed on December 23, 2019.
10.29	Eight Amended and Restated Credit Agreement dated as of September 24, 2021 among The AES Corporation, a Delaware corporation, the lenders listed on the signature pages thereof, Citibank, N.A., as Administrative Agent and Citibank, N.A., Mizuho Bank Ltd. and Sumitomo Mitsui Banking Corporation, as Joint Lead Arrangers, incorporated herein by reference to Exhibit 10.1 of the Company's Form 8-K filed on September 28, 2021 (SEC File No. 001-12291).
10.30	Form of Director and Officer Indemnification Agreement is incorporated herein by reference to Exhibit 10.30 of the Company's Form 10-Q for the period ended September 30, 2022.
10.31	Amendment No. 1 to the Credit Agreement dated as of August 23, 2022 among The AES Corporation, a Delaware corporation, the lenders listed on the signature pages thereof, and Citibank, N.A., as Administrative Agent is incorporated herein by reference to Exhibit 10.31 of the Company's Form 10-Q for the period ended September 30, 2022.
10.32	Term Loan Agreement dated as of September 30, 2022 among The AES Corporation as Borrower, the banks named herein as Banks, and Sumitomo Mitsui Banking Corporation as Administrative Agent is incorporated herein by reference to Exhibit 10.32 of the Company's Form 10-Q for the period ended September 30, 2022.
21.1	Subsidiaries of The AES Corporation (filed herewith).
23.1	Consent of Independent Registered Public Accounting Firm, Ernst & Young LLP (filed herewith).
24	Powers of Attorney (filed herewith).
31.1	Rule 13a-14(a)/15d-14(a) Certification of Andrés Gluski (filed herewith).
31.2	Rule 13a-14(a)/15d-14(a) Certification of Stephen Coughlin (filed herewith).
32.1	Section 1350 Certification of Andrés Gluski (filed herewith).
32.2	Section 1350 Certification of Stephen Coughlin (filed herewith).
101	The AES Corporation Annual Report on Form 10-K for the year ended December 31, 2022, formatted in Inline XBRL (Inline Extensible Business Reporting Language): (i) the Cover Page, (ii) Consolidated Balance Sheets, (iii) Consolidated Statements of Operations, (iv) Consolidated Statements of Comprehensive Income (Loss), (v) Consolidated Statements of Changes in Equity, (vi) Consolidated Statements of Cash Flows, and (vii) Notes to Consolidated Financial Statements. The instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)

(c) Schedule

Schedule I—Financial Information of Registrant

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, as amended, the Company has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

THE AES CORPORATION
(Company)

Date: March 1, 2023

By: /s/ ANDRÉS GLUSKI
Name: Andrés Gluski
President, Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, this report has been signed below by the following persons on behalf of the Company and in the capacities and on the dates indicated.

Name	Title	Date
*	President, Chief Executive Officer (Principal Executive Officer) and Director	March 1, 2023
Andrés Gluski	Director	March 1, 2023
*	Director	March 1, 2023
Janet G. Davidson	Director	March 1, 2023
*	Director	March 1, 2023
Tarun Khanna	Director	March 1, 2023
*	Director	March 1, 2023
Holly K. Koeppel	Director	March 1, 2023
*	Director	March 1, 2023
Julia M. Laulis	Director	March 1, 2023
*	Director	March 1, 2023
James H. Miller	Director	March 1, 2023
*	Director	March 1, 2023
Alain Monié	Chairman of the Board and Lead Independent Director	March 1, 2023
*	Director	March 1, 2023
John B. Morse	Director	March 1, 2023
*	Director	March 1, 2023
Moises Naim	Director	March 1, 2023
*	Director	March 1, 2023
Teresa M. Sebastian	Director	March 1, 2023
*	Director	March 1, 2023
Maura Shaughnessy	Executive Vice President and Chief Financial Officer (Principal Financial Officer)	March 1, 2023
/s/ STEPHEN COUGHLIN	Senior Vice President and Chief Accounting Officer (Principal Accounting Officer)	March 1, 2023
Stephen Coughlin	Attorney-in-fact	March 1, 2023
/s/ SHERRY L. KOHAN	Sherry L. Kohan	March 1, 2023
*By: <u>/s/ PAUL L. FREEDMAN</u> Attorney-in-fact		March 1, 2023

**THE AES CORPORATION AND SUBSIDIARIES
INDEX TO FINANCIAL STATEMENT SCHEDULES**

Schedule I—Condensed Financial Information of Registrant

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Schedules other than that listed above are omitted as the information is either not applicable, not required, or has been furnished in the consolidated financial statements or notes thereto included in Item 8 hereof.

See Notes to Schedule I

THE AES CORPORATION
SCHEDULE I CONDENSED FINANCIAL INFORMATION OF PARENT
BALANCE SHEETS
DECEMBER 31, 2022 AND 2021

	December 31,	
	2022	2021
	(in millions)	
ASSETS		
Current Assets:		
Cash and cash equivalents	\$ 24	\$ 40
Accounts and notes receivable from subsidiaries	169	231
Prepaid expenses and other current assets	47	50
Total current assets	<u>240</u>	<u>321</u>
Investment in and advances to subsidiaries and affiliates	7,204	7,159
Office Equipment:		
Cost	16	29
Accumulated depreciation	(10)	(23)
Office equipment, net	<u>6</u>	<u>6</u>
Other Assets:		
Deferred financing costs, net of accumulated amortization of \$9 and \$7, respectively	8	6
Other assets	117	33
Total other assets	<u>125</u>	<u>39</u>
Total assets	<u><u>\$ 7,575</u></u>	<u><u>\$ 7,525</u></u>
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current Liabilities:		
Accounts payable	\$ 33	\$ 17
Accounts and notes payable to subsidiaries	609	161
Accrued and other liabilities	<u>319</u>	<u>340</u>
Total current liabilities	<u>961</u>	<u>518</u>
Long-term Liabilities:		
Debt	3,894	3,729
Other long-term liabilities	<u>283</u>	<u>480</u>
Total long-term liabilities	<u>4,177</u>	<u>4,209</u>
Stockholders' equity:		
Preferred stock	838	838
Common stock	8	8
Additional paid-in capital	6,688	7,106
Accumulated deficit	(1,635)	(1,089)
Accumulated other comprehensive loss	(1,640)	(2,220)
Treasury stock	(1,822)	(1,845)
Total stockholders' equity	<u>2,437</u>	<u>2,798</u>
Total liabilities and equity	<u><u>\$ 7,575</u></u>	<u><u>\$ 7,525</u></u>

See Notes to Schedule I.

THE AES CORPORATION
SCHEDULE I CONDENSED FINANCIAL INFORMATION OF PARENT
STATEMENTS OF OPERATIONS
YEARS ENDED DECEMBER 31, 2022, 2021, AND 2020

For the Years Ended December 31,

	2022	2021	2020
	(in millions)		
Revenue from subsidiaries and affiliates	\$ 30	\$ 28	\$ 29
Equity in earnings of subsidiaries and affiliates	(280)	(47)	383
Interest income	28	20	31
General and administrative expenses	(140)	(121)	(125)
Other income	14	51	26
Other expense	—	(65)	(6)
Loss on extinguishment of debt	—	—	(146)
Interest expense	(163)	(74)	(163)
Income (loss) before income taxes	<u>(511)</u>	<u>(208)</u>	<u>29</u>
Income tax benefit (expense)	(35)	(201)	17
Net income (loss)	\$ (546)	\$ (409)	\$ 46

See Notes to Schedule I.

THE AES CORPORATION
SCHEDULE I CONDENSED FINANCIAL INFORMATION OF PARENT
STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
YEARS ENDED DECEMBER 31, 2022, 2021, AND 2020

	2022	2021	2020
	(in millions)		
NET INCOME (LOSS)	\$ (546)	\$ (409)	\$ 46
Foreign currency translation activity:			
Foreign currency translation adjustments, net of income tax (expense) benefit of \$0, \$0 and \$(8), respectively	(37)	(86)	—
Reclassification to earnings, net of \$0 income tax for all periods	—	3	192
Total foreign currency translation adjustments, net of tax	<u>(37)</u>	<u>(83)</u>	<u>192</u>
Derivative activity:			
Change in derivative fair value, net of income tax benefit (expense) of \$(198), \$8 and \$90, respectively	645	(7)	(309)
Reclassification to earnings, net of income tax expense of \$0, \$73 and \$19, respectively	44	254	72
Total change in fair value of derivatives, net of tax	<u>689</u>	<u>247</u>	<u>(237)</u>
Pension activity:			
Change in pension adjustments due to net actuarial gain (loss) for the period, net of income tax (expense) benefit of \$(2), \$(9) and \$4, respectively	10	23	(12)
Reclassification of earnings, net of income tax expense of \$1, \$3 and \$0, respectively	—	1	—
Total change in unfunded pension obligation	<u>10</u>	<u>24</u>	<u>(12)</u>
OTHER COMPREHENSIVE INCOME (LOSS)	662	188	(57)
COMPREHENSIVE INCOME (LOSS)	\$ 116	\$ (221)	\$ (11)

See Notes to Schedule I.

THE AES CORPORATION
SCHEDULE I CONDENSED FINANCIAL INFORMATION OF PARENT
STATEMENTS OF CASH FLOWS
YEARS ENDED DECEMBER 31, 2022, 2021, AND 2020

For the Years Ended December 31,	2022	2021	2020
	(in millions)		
Net cash provided by operating activities	\$ 434	\$ 570	\$ 434
Investing Activities:			
Proceeds from the sale of business interests, net of expenses	157	64	412
Investment in and net advances to subsidiaries	(1,716)	(2,260)	(652)
Return of capital	907	698	346
Additions to property, plant and equipment	(10)	(14)	(8)
Purchase of short term investments, net	—	—	(1)
Net cash provided by (used in) investing activities	(662)	(1,512)	97
Financing Activities:			
(Repayments) Borrowings under the revolver, net	(40)	295	(110)
Borrowings of notes payable and other coupon bearing securities	200	—	3,397
Repayments of notes payable and other coupon bearing securities	—	—	(3,366)
Loans from subsidiaries	465	—	25
Issuance of preferred stock	—	1,014	—
Proceeds from issuance of common stock	15	8	4
Common stock dividends paid	(422)	(401)	(381)
Payments for deferred financing costs	(4)	(4)	(38)
Sales to noncontrolling interests	—	(1)	—
Other financing	(2)	1	(3)
Net cash provided by (used in) financing activities	212	912	(472)
Increase (Decrease) in cash and cash equivalents	(16)	(30)	59
Cash and cash equivalents, beginning	40	70	11
Cash and cash equivalents, ending	<u>\$ 24</u>	<u>\$ 40</u>	<u>\$ 70</u>
Supplemental Disclosures:			
Cash payments for interest, net of amounts capitalized	\$ 125	\$ 79	\$ 156
Cash payments (refunds) for income taxes	1	—	(8)

See Notes to Schedule I.

THE AES CORPORATION
SCHEDULE I
NOTES TO SCHEDULE I

1. Application of Significant Accounting Principles

The Schedule I Condensed Financial Information of the Parent includes the accounts of The AES Corporation (the "Parent Company") and certain holding companies.

ACCOUNTING FOR SUBSIDIARIES AND AFFILIATES — The Parent Company has accounted for the earnings of its subsidiaries on the equity method in the financial information.

INCOME TAXES — Positions taken on the Parent Company's income tax return which satisfy a more-likely-than-not threshold will be recognized in the financial statements. The income tax expense or benefit computed for the Parent Company reflects the tax assets and liabilities on a stand-alone basis and the effect of filing a consolidated U.S. income tax return with certain other affiliated companies.

ACCOUNTS AND NOTES RECEIVABLE FROM SUBSIDIARIES — Amounts have been shown in current or long-term assets based on terms in agreements with subsidiaries, but payment is dependent upon meeting conditions precedent in the subsidiary loan agreements.

2. Debt

Senior and Unsecured Notes and Loans Payable (\$ in millions)

	Interest Rate	Maturity	December 31,	
			2022	2021
Senior Variable Rate Term Loan	SOFR + 1.125%	2024	200	—
Senior Unsecured Note	3.300%	2025	900	900
Drawings on revolving credit facility	SOFR + 1.75%	2027	325	365
Senior Unsecured Note	1.375%	2026	800	800
Senior Unsecured Note	3.95%	2030	700	700
Senior Unsecured Note	2.45%	2031	1,000	1,000
Unamortized (discounts)/premiums & debt issuance (costs)			(31)	(36)
Total			<u>\$ 3,894</u>	<u>\$ 3,729</u>

FUTURE MATURITIES OF RE COURSE DEBT — As of December 31, 2022 scheduled maturities are presented in the following table (in millions):

December 31,	Annual Maturities
2023	\$ —
2024	200
2025	900
2026	800
2027	325
Thereafter	1,700
Unamortized (discount)/premium & debt issuance (costs), net	(31)
Total debt	<u>\$ 3,894</u>

3. Dividends from Subsidiaries and Affiliates

Cash dividends received from consolidated subsidiaries were \$832 million, \$894 million, and \$1 billion for the years ended December 31, 2022, 2021, and 2020, respectively. For the years ended December 31, 2022, 2021, and 2020, \$157 million, \$65 million, and \$302 million, respectively, of the dividends paid to the Parent Company are derived from the sale of business interests and are classified as an investing activity for cash flow purposes. All other dividends are classified as operating activities. There were no cash dividends received from affiliates accounted for by the equity method for the years ended December 31, 2022, 2021, and 2020.

4. Guarantees and Letters of Credit

GUARANTEES — In connection with certain project financing, acquisitions and dispositions, power purchases and other agreements, the Parent Company has expressly undertaken limited obligations and commitments, most of which will only be effective or will be terminated upon the occurrence of future events. These obligations and commitments, excluding those collateralized by letter of credit and other obligations discussed below, were limited.

as of December 31, 2022 by the terms of the agreements, to an aggregate of approximately \$2.4 billion, representing 81 agreements with individual exposures ranging up to \$400 million. These amounts exclude normal and customary representations and warranties in agreements for the sale of assets (including ownership in associated legal entities) where the associated risk is considered to be nominal.

LETTERS OF CREDIT — At December 31, 2022, the Parent Company had \$34 million in letters of credit outstanding under the revolving credit facility, representing 16 agreements with individual exposures up to \$15 million; \$128 million in letters of credit outstanding under the unsecured credit facilities, representing 39 agreements with individual exposures ranging up to \$36 million; and \$123 million in letters of credit outstanding under bilateral agreements, representing 2 agreements with individual exposures ranging up to \$64 million. During the year ended December 31, 2022, the Parent Company paid letter of credit fees ranging from 1% to 3% per annum on the outstanding amounts.

The AES Corporation
2022 Form 10-K Exhibit 21.1

Name	Jurisdiction of Formation/Organization
12963 Main Solar 1, LLC	Delaware
241 Knapp Road Solar, LLC	Delaware
241 Knapp Solar 2, LLC	Delaware
25 Ashdown Road Solar, LLC	Delaware
52RS 8me LLC	Delaware
61LK 8me, LLC	Delaware
65HK 8me LLC	Delaware
67RK 8me LLC	Delaware
87RL 8ME LLC	Delaware
Aberdeen Solar LLC	Delaware
AC Criminal Courts Complex SPE2 Limited Liability Company	New Jersey
ACE DevCo NC, LLC	Delaware
ACE Development Company II, LLC	Delaware
ACE Development Company, LLC	Delaware
ACED CES OpCo Holdings, LLC	Delaware
ACED CES OpCo, LLC	Delaware
ACED DevCo Warehouse Borrower, LLC	Delaware
ACED DevCo Warehouse Pledgor, LLC	Delaware
ACED Finance 3 HoldCo, LLC	Delaware
ACED Finance 3, LLC	Delaware
ACED Land Master Borrower, LLC	Delaware
ACED Land Master Tenant, LLC	Delaware
ACED Mountain View FinCo, LLC	Delaware
ACED MSL Pledge, LLC	Delaware
ACED OpCo D, LLC	Delaware
ACED OpCo F, LLC	Delaware
ACED OpCo Holdings Pledgor, LLC	Delaware
ACED OpCo Holdings, LLC	Delaware
ACED OpCo Warehouse Borrower, LLC	Delaware
ACED OpCo Warehouse Pledgor, LLC	Delaware
ACED Procurement Holdings, LLC	Delaware
ACED Procurement, LLC	Delaware
ACED US Wind Holdings I, LLC	Delaware
ACED Warehouse Tax Equity SellCo, LLC	Delaware
Adera Solar, LLC	Delaware
AES (India) Private Limited	India
AES (NI) Limited	Northern Ireland
AES Accabonac Solar, LLC	Delaware
AES Adler Creek Solar, LLC	Delaware
AES Africa Power Company B.V.	The Netherlands
AES AgriVerde Holdings, B.V.	The Netherlands
AES AgriVerde Services (Ukraine) Limited Liability Company	Ukraine
AES Agua Fria ES, LLC	Delaware

AES Alamitos Energy, LLC	Delaware
AES Alamitos, L.L.C.	Delaware
AES Alicura Holdings S.C.A.	Argentina
AES Americas International Holdings, Limited	Bermuda
AES Andes S.A.	Chile
AES Andres (BVI) Ltd.	British Virgin Islands
AES Andres BV	Netherlands
AES Andres DR, S.A.	Dominican Republic
AES Argentina Generación S.A.	Argentina
AES Argentina Operations, Ltd.	Cayman Islands
AES Arinos Solar Holding S.A.	Brazil
AES Arinos Solar I S.A.	Brazil
AES Arinos Solar II S.A.	Brazil
AES Arinos Solar III S.A.	Brazil
AES Arinos Solar IV S.A.	Brazil
AES Arinos Solar V S.A.	Brazil
AES Arinos Solar VI S.A.	Brazil
AES Arinos Solar VII S.A.	Brazil
AES Arinos Solar VIII S.A.	Brazil
AES Arlington Services, LLC	Delaware
AES Aurora Holdings, Inc.	Delaware
AES Aurora, Inc.	Delaware
AES Bainbridge Holdings, LLC	Delaware
AES Bainbridge, LLC	Delaware
AES Baird Solar, LLC	Delaware
AES Ballylumford Holdings Limited	England & Wales
AES Baltic Holdings BV	The Netherlands
AES Barka Services, Inc.	Delaware
AES Barry Limited	United Kingdom
AES Barry Operations Ltd.	United Kingdom
AES Beaver Creek Ranch Solar, LLC	Delaware
AES Beaver Valley, L.L.C.	Delaware
AES Belfast West Power Limited	Northern Ireland
AES Belleville Solar, LLC	Delaware
AES Bend Solar I, LLC	Delaware
AES Bend Solar II, LLC	Delaware
AES Big Cedar Holdings, LLC	Delaware
AES Big Sky, L.L.C.	Virginia
AES Black River Solar, LLC	Delaware
AES Botswana Holdings B.V.	The Netherlands
AES Brasil B.V.	Netherlands
AES Brasil Energia S.A.	Brazil
AES Brasil Ltda	Brazil
AES Brasil Operações S.A.	Brazil
AES Brazil International Holdings, Limited	Bermuda
AES Brazil, Inc.	Delaware
AES Broadalbin Solar, LLC	Delaware

AES Bulgaria B.V.	The Netherlands
AES Bulgaria Holdings BV	The Netherlands
AES Cajuína AB1 Holdings S.A.	Brazil
AES Cajuína AB2 Holdings S.A.	Brazil
AES Cajuína AB3 Holdings S.A.	Brazil
AES Calaca Pte. Ltd.	Singapore
AES Calaca Pte. Ltd. - Philippine Branch	Philippines
AES Caracoles SRL	Argentina
AES Carbon Exchange, Ltd.	Bermuda
AES Carbon Holdings, LLC	Virginia
AES Caribbean Finance Holdings, Inc.	Delaware
AES Caribbean Investment Holdings, Ltd.	Cayman Islands
AES Cayman Guaiba, Ltd.	Cayman Islands
AES CC&T International, Ltd.	British Virgin Islands
AES CE PNC I Managing Member, LLC	Delaware
AES CE PNC I, LLC	Delaware
AES CE RS XVI Managing Member, LLC	Delaware
AES CE RS XVI, LLC	Delaware
AES CE RS XX Managing Member, LLC	Delaware
AES CE RS XX, LLC	Delaware
AES CE Solutions OH, LLC	Delaware
AES CE Solutions TX, LLC	Texas
AES CE Solutions, LLC	Delaware
AES CE SVB 1 Managing Member, LLC	Delaware
AES CE SVB 1, LLC	Delaware
AES Central America Electric Light, LLC	Virginia
AES Central American Holdings, Inc.	Delaware
AES Central American Investment Holdings, Ltd.	Cayman Islands
AES Central Line 2022 Class B, LLC	Delaware
AES Ceprano Energia SRL	Italy
AES CFE Holding II LLC	Delaware
AES CFE Holding III LLC	Delaware
AES CFE Holding LLC	Delaware
AES Changuinola, S.R.L.	Panama
AES Chhattisgarh Energy Private Limited	India
AES Chile Inversiones Renovables SpA	Chile
AES Chivor S.A.	Colombia
AES Clean Energy Development Holdings, LLC	Delaware
AES Clean Energy Development, LLC	Delaware
AES Clean Energy Operations & Maintenance, LLC	Delaware
AES Clean Energy Services, LLC	Delaware
AES CLESA Y Compania, Sociedad en Comandita de Capital Variable	San Salvador
AES Climate Solutions Holdings I, LLC	Delaware
AES Climate Solutions Holdings II, LLC	Delaware
AES Climate Solutions Holdings, L.P.	Bermuda
AES Climate Solutions Holdings, LLC	Delaware
AES Colombia & Cia S.C.A. E.S.P.	Colombia

AES Colon Development, S. de R.L.	Panama
AES Colon Holding, S. de R.L.	Panama
AES Columbia Power, LLC	Delaware
AES Comercializadora de Energia Ltda.	Brazil
AES Communications Latin America, Inc.	Delaware
AES Communications, LLC	Virginia
AES Connecticut Management, L.L.C.	Delaware
AES Coop Holdings, LLC	Delaware
AES Costa Rica Energy SRL	Costa Rica
AES Costa Rica Holdings, Ltd.	Cayman Islands
AES Daigle Solar, LLC	Delaware
AES DE AssetCo VI, LLC	Delaware
AES DE AssetCo VII, LLC	Delaware
AES DE Class B I, LLC	Delaware
AES DE Class B II, LLC	Delaware
AES DE Class B III, LLC	Delaware
AES DE Class B IV, LLC	Delaware
AES DE Class B V, LLC	Delaware
AES DE Class B VI, LLC	Delaware
AES DE Class B VII, LLC	Delaware
AES DE Class B VIII, LLC	Delaware
AES DE Class B XIV, LLC	Delaware
AES DE Construction, LLC	Delaware
AES DE DevCo I, LLC	Delaware
AES DE Holdings I, LLC	Colorado
AES DE Holdings III, LLC	Delaware
AES DE Holdings Omnibus Pledgor, LLC	Delaware
AES DE Holdings V Pledgor, LLC	Delaware
AES DE Holdings V, LLC	Delaware
AES DE Holdings VI, LLC	Delaware
AES DE Holdings VII Pledgor, LLC	Delaware
AES DE Holdings VII, LLC	Delaware
AES DE Holdings VIII Pledgor, LLC	Delaware
AES DE Holdings VIII, LLC	Delaware
AES DE Manager, LLC	Colorado
AES DE REC Co VI, LLC	Delaware
AES DE REC Co VII, LLC	Delaware
AES DE RS I, LLC	Delaware
AES DE RS II, LLC	Delaware
AES DE RS III, LLC	Delaware
AES DE RS IV, LLC	Delaware
AES DE RS IX, LLC	Delaware
AES DE RS V, LLC	Delaware
AES DE RS VI, LLC	Delaware
AES DE RS VII, LLC	Delaware
AES DE RS VIII, LLC	Delaware
AES DE RS X, LLC	Delaware

AES DE RS XI, LLC	Delaware
AES DE RS XII, LLC	Delaware
AES DE RS XIV, LLC	Delaware
AES DE RS XV, LLC	Delaware
AES DE Solar Access Holdings I, LLC	Delaware
AES Deepwater, LLC	Delaware
AES DE-GIE, LLC	Delaware
AES DevCo Warehouse Borrower, LLC	Delaware
AES DevCo Warehouse Pledgor, LLC	Delaware
AES Digital Experience, LLC	Delaware
AES Distribuidores Salvadoreños Limitada	San Salvador
AES Distribuidores Salvadoreños Y Compañia S en C de C.V.	San Salvador
AES Distributed Holdings, LLC	Delaware
AES Dominicana Renewable Energy, S.A.	Dominican Republic
AES DPL Holdings, LLC	Delaware
AES DPP Holdings, Ltd.	Cayman Islands
AES Drax Financing, Inc.	Delaware
AES Drax Power Finance Holdings Limited	United Kingdom
AES EDC Holding, L.L.C.	Delaware
AES El Salvador Electric Light, LLC	Virginia
AES El Salvador Trust	Panama
AES El Salvador, LLC	Virginia
AES El Salvador, S.A. de C.V.	El Salvador
AES Electric Ltd.	United Kingdom
AES Electroinversora B.V.	The Netherlands
AES Elpa S.A.	Brazil
AES Empresa Electrica de El Salvador Limitada de Capital Variable	El Salvador
AES Energia SRL	Italy
AES Energy B.V.	Netherlands
AES Energy Services Inc.	Ontario
AES Energy Solutions, LLC	Delaware
AES Energy Storage Arizona, LLC	Delaware
AES Energy Storage Holdings	Mauritius
AES Energy Storage Holdings, LLC	Delaware
AES Energy Storage Zeeland B.V.	The Netherlands
AES Energy Storage, LLC	Delaware
AES Energy, Ltd.	Bermuda
AES Energy, Ltd. (Argentina Branch)	Argentina
AES Engineering, LLC	Delaware
AES ES Alamitos 2, LLC	Delaware
AES ES Alamitos, LLC	Delaware
AES ES Antelope Expansion 2, LLC	Delaware
AES ES Deepwater, LLC	Delaware
AES ES Gilbert, LLC	Delaware
AES ES Holdings, LLC	Delaware
AES ES Tait, LLC	Delaware
AES ES Westwing, LLC	Delaware

AES Europe Services EOOD	Bulgaria
AES Fahnestock Solar, LLC	Delaware
AES Finance 3 HoldCo, LLC	Delaware
AES Finance 3, LLC	Delaware
AES Finance and Development, Inc.	Delaware
AES FleetLine, LLC	Delaware
AES Florestal Ltda.	Brazil
AES Fonseca Energia Limitada de C.V.	El Salvador
AES Foreign Energy Holdings, LLC	Delaware
AES Gabreski Solar, LLC	Delaware
AES Gas Supply & Distribution Ltd.	Cayman Islands
AES GEI US Finance, Inc.	Delaware
AES GEO Energy OOD	Bulgaria
AES GF1 Holdings S.A.	Brazil
AES GF2 Holdings S.A.	Brazil
AES Glengarry Farms Solar, LLC	Delaware
AES Global Insurance Company	Vermont
AES Global Mobility Services, LLC	Delaware
AES Global Power Holdings B.V.	The Netherlands
AES Globales B.V.	The Netherlands
AES Government, LLC	Delaware
AES GPH Holdings, Inc.	Delaware
AES Grand Dominicana, Ltd.	Cayman Islands
AES Great Cove Holdings, LLC	Delaware
AES Greece Solar, LLC	Delaware
AES Grid Stability, LLC	Delaware
AES Griggs Solar, LLC	Delaware
AES Guaiba II Empreendimentos Ltda	Brazil
AES Guatemala Servicios Comerciales y Compañía Limitada	Guatemala
AES Guayama Holdings BV	The Netherlands
AES Hawaii Foundation	Hawaii
AES Hawaii Management Company, LLC	Delaware
AES Hawaii, LLC	Delaware
AES Heckscher Solar, LLC	Delaware
AES HECO 2022 Class B, LLC	Delaware
AES HECO 2023 Class B, LLC	Delaware
AES High Mesa Solar, LLC	Delaware
AES Highgrove Holdings, L.L.C.	Delaware
AES Highgrove, L.L.C.	Delaware
AES Hispanola Holdings BV	The Netherlands
AES Hispanola Holdings II BV	The Netherlands
AES Holdings B.V.	The Netherlands
AES Holdings B.V. - Vietnam Rep Office	Vietnam
AES Holdings Brasil II Ltda.	Brazil
AES Holdings Brasil Ltda.	Brazil
AES Holland Solar, LLC	Delaware
AES Honduras Servicios Comerciales, S. de R.L. de C.V.	Honduras

AES Horizons Holdings BV	The Netherlands
AES Horizons Investments Limited	United Kingdom
AES Huntington Beach Development, L.L.C.	Delaware
AES Huntington Beach Energy, LLC	Delaware
AES Huntington Beach, L.L.C.	Delaware
AES IB Valley Corporation	India
AES Ilumina Holdings, LLC	Delaware
AES Ilumina Member, LLC	Delaware
AES Ilumina, LLC	Puerto Rico
AES India Energy Solutions Private Limited	India
AES India Holdings (Mauritius)	Mauritius
AES India, L.L.C.	Delaware
AES Indiana Devco Holdings 1, LLC	Indiana
AES Indiana Devco Holdings 2, LLC	Indiana
AES Indiana Holdings, L.L.C.	Delaware
AES Integrated Energy, LLC	Delaware
AES Intercon II, Ltd.	Cayman Islands
AES International Holdings II, Ltd.	British Virgin Islands
AES International Holdings III, Ltd.	British Virgin Islands
AES International Holdings, Ltd.	British Virgin Islands
AES Investment Chile SpA	Chile
AES Italia S.r.l	Italy
AES James Baird Solar, LLC	Delaware
AES Johnsville Solar, LLC	Delaware
AES Jordan Holdco, Ltd.	Cayman Islands
AES Jordan PSC	Jordan
AES Jordan Solar B.V.	Netherlands
AES Juniper Point Holdings, LLC	Delaware
AES Kalaeloa Venture, L.L.C.	Delaware
AES Kekaha Solar, LLC	Delaware
AES Keystone, L.L.C.	Delaware
AES Khanya - Kwazulu Natal (Proprietary) Limited	South Africa
AES King Harbor, Inc.	Delaware
AES Kuihelani Solar, LLC	Delaware
AES LA FIT Dedeaux, LLC	Delaware
AES LA FIT Francisco, LLC	Delaware
AES LA FIT Sun Valley, LLC	Delaware
AES Landfill Carbon, LLC	Virginia
AES Latin America S. de R.L.	Panama
AES Laubacher Solar, LLC	Delaware
AES Laurel Mountain Repower Development Company, LLC	Delaware
AES Laurel Mountain, LLC	Delaware
AES Lawai Solar, LLC	Delaware
AES Levant Holdings B.V.	Netherlands
AES Levant Holdings BV Jordan PSC	Jordan
AES Lumos Holdings, LLC	Delaware
AES Maritza East 1 Services Ltd.	Cyprus

AES Maritza East I EOOD	Bulgaria
AES Maritza East I Services EOOD	Bulgaria
AES Marketing and Trading, LLC	Delaware
AES Mayan Holdings, S. de R.L. de C.V.	Mexico
AES Merida B.V.	The Netherlands
AES Merida III, S. de R.L. de C.V.	Mexico
AES Merida Management Services, S. de R.L. de C.V.	Mexico
AES Mexico Farms, L.L.C.	Delaware
AES Mexico Generation Holdings, S. de R.L. de C.V.	Mexico
AES MicroPlanet, Ltd.	British Virgin Islands
AES Mid East Holdings 2, Ltd.	Cayman Islands
AES Mong Duong Holdings B.V.	The Netherlands
AES Mong Duong Power Co. Ltd.	Vietnam
AES Mong Duong Project Holdings B.V.	The Netherlands
AES Monroe Holdings B.V.	The Netherlands
AES Monroe Solar A, LLC	Delaware
AES Monroe Solar B, LLC	Delaware
AES Monroe Solar C, LLC	Delaware
AES Monroe Solar D, LLC	Delaware
AES Monroe Solar E, LLC	Delaware
AES Mount Vernon B.V.	The Netherlands
AES Mountain View Solar, LLC	Delaware
AES NA Central, L.L.C.	Delaware
AES Nejapa Gas Ltda. de C.V.	El Salvador
AES Nejapa Services Ltda. de C.V.	El Salvador
AES Next B.V.	Netherlands
AES Next Operations, LLC	Delaware
AES Next Solar, LLC	Delaware
AES Next Solutions, S.R.L.	Panama
AES Next, LLC	Delaware
AES NEXT, Ltda. de C.V.	El Salvador
AES North America Development, LLC	Delaware
AES Oahu Wind Holdings, LLC	Delaware
AES Oahu, LLC	Delaware
AES Oasis Holdco, Inc.	Delaware
AES Oasis Ltd.	Cayman Islands
AES Oasis Mauritius Inc	Mauritius
AES Odyssey, L.L.C.	Delaware
AES Ohio Generation, LLC	Ohio
AES OpCo E, LLC	Delaware
AES OpCo G, LLC	Delaware
AES OpCo Holdings Pledgor, LLC	Delaware
AES OpCo Holdings, LLC	Delaware
AES OpCo Warehouse Borrower, LLC	Delaware
AES OpCo Warehouse Pledgor, LLC	Delaware
AES Operaciones Laguna del Rey, S. de R.L. de C.V.	Mexico
AES OPGC Holding	Mauritius

AES Orissa Distribution Private Limited	India
AES Orphan Farm Solar, LLC	Delaware
AES Overseas Holdings (Cayman) Ltd.	Cayman Islands
AES Overseas Holdings Limited	United Kingdom
AES Pacific Ocean Holdings B.V.	The Netherlands
AES Pacific, Inc.	Delaware
AES Pak Holdings, Ltd.	British Virgin Islands
AES Pakistan (Pvt) Ltd.	Pakistan
AES Pakistan Operations, Ltd.	Delaware
AES Panama Generation Holdings S.R.L.	Panama
AES Panamá, S.R.L.	Panama
AES Parana Gas S.A.	Argentina
AES Parana Holdings, Ltd.	Cayman Islands
AES Parana Operations S.R.L.	Argentina
AES Parana Uruguay S.R.L	Uruguay
AES Pasadena, Inc.	Delaware
AES Peace Bear Ranch Solar, LLC	Delaware
AES Pelletier Solar, LLC	Delaware
AES Phil Investment Pte. Ltd.	Singapore
AES Puerto Rico Services, Inc.	Delaware
AES Puerto Rico, Inc.	Cayman Islands
AES Puerto Rico, L.P.	Delaware
AES Ravich North Solar, LLC	Delaware
AES Redondo Beach, L.L.C.	Delaware
AES Renewable Development Holdings, LLC	Delaware
AES Renewable Holdings DevCo NC, LLC	Delaware
AES Renewable Holdings OpCo 1 Pledgor, LLC	Delaware
AES Renewable Holdings OpCo 1, LLC	Delaware
AES Renewable Holdings, LLC	Delaware
AES Renewable Power Group, S.R.L.	Dominican Republic
AES RH RS XIX, LLC	Delaware
AES RH RS XVII, LLC	Delaware
AES RH RS XVIII, LLC	Delaware
AES Riverside Holdings, LLC	Delaware
AES Rochester Solar, LLC	Delaware
AES Rt 5 Storage Solar, LLC	Delaware
AES SACEF Investment, LLC	Delaware
AES San Nicolas B.V.	The Netherlands
AES SC Holdings, LLC	Delaware
AES Services Philippines Inc.	Philippines
AES Services, Inc.	Delaware
AES Servicios America S.R. L.	Argentina
AES Servicios Electricos, S. de R.L. de C.V.	Mexico
AES Serviços TC Ltda.	Brazil
AES Shady Point 2, LLC	Delaware
AES Shady Point, LLC	Delaware
AES Silk Road Energy LLC	Russia

AES Silk Road, LLC	Delaware
AES Solar Energy, LLC	Delaware
AES Solar Galabovo EOOD	Bulgaria
AES Solar Holdings, LLC	Delaware
AES Solar Power PR, LLC	Delaware
AES Sole Italia S.r.l.	Italy
AES Soluciones, Limitada de Capital Variable	El Salvador
AES Solutions Management, LLC	Delaware
AES Solutions, LLC	Virginia
AES South Africa Peakers Holdings (Proprietary) Limited	South Africa
AES South America Holdings Cooperatief U.A.	Netherlands
AES South America Holdings I B.V.	The Netherlands
AES South America Holdings II B.V.	The Netherlands
AES South American Holdings, Ltd.	Cayman Islands
AES Southland Development, LLC	Delaware
AES Southland Energy Company Holdings I, LLC	Delaware
AES Southland Energy Holdings II, LLC	Delaware
AES Southland Energy Holdings, LLC	Delaware
AES Southland Energy, LLC	Delaware
AES Stendts Solar, LLC	Delaware
AES Stony Creek Solar, LLC	Delaware
AES Strategic Equipment Holdings Corporation	Delaware
AES Sul, L.L.C.	Delaware
AES Sunken Meadow Solar, LLC	Delaware
AES Taiwan Ltd.	Taiwan
AES Tamuin Development Services S. de R.L. de C.V.	Mexico
AES TEG II Mexican Holdings, S. de R.L. de C.V.	Mexico
AES TEG II Mexican Investments, S. de R.L. de C.V.	Mexico
AES TEG II Operations, S. de R.L. de C.V.	Mexico
AES TEG Mexican Holdings, S. de R.L. de C.V.	Mexico
AES TEG Mexican Investments S. de R.L. de C.V.	Mexico
AES TEG Operations, S. de R.L. de C.V.	Mexico
AES TEGTEP Holdings B.V.	The Netherlands
AES TEP Power II Investments Limited	United Kingdom
AES Texas Funding III, L.L.C.	Delaware
AES Thames, L.L.C.	Delaware
AES Tietê Eólica S.A.	Brazil
AES Tietê Integra Soluções em Energia Ltda	Brazil
AES Tonawanda Solar, LLC	Delaware
AES Transpower Pte Ltd -- Hong Kong Branch	Hong Kong
AES Trust III	Delaware
AES Tucano Holding I S.A.	Brazil
AES Tucano Holding II S.A.	Brazil
AES U.S. Holdings, LLC	Delaware
AES U.S. Investments, Inc.	Indiana
AES U.S. Solar, LLC	Delaware
AES UK Datacenter Services Limited	United Kingdom

AES UK Holdings Limited	United Kingdom
AES UK Power Financing II Ltd	United Kingdom
AES UK Power Financing Limited	United Kingdom
AES UK Power Holdings Limited	United Kingdom
AES UK Power, L.L.C.	Delaware
AES Union de Negocios, S.A. de C.V.	El Salvador
AES US BESS Holdings, LLC	Delaware
AES US Generation Holdings, LLC	Delaware
AES US Generation, LLC	Delaware
AES US Services, LLC	Delaware
AES US Wind Development II, LLC	Delaware
AES US Wind Development, L.L.C.	Delaware
AES US Wind Generation Holdings, LLC	Delaware
AES US Wind Holdings, LLC	Delaware
AES Venezuela Finance	United Kingdom
AES Volcan Holdings B.V.	Netherlands
AES Waikoloa Solar, LLC	Delaware
AES Warehouse Tax Equity SellCo, LLC	Delaware
AES Warrior Run, L.L.C.	Delaware
AES Wawarsing Solar, LLC	Delaware
AES West Kauai Energy Project, LLC	Delaware
AES West Oahu Solar, LLC	Delaware
AES Western Power Holdings, L.L.C.	Delaware
AES Western Power, L.L.C.	Delaware
AES Western Wind MV Acquisition, LLC	Delaware
AES Western Wind, L.L.C.	Delaware
AES Westwing II ES, LLC	Delaware
AES Wind Generation Limited	England & Wales
AES Wind Generation, LLC	Delaware
AES Wind Investments I B.V.	The Netherlands
AES Wind Investments II B.V.	The Netherlands
AES Wind Operations Bulgaria EOOD	Bulgaria
AES WR Limited Partnership	Delaware
AES Yucatan, S. de R.L. de C.V.	Mexico
AES Zephyr 2, LLC	Delaware
AES Zephyr 3, L.L.C.	Delaware
AES Zephyr, LLC	Delaware
AES-3C Maritza East 1 Ltd.	Cyprus
AES-3C Maritza East I EOOD	Bulgaria
AESCom Sul Ltda.	Brazil
AES-RS Spanish Holdings, LLC	Delaware
AES-RS Sunshine Cooperatief U.A.	Netherlands
AES-RS Sunshine Holdings, LLC	Delaware
AgCert Canada Holding, Limited	Ireland
AgCert Chile Servicios Ambientales Limitada	Chile
AgCert International, Limited	Ireland
Agilion Energy Private Limited	India

Agua Clara, S.A.S.	Dominican Republic
AGV Solar IV Geradora de Energia S.A.	Brazil
AGV Solar V Geradora de Energia S.A.	Brazil
AGV Solar VI Geradora de Energia S.A.	Brazil
AGV Solar VII Geradora de Energia S.A.	Brazil
Ahern Pipestone Solar LLC	Delaware
Allis Medina Solar, LLC	Delaware
Alto Maipo Delaware LLC	Delaware
Alto Maipo SpA	Chile
AM Solar B.V.	Netherlands
AM Solar BV Jordan PSC	Jordan
Amaterasu LLC	Massachusetts
Anawio Solar, LLC	Delaware
Andes Solar II SpA	Chile
Andes Solar SpA	Chile
Antelope Big Sky Ranch LLC	Delaware
Antelope DSR 1, LLC	Delaware
Antelope DSR 2, LLC	Delaware
Antelope DSR 3, LLC	Delaware
Antelope Expansion 1B Solar Land Borrower, LLC	Delaware
Antelope Expansion 1B, LLC	Delaware
Antelope Expansion 2 Holdings, LLC	Delaware
Antelope Expansion 2 MM, LLC	Delaware
Antelope Expansion 2, LLC	Delaware
Antelope Expansion 3A, LLC	Delaware
Antelope Expansion 3B, LLC	Delaware
Antonito Solar Holding LLC	Delaware
Antonito Solar LLC	Delaware
Apple Valley Solar Farm LLC	Delaware
APR Walden Solar 1, LLC	Delaware
Arizona B&GC Solar, LLC	Colorado
ARNIKA Beteiligungsverwaltungs GmbH	Austria
Arnold Corner Energy Storage 1 LLC	Delaware
Aspiration Solar G LLC	Delaware
Assonet Solar 1, LLC	Delaware
Atkinson County S1, LLC	Delaware
Atlantic Basin Services, Ltd.	Cayman Islands
Augusta Solar LLC	Delaware
AZ Solar I, LLC	Colorado
AZ Solar II, LLC	Colorado
AZ Solar Phase Zero, LLC	Colorado
Bakersfield Industrial PV 1, LLC	California
Bakersfield PV I, LLC	California
Baldy Mesa C, LLC	Delaware
Baldy Mesa Solar Land Borrower, LLC	Delaware
Baldy Mesa Solar, LLC	Delaware
BAML Raceway Estrella Holdings, LLC	Delaware

BAML Raceway Estrella Managing Member, LLC	Delaware
Barber's Point BESS, LLC	Delaware
Barlow Solar LLC	Delaware
Barre Solar Holding, LLC	Delaware
Barre Solar I LLC	Delaware
Barre Solar II LLC	Delaware
Barre Solar III LLC	Delaware
Baseline Solar Holding LLC	Delaware
Battle Mountain Solar LLC	Delaware
Battleground Solar I, LLC	North Carolina
Bay Breeze Solar, LLC	Delaware
Bayshore Solar A, LLC	Delaware
Bayshore Solar B, LLC	Delaware
Bayshore Solar C, LLC	Delaware
Beacon Solar 1, LLC	Delaware
Beacon Solar 3, LLC	Delaware
Beacon Solar 4, LLC	Delaware
Beals Medina Solar, LLC	Delaware
Bellefield HoldCo, LLC	Delaware
Beulaville Solar, LLC	Delaware
Big River Wind Farm, LLC	Delaware
Big Sky North, LLC	Delaware
Big Spring Solar LLC	Delaware
Birch Coulee Solar LLC	Delaware
Biscoe Owner, LLC	North Carolina
Biscoe Solar, LLC	North Carolina
Black Creek Solar LLC	Delaware
Black Iron Solar, LLC	Delaware
Blackhorse Farm Solar, LLC	Rhode Island
Blanca Peak Solar CSG LLC	Delaware
Blue Sky Endeavors, LLC	Delaware
Blue Stone Solar Energy, LLC	Delaware
Blues City Solar LLC	Delaware
Bluff Bench Solar LLC	Delaware
Boa Hora 1 Geradora De Energia Solar S.A.	Brazil
Boa Hora 2 Geradora de Energia Solar S.A.	Brazil
Boa Hora 3 Geradora De Energia Solar S.A.	Brazil
Bolton Solar I, LLC	Delaware
Boone Hill Solar, LLC	Delaware
Boreas Energy, LLC	Delaware
Bósforo de Responsabilidad Limitada de Capital Variable	El Salvador
Box Elder Solar, LLC	Delaware
Brasiliana Participações S.A.	Brazil
Brasventos Eolo Geradora de Energia S.A.	Brazil
Brasventos Miassaba 3 Geradora de Energia S.A.	Brazil
Bridgeport Solar, LLC	Colorado
Brooks Solar, LLC	Delaware

Brookside Solar, LLC	Delaware
Brookwood Drive Solar 1, LLC	Delaware
BSE PV Maui County II, LLC	Delaware
BSE PV Maui County, LLC	Delaware
Buffalo Gap Holdings 2, LLC	Delaware
Buffalo Gap Holdings 3, L.L.C.	Delaware
Buffalo Gap Holdings, LLC	Delaware
Buffalo Gap Repower, LLC	Delaware
Buffalo Gap Wind Farm 2, LLC	Delaware
Buffalo Gap Wind Farm 3, L.L.C.	Delaware
Buffalo Gap Wind Farm 4, L.L.C.	Delaware
Buffalo Gap Wind Farm, LLC	Delaware
Bullock Freetown Solar 1, LLC	Delaware
BWC Lake Lashaway, LLC	Delaware
BWC Lake Ripple, LLC	Delaware
BWC Muddy Brook, LLC	Delaware
BWC Stony Brook, LLC	Delaware
Cabin Creek Solar LLC	Delaware
Calhoun County Solar LLC	Delaware
Calverton Solar LLC	Delaware
Camille, Ltd.	Cayman Islands
Cannonball Solar LLC	Delaware
Cat Canyon Solar LLC	Delaware
Caterpillar Hill Road Solar 1, LLC	Delaware
Cavalier Solar A, LLC	Delaware
Cavalier Solar A2, LLC	Delaware
Cavanal Minerals, LLC	Delaware
CCP-PI Fund, LLC	Delaware
CCP-PI Lessee, LLC	Idaho
CCP-PI Lessor, LLC	Idaho
CCP-PI Managing Member, LLC	Delaware
CDEC-SING Ltda	Chile
CE BCS 1 Managing Member, LLC	Delaware
CE BCS Holdings 1, LLC	Delaware
CE FinCo 1 Pledgor, LLC	Delaware
CE FinCo 1, LLC	Delaware
CE GP 1 Managing Member, LLC	Delaware
CE GP Holdings 1, LLC	Delaware
CE TB 1 Managing Member, LLC	Delaware
CE TB Holdings 1, LLC	Delaware
CE WFS 3 Managing Member, LLC	Delaware
CE WFS Holdings 3, LLC	Delaware
Cedar Flats Solar LLC	Delaware
Cement City Solar, LLC	Delaware
Cemig II B.V.	The Netherlands
Centrais Eólicas Ametista S.A.	Brazil
Centrais Eólicas Borgo S.A.	Brazil

Centrais Eólicas Caetité S.A.	Brazil
Centrais Eólicas da Prata S.A.	Brazil
Centrais Eólicas dos Araças S.A.	Brazil
Centrais Eólicas Dourados S.A.	Brazil
Centrais Eólicas Espigão S.A.	Brazil
Centrais Eólicas Maron S.A.	Brazil
Centrais Eólicas Morrão S.A.	Brazil
Centrais Eólicas Pelourinho S.A.	Brazil
Centrais Eólicas Pilões S.A.	Brazil
Centrais Eólicas Seraima S.A.	Brazil
Centrais Eólicas Serra do Espinhaço S.A.	Brazil
Centrais Eólicas Tanque S.A.	Brazil
Centrais Eólicas Ventos do Nordeste S.A.	Brazil
Central Antelope Dry Ranch C LLC	Delaware
Central Electricity Supply Company of Orissa Limited	India
Central Eólica Santo Antônio de Pádua S.A.	Brazil
Central Eólica São Cristóvão S.A.	Brazil
Central Eólica São Jorge S.A.	Brazil
Central Line Solar, LLC	Delaware
Central Termoelectrica Guillermo Brown S.A.	Argentina
CES - Temple Solar LLC	Delaware
CES Colorado Solar Gardens LLC	Delaware
CES Community Solar Gardens, LLC	Delaware
CFE BESS Jobos, LLC	Puerto Rico
CFE BESS Salinas, LLC	Puerto Rico
Chagual Energía SpA	Chile
Charger Storage, LLC	Delaware
Chase City Energy Storage 1 LLC	Delaware
Chase Solar LLC	Delaware
Chevelon Butte RE II LLC	Delaware
Chevelon Butte RE III LLC	Delaware
Chevelon Butte RE IV LLC	Delaware
Chevelon Butte RE LLC	Arizona
Chevelon Butte RE V LLC	Delaware
Cheyenne Mountain Solar, LLC	Delaware
Chile Renovables SpA	Chile
Citizen Solar B LLC	Delaware
Clarkson Solar Holding, LLC	Delaware
Clarkson Solar LLC	Delaware
Clean Flexible Energy II, LLC	Puerto Rico
Clean Flexible Energy III, LLC	Puerto Rico
Clean Flexible Energy, LLC	Puerto Rico
Clean Wind Energy Ltd.	Israel
Cleghorn Ridge Wind CA, LLC	Delaware
Clover Creek Solar, LLC	Delaware
Clover Creek Storage, LLC	Delaware
CMG Energy Resources LLC	Delaware

CO-CA Wholly Owned, LLC	Delaware
Cogentrix Valcour Intermediate Holdings, LLC	Delaware
Cogentrix Valcour Wind Energy Holdings II, LLC	Delaware
Colon LNG Marketing S. De R.L.	Panama
Community Energy Minnesota Solar Gardens LLC	Delaware
Community Energy Solar Development LLC	Delaware
Community Energy Solar, LLC	Delaware
Compania de Alumbrado Eletrico de San Salvador, S.A. DE C.V.	El Salvador
Compañía Transmisora Angamos SpA	Chile
Compañía Transmisora La Cebada S.A.	Chile
Compass Circle Solar, LLC	Rhode Island
Cordilheira dos Ventos Centrais Eólicas Ltda.	Brazil
Costa Norte LNG Terminal S. de R.L.	Panama
County Highway Solar 1, LLC	Delaware
County Highway Solar 2, LLC	Delaware
Cramer Creek Solar, LLC	Delaware
Crescent Solar LLC	Delaware
Cricket Mountain Solar LLC	Delaware
Cristales SpA	Chile
Cronin Road Solar 1, LLC	Delaware
Crooked River Solar LLC	Delaware
Croom Solar LLC	Delaware
Cross Lake Solar LLC	Delaware
CRPD Solar 1, LLC	Delaware
Cumberland Solar LLC	Delaware
Cuscatlan Solar, Ltda. de C.V.	El Salvador
Daggett Ridge Wind Farm, LLC	Delaware
Daviess County Solar LLC	Delaware
Delano PV 1, LLC	California
Deming Solar LLC	Delaware
Derwood Solar LLC	Delaware
Desert Sage II Solar, LLC	Delaware
Desert Sage Solar, LLC	Delaware
Diamond Development, Inc.	Ohio
Distribuidora Electrica de Usulutan, Sociedad Anonima de Capital Variable	El Salvador
Domi Trading S.L.	Spain
Dominican Power Partners	Cayman Islands
Dominican Power Partners (DPP Branch)	Dominican Republic
Double Butte Storage, LLC	Delaware
Downsville Solar II LLC	Delaware
Downsville Solar LLC	Delaware
DPL Capital Trust II	Delaware
DPL Inc.	Ohio
Dublin Solar I, LLC	Indiana
Dunstable Solar 1, LLC	Delaware
Dusenberry Lane Solar 1, LLC	Delaware
Early Solar, LLC	Delaware

East Bloomfield Solar LLC	Delaware
East Brookfield Main Street Solar LLC	Delaware
East Line Solar, LLC	Delaware
Eaton Solar LLC	Delaware
Echo Storage, LLC	Delaware
Eden Solar, LLC	North Carolina
Elevation Solar C LLC	Delaware
Elizabethtown Solar Holding LLC	Delaware
Elizabethtown Solar LLC	Delaware
Eloy ESD Solar Holdings, LLC	Delaware
Embuaca Geração e Comercialização de Energia S.A.	Brazil
Empire Solar, LLC	Delaware
Empresa Electrica Angamos SpA	Chile
Empresa Electrica Cochrane SpA	Chile
Empresa Electrica de Oriente, S.A. de C.V.	El Salvador
Empresa Electrica Ventanas SpA	Chile
EnerAB Cogeneracion I Laguna del Rey, S. de R.L. de C.V.	Mexico
EnerAB Durango, S. de R.L. de C.V.	Mexico
EnerAB Suministro Calificado, S. de R.L. de C.V.	Mexico
EnerAB Tenedora, S. de R.L. de C.V.	Mexico
ENERAB, S. de R.L. de C.V.	Mexico
ENERGEN S.A.	Argentina
Energetica Argentina S.A.	Argentina
Energía Eólica Curauma SpA	Chile
Energía Eólica Don Alvaro SpA	Chile
Energia Eolica Los Olmos SpA	Chile
Energia Eolica Mesamavida SpA	Chile
Energía Eólica Pampas SpA	Chile
Energía Eólica Paposo SpA	Chile
Energía Eólica Rinconada SpA	Chile
Energía Eólica San Matías SpA	Chile
Energía Natural Dominicana Enadom, S.R.L.	Dominican Republic
EOL Brisa Energias Renováveis S.A.	Brazil
EOL Vento Energias Renováveis S.A.	Brazil
EOL Wind Energias Renováveis S.A.	Brazil
Eólica Bela Vista Geração e Comercialização de Energia S.A.	Brazil
Eólica Icarai Geração e Comercialização de Energia S.A.	Brazil
Eólica Mar e Terra Geração e Comercialização de Energia S.A.	Brazil
Eólica Mesa La Paz, S. de R.L. de C.V.	Mexico
Estrella Solar Land Borrower, LLC	Delaware
Estrella Solar, LLC	Delaware
Evangeline Solar LLC	Delaware
Felix 1, LLC	Delaware
Felix 2, LLC	Delaware
Felix 3, LLC	Delaware
Felix DevCo Holdings, LLC	Delaware
Felix DevCo, LLC	Delaware

Field of Dreams Solar Farm, LLC	Delaware
Finchville Solar, LLC	Delaware
Fitch Solar, LLC	Delaware
Flint Creek Solar LLC	Delaware
FLS 2013 Owner A MM, LLC	North Carolina
FLS 2013 Owner A, LLC	North Carolina
FLS 2013 Owner B MM, LLC	North Carolina
FLS 2013 Owner B, LLC	North Carolina
FLS 2013 Solar A, LLC	North Carolina
FLS 2013 Solar B, LLC	North Carolina
FLS 2014 Group A MM, LLC	North Carolina
FLS 2014 Group A, LLC	North Carolina
FLS 2014 Solar A MM, LLC	North Carolina
FLS 2014 Solar A, LLC	North Carolina
FLS Operations PV 2013, LLC	North Carolina
FLS Owner 170, LLC	North Carolina
FLS Owner 200, LLC	North Carolina
FLS Solar 100, LLC	North Carolina
FLS Solar 110, LLC	North Carolina
FLS Solar 170, LLC	North Carolina
FLS Solar 200, LLC	North Carolina
Fluence Energy, LLC	Delaware
Forebay Wind, LLC	California
Founder's Homestead Farm Solar, LLC	Rhode Island
Four Horizons Wind Park, LLC	Delaware
Franklin Solar, LLC	Delaware
FTP-Maui PV Projects, LLC	Delaware
FTS Beacon Solar Holdings, LLC	Delaware
FTS Beacon Solar Managing Member, LLC	Delaware
FTS Eden Managing Member, LLC	Delaware
FTS MA Managing Member, LLC	Delaware
FTS MA Owner, LLC	Delaware
FTS Managing Member 1, LLC	Delaware
FTS Managing Member 2, LLC	Delaware
FTS Master Tenant 1, LLC	Delaware
FTS Master Tenant 2, LLC	Delaware
FTS Project Owner 1, LLC	Delaware
FTS Project Owner 2, LLC	Delaware
FTS Solar Holdings 4, LLC	Delaware
FTS Solar Managing Member 4, LLC	Delaware
Fundación AES Chile	Chile
Fundacion AES Dominicana, Inc.	Dominican Republic
Fundación AES en Panamá	Panama
Gas Natural Atlantico II S. de R.L.	Panama
Gas Natural Atlantico S. De R.L.	Panama
Gasoducto GasAndes Argentina S.A.	Argentina
Gasoducto GasAndes S.A.	Chile

Geer Rd Solar 1 LLC	New York
Geer Rd Solar 2 LLC	New York
Geer Rd Solar 3 LLC	New York
Gener Argentina S.A.	Argentina
Geneva Solar LLC	Delaware
Geode Solar LLC	Delaware
Georgia Solar Holdings, LLC	Delaware
Georgia Solar Parent, LLC	Delaware
Gladwin Solar LLC	Delaware
Glen Canyon Solar A, LLC	Delaware
Glen Canyon Solar B, LLC	Delaware
Glen Canyon Solar C, LLC	Delaware
Glenmere Lake Solar LLC	Delaware
Global Energy Holdings B.V.	The Netherlands
Golden Compass Managing Member, LLC	Delaware
Golden Compass Seller, LLC	Delaware
Goller Enerji Uretim Ltd. Sti.	Turkey
Great Cove Holdings Pledgor, LLC	Delaware
Great Cove Seller Pledgor, LLC	Delaware
Great Cove Seller, LLC	Delaware
Great Cove Solar II LLC	Delaware
Great Cove Solar III LLC	Delaware
Great Cove Solar LLC	Delaware
Great Gully Solar Farm, LLC	Delaware
Green Beanworks B, LLC	Delaware
Green Beanworks C, LLC	Delaware
Green Beanworks D, LLC	Delaware
GreenAnt do Brasil Sistemas de Informação S.A.	Brazil
Greenwich Solar 1, LLC	Delaware
Group Energy Gas Panama, S.R.L.	Panama
GS Chevelon Butte I Holdings, LLC	Delaware
GS Chevelon Butte I Managing Member, LLC	Delaware
Guaimbê I Parque Solar S.A.	Brazil
Guaimbê II Parque Solar S.A.	Brazil
Guaimbê III Parque Solar S.A.	Brazil
Guaimbê IV Parque Solar S.A.	Brazil
Guaimbê Solar Holding S.A.	Brazil
Guaimbê V Parque Solar S.A.	Brazil
Guelphwood RD Solar 1, LLC	Delaware
Hainesport Solar LLC	Delaware
Halifax County Solar LLC	Delaware
Hardin Solar LLC	Delaware
Hardy Hills Solar Energy LLC	Delaware
Hart Solar, LLC	Delaware
Haynesville Energy Storage 1 LLC	Delaware
Health and Welfare Benefit Plans LLC	Delaware
HECO Seller Pledgor, LLC	Delaware

HECO Seller, LLC	Delaware
Hemlock Ridge Solar LLC	Delaware
Henderson County Solar LLC	Delaware
High Prairie Solar, LLC	Delaware
High Valley Solar, LLC	Delaware
Highlander IA, LLC	Delaware
Highlander Seller Managing Member, LLC	Delaware
Highlander Seller, LLC	Delaware
Highlander Solar Energy Station 1, LLC	Delaware
Hilo Solar, LLC	Delaware
Hipotecaria San Miguel Limitada de Capital Variable	San Salvador
Hipotecaria Santa Ana Limitada de Capital Variable	El Salvador
Hobart Solar LLC	Indiana
Hopi Solar Ranch, LLC	Delaware
Huron Solis Power LLC	Colorado
I.E. DR Projects I, S.R.L.	Dominican Republic
I.E. DR Projects II, S.R.L.	Dominican Republic
I.E. DR Projects III, S.R.L.	Dominican Republic
ID Solar 1, LLC	Delaware
Indianapolis Power & Light Company	Indiana
Indimento Inversiones, S.L.	Spain
Industry Solar Power Generation Station 1 LLC	Delaware
Innovative Owner 14, LLC	North Carolina
Innovative Owner 15, LLC	North Carolina
Innovative Solar 14, LLC	North Carolina
Innovative Solar 15, LLC	North Carolina
InterAndes, S.A.	Argentina
Inversiones Cachagua SpA	Chile
Inversiones Cochrane SpA	Chile
Inversiones Energia Renovable Limitada	Chile
Inversiones LK SpA	Chile
Inversora de San Nicolas S.A.	Argentina
IPALCO Enterprises, Inc.	Indiana
Isabelle Creek Solar LLC	Delaware
Jobstown Solar LLC	Delaware
Johnstown Solar 1, LLC	Delaware
Kalahawai Solar LLC	Delaware
Kazincbarcikai Iparteruletfejleszt Kft.	Hungary
Keamuku Solar, LLC	Delaware
Kenansville Solar LLC	Delaware
Keydet Solar Center, LLC	Delaware
Kings Rooftop PV, LLC	California
La Plata II, Ltd.	British Virgin Islands
La Plata III B.V.	The Netherlands
Lafayette Horizon Solar CSG LLC	Delaware
Lafayette Solar 1, LLC	Delaware
Lafayette Solar LLC	Delaware

Lake Village Solar LLC	Indiana
Lancaster Area Battery Storage, LLC	Delaware
Lancaster Energy Center, LLC	Delaware
Lancaster Little Rock C LLC	Delaware
Lancaster WAD B LLC	Delaware
Lane Ave Solar LLC	Delaware
Laramie River Solar LLC	Delaware
Latigo Wind Managing Member, LLC	Delaware
Latigo Wind Park, LLC	Delaware
Laurel Lake Solar LLC	Delaware
Laurel Mountain BESS, LLC	Delaware
Laurel Mountain FinCo Holdings, LLC	Delaware
Laurel Mountain FinCo, LLC	Delaware
Laurel Mountain Holdings, LLC	Delaware
Laurel Mountain Interconnection, LLC	Delaware
Laurel Mountain Managing Member, LLC	Delaware
Laurel Mountain Procurement, LLC	Delaware
Lemoore PV 1 LLC	California
Letts Creek Solar, LLC	Delaware
Lewiston Solar 1, LLC	Delaware
Linkville Solar, LLC	Delaware
Locust Ridge Solar LLC	Delaware
Lowndes Solar 2 LLC	Delaware
Lowndes Solar LLC	Delaware
Luna HoldCo, LLC	Delaware
Luna Storage, LLC	Delaware
MacGregor Park, Inc.	Ohio
Magnolia Wind Farm, LLC	Delaware
Mamalahoa PV BESS, LLC	Delaware
Mannys Corners Solar 1, LLC	Delaware
Manteca PV 1 LLC	California
Maple Solar, LLC	New York
Marahu Solar, LLC	Puerto Rico
Mass Community Solar LLC	Delaware
Maui 17-2 LLC	Hawaii
Mauka FIT Twenty LLC	Hawaii
Mayson Solar LLC	Delaware
Mazon Solar II LLC	Delaware
McCracken County Solar LLC	Delaware
MCE Solar One, LLC	Delaware
McFarland Solar A Land Borrower, LLC	Delaware
McFarland Solar A, LLC	Delaware
McFarland Solar B Land Borrower, LLC	Delaware
McFarland Solar B, LLC	Delaware
McFarland Solar D, LLC	Delaware
McFarland Storage C, LLC	Delaware
Meade County Solar LLC	Delaware

Mercury Chile Co. II Ltd.	Cayman Islands
Mercury Chile Holdco LLC	Delaware
MFP CO I, LLC	Delaware
MFP CO II, LLC	Colorado
MFP CO III, LLC	Delaware
Miami Valley Insurance Company	Vermont
Miami Valley Lighting, LLC	Ohio
Mid-America Capital Resources, Inc.	Indiana
Middletown Solar 1, LLC	Delaware
Mill Creek Solar LLC	Delaware
Missile Site Solar LLC	Delaware
Mitchell County Solar, LLC	Delaware
MM Solar Parent, LLC	Delaware
Monarch Solar PV LLC	Delaware
Mong Duong Finance Holdings B.V.	Netherlands
Morgan Valley Wind Farm, LLC	Delaware
Morris Solar, LLC	Delaware
Motor EV, Inc.	Delaware
Mount Olive Solar Holding LLC	Delaware
Mount Olive Solar LLC	Delaware
Mountain Minerals, LLC	Delaware
Mountain View Power Partners IV, LLC	Delaware
Mountain View Power Partners, LLC	Delaware
MS Participações Societárias S.A.	Brazil
MSP Master Tenant I, LLC	Colorado
MSP Master Tenant II, LLC	Colorado
Mt. Zion Solar, LLC	Delaware
Murphy Lake Solar, LLC	Texas
Na Pua Makani Power Partners, LLC	Delaware
National Grassland Solar, LLC	Delaware
Navajo Solar Power Generation Station 1 LLC	Delaware
Naylor Solar LLC	Delaware
NC 2014 Fund A MM, LLC	North Carolina
NC 2014 Fund A, LLC	North Carolina
New Bremen Solar, LLC	Delaware
New Sustainable Property Holdings II, LLC	Delaware
New Sustainable Property Holdings, LLC	Delaware
Next Brasil Investimentos Ltda.	Brazil
Nick Owner, LLC	North Carolina
Nick Solar, LLC	North Carolina
Norgener Foreign Investment SpA	Chile
Norgener Inversiones SpA	Chile
North Bay Solar 1, LLC	Delaware
North Branch Solar LLC	Delaware
North Lancaster Ranch LLC	Delaware
Northline Solar, LLC	Delaware
Nova Energia Holding S.A.	Brazil

Novus Barre Town Solar, LLC	Delaware
Nucla Solar LLC	Delaware
NY RNM Project1, LLC	Delaware
NY RNM Project1A, LLC	Delaware
NY RNM Project2, LLC	Delaware
NY RNM Project3, LLC	Delaware
NY RNM Project4, LLC	Delaware
Oahu SPE 101-14 LLC	Hawaii
Oahu SPE 101-19 LLC	Hawaii
Oahu SPE 101-2 LLC	Hawaii
Oahu SPE 101-33 LLC	Hawaii
Oahu SPE 101-4 LLC	Hawaii
Oahu SPE 101-9, LLC	Hawaii
Oak Ridge Solar, LLC	Delaware
Old Gold Wind Farm, LLC	Delaware
Omega SpA	Chile
Otoe Solar Power Generation Station 1 LLC	Delaware
Painted Desert Power, LLC	Delaware
Parque Eólico Campo Lindo SpA	Chile
Parque Eólico Los Cururos SpA	Chile
Parque Solar Durango, S. de R.L. de C.V.	Mexico
Particle Wave LLC	Massachusetts
Pawnee Solar 2 LLC	Delaware
Pawnee Solar LLC	Delaware
Perennial Solar LLC	Delaware
Pershing Solar, LLC	Delaware
Persistence Solar LLC	Delaware
Pine Bluff Solar I LLC	Delaware
Pine Bluff Solar II LLC	Delaware
Pine Grove Solar, LLC	Delaware
Pioneer Wind Managing Member, LLC	Delaware
Pioneer Wind Park I, LLC	Delaware
Pioneer Wind Park II, LLC	Delaware
Platteview Solar LLC	Delaware
Pleinmont Solar 1, LLC	Delaware
Pleinmont Solar 2, LLC	Delaware
Plus Energy Services, LLC	Delaware
Plymouth Solar 1, LLC	Delaware
Polecat Creek Solar I LLC	Delaware
Polecat Creek Solar II LLC	Delaware
Pony Express Solar, LLC	Delaware
Poopoomino BESS, LLC	Delaware
Poopoomino Solar, LLC	Delaware
Poplar Energy Storage 1 LLC	Delaware
Portville Solar 1, LLC	Delaware
Potengi Holdings S.A.	Brazil
Powhatan Solar Power Generation Station 1 LLC	Delaware

Prevailing Wind Park Holdings, LLC	Delaware
Prevailing Wind Park MM, LLC	Delaware
Prevailing Wind Park, LLC	South Dakota
Princetown Solar 1, LLC	Delaware
Providence Solar LLC	Delaware
Pullman Solar Land Borrower, LLC	Delaware
Pullman Solar, LLC	Delaware
Punta del Sol SpA	Chile
Puu Hao Solar, LLC	Delaware
Raceway Solar 1 Land Borrower, LLC	Delaware
Raceway Solar 1, LLC	Delaware
Raceway Solar 2, LLC	Delaware
Rancho Viejo Community Solar LLC	Delaware
Rancho Viejo Solar LLC	Delaware
Randolph Solar 1, LLC	Delaware
Rangeland Solar, LLC	Delaware
Ransomville Solar 1, LLC	Delaware
Rawhide Solar LLC	Delaware
REB Empreendimentos e Administradora de Bens S.A.	Brazil
Red Lion Solar LLC	Delaware
Red Rocks Solar LLC	Delaware
Reddy Branch Solar LLC	Delaware
Redman Solar 2, LLC	Delaware
Redman Solar, LLC	Delaware
Rei dos Ventos 3 Geradora de Energia S.A.	Brazil
Rep Office of AES Silk Road in Tajikstan Republic	Tajikistan
Richmond Green Hydrogen One, LLC	Delaware
Richmond Solar Power 1, LLC	Rhode Island
Richmond Spider Solar, LLC	Delaware
Rincon Solar I, LLC	Georgia
Rineyville Solar LLC	Delaware
Rising Solar, LLC	Delaware
River Street Solar 1, LLC	Delaware
Riverhead Solar 2, LLC	New York
Riverhead Solar Farm, LLC	Delaware
Riverside Canal Power Company	California
Riverside Solar, LLC	Delaware
Riviera Solar, LLC	Delaware
RMS325 LLC	Delaware
RMS335 LLC	Delaware
Robeson Solar I, LLC	Delaware
Rocky Bluff Solar LLC	Delaware
Rocky Mountain Solar PV LLC	Delaware
Rodemacher Solar LLC	Delaware
Rosamond Project Holdings, LLC	Delaware
Rosamond Solar, LLC	Colorado
RT52 Walden Solar 1, LLC	Delaware

Rutland Community Solar Holding LLC	Delaware
Rutland Solar LLC	Delaware
Ryan Road Solar LLC	Delaware
Sage Solar LLC	Delaware
San Bernardino Solar, LLC	Delaware
San Luis Solar Garden LLC	Delaware
San Luis Solar Holding LLC	Delaware
San Pablo Raceway, LLC	Delaware
Sand Lake Solar PV LLC	Delaware
Sandstone Solar LLC	Delaware
Sangamon Solar LLC	Delaware
Santa Clara Solar LLC	Delaware
Santos Energia Participações S.A.	Brazil
Scituate Solar I LLC	Delaware
Scottsdale Solar Holdings, LLC	Delaware
SD Solar I, LLC	Colorado
SeaWest Asset Management Services, LLC	California
SeaWest Properties, LLC	California
Seguro Storage, LLC	Delaware
Selma Owner, LLC	North Carolina
Selma Solar, LLC	North Carolina
Seneca Wind 2 LLC	Delaware
Seneca Wind LLC	Delaware
SEPV Imperial, LLC	Delaware
SEPV Mojave West, LLC	Delaware
SEPV Palmdale East, LLC	Delaware
Serra Verde I Energética S.A.	Brazil
Serra Verde II Energética S.A.	Brazil
Serra Verde III Energética S.A.	Brazil
Serra Verde IV Energética S.A.	Brazil
Serra Verde V Energética S.A.	Brazil
Serra Verde VI Energética S.A.	Brazil
Serra Verde VII Energética S.A.	Brazil
Settler Wind, LLC	Delaware
SFDK FinCo Holdings, LLC	Delaware
SFDK FinCo, LLC	Delaware
SFDK Solar Holding, LLC	Delaware
SFDK Solar Managing Member, LLC	Delaware
SFDK Solar, LLC	Delaware
SFMM Solar, LLC	Delaware
Shazia S.R.L.	Argentina
Sierra Solar Greenworks LLC	Delaware
Sierras del Buendia S.A.	Argentina
Silver Lake Solar, LLC	Delaware
Silver Peak Energy Land Borrower, LLC	Delaware
Silver Peak Energy, LLC	Delaware
Skipjack IA, LLC	Delaware

Skipjack Seller Managing Member, LLC	Delaware
Skipjack Seller, LLC	Delaware
Skipjack Solar Center, LLC	Delaware
Soda Flats Solar LLC	Delaware
Solar Access America, LLC	Delaware
Solar Access CA, LLC	Delaware
Solar Access California, LLC	Colorado
Solverde 1, LLC	Delaware
Somers Road Solar 1, LLC	Delaware
Somerset Solar, LLC	Delaware
Son My LNG Terminal Holding B.V	The Netherlands
Son My LNG Terminal Limited Liability Company	Vietnam
Sooner Solar LLC	Delaware
South Barre Solar 1, LLC	Delaware
South Deming Solar LLC	Delaware
South Goshen Solar LLC	Delaware
South Wayne Solar LLC	Delaware
Southern Hills Wind LLC	Delaware
Southern Valley Solar LLC	Delaware
SP Antelope DSR LLC	Delaware
Spirit Mound Solar LLC	Delaware
SPN Solar Holdings 1, LLC	Delaware
SPN Solar Holdings 2, LLC	Delaware
SPN Solar Holdings 3, LLC	Delaware
SPN Solar Holdings 4, LLC	Delaware
SPN Solar Holdings 5, LLC	Delaware
SPN Solar Managing Member 1, LLC	Delaware
SPN Solar Managing Member 2, LLC	Delaware
SPN Solar Managing Member 3, LLC	Delaware
SPN Solar Managing Member 4, LLC	Delaware
SPN Solar Managing Member 5, LLC	Delaware
Spotsylvania Solar Energy Center, LLC	Delaware
sPower Antex 1B FinCo, LLC	Delaware
sPower Beacon Solar FinCo, LLC	Delaware
sPower Cardinal HoldCo, LLC	Delaware
sPower DevCo NC, LLC	Delaware
sPower DevCo Warehouse Borrower, LLC	Delaware
sPower DevCo Warehouse Pledgor, LLC	Delaware
sPower Development Company, LLC	Delaware
sPower Energy Marketing, LLC	Delaware
sPower Finance 1 HoldCo, LLC	Delaware
sPower Finance 1, LLC	Delaware
sPower Finance 2 HoldCo, LLC	Delaware
sPower Finance 2, LLC	Delaware
sPower Finance 3 HoldCo, LLC	Delaware
sPower Finance 3, LLC	Delaware
sPower Finance 3A HoldCo, LLC	Delaware

sPower Finance 3A, LLC	Delaware
sPower FinCo 1 LLC	Delaware
sPower FinCo 2 LLC	Delaware
sPower FinCo 3 LLC	Delaware
sPower FinCo 4 LLC	Delaware
sPower FinCo 5 LLC	Delaware
sPower FinCo 6 LLC	Delaware
sPower FinCo 7 LLC	Delaware
sPower FinCo 8 LLC	Delaware
sPower FinCo 9 LLC	Delaware
sPower Highlander FinCo, LLC	Delaware
sPower MSL Pledge, LLC	Delaware
sPower MSL, LLC	Delaware
sPower NorthPeak FinCo, LLC	Delaware
sPower OpCo A Blocker, LLC	Delaware
sPower OpCo A, LLC	Delaware
sPower OpCo B, LLC	Delaware
sPower OpCo C, LLC	Delaware
sPower OpCo H, LLC	Delaware
sPower OpCo Warehouse Borrower, LLC	Delaware
sPower OpCo Warehouse Pledgor, LLC	Delaware
sPower Prevailing FinCo, LLC	Delaware
sPower Procurement, LLC	Delaware
sPower Project Holdings, LLC	Delaware
sPower Skipjack FinCo, LLC	Delaware
sPower Skipjack Holdings, LLC	Delaware
sPower SLB HoldCo, LLC	Delaware
sPower Texas DevCo, LLC	Delaware
sPower Warehouse Tax Equity SellCo, LLC	Delaware
sPower Wind Holdings 1, LLC	Delaware
sPower Winterfell Holdings, LLC	Delaware
sPower, LLC	Delaware
Spring Hill Rd Solar 1, LLC	Delaware
SPW Solar Holdings 1, LLC	Delaware
SPW Solar Holdings 2, LLC	Delaware
SPW Solar Holdings 3, LLC	Delaware
SPW Solar Holdings 4, LLC	Delaware
SPW Solar Managing Member 1, LLC	Delaware
SPW Solar Managing Member 2, LLC	Delaware
SPW Solar Managing Member 3, LLC	Delaware
SPW Solar Managing Member 4, LLC	Delaware
St. Martin Solar LLC	Delaware
Standalone Battery Seller, LLC	Delaware
Stony Lake Solar, LLC	Delaware
Store Heat and Produce Energy, Inc.	Indiana
Stow Solar I, LLC	Delaware
Sudbury Ervin GMC Solar, LLC	Delaware

Sugar Maple Solar, LLC	Delaware
Summer Solar LLC	Delaware
Sundog Solar LLC	Delaware
SunE Solar XVII Project5, LLC	Delaware
SunE SunHoldings4, LLC	Delaware
Sustainable Power Group Pledgor, LLC	Delaware
Sustainable Power Group, LLC	Delaware
Sustainable Property Holdings, LLC	Delaware
Sycamore Cross Solar, LLC	Delaware
Tau Power BV	The Netherlands
TEG Business Trust	Mexico
Tendril Holdings, LLC	Delaware
Tendril Intermediate Holdings, LLC	Delaware
Tendril Midco, LLC	Delaware
TEP Business Trust	Mexico
TermoAndes S.A.	Argentina
Termoelectrica del Golfo, S. de R.L. de C.V.	Mexico
Termoelectrica Penoles, S. de R.L. de C.V.	Mexico
The AES Corporation	Delaware
The Dayton Power and Light Company	Ohio
Thorn Lake Solar, LLC	Delaware
Tioga HoldCo I, LLC	Delaware
Tioga HoldCo II, LLC	Delaware
Tioga Solar Blairstown, LLC	Delaware
Tioga Solar Dinuba LLC	Delaware
Tioga Solar Gila, LLC	Delaware
Tioga Solar Gridley, LLC	Delaware
Tioga Solar Hemet DLL1, LLC	Delaware
Tioga Solar Hemet WF1, LLC	Delaware
Tioga Solar I, LLC	Delaware
Tioga Solar II, LLC	Delaware
Tioga Solar IV, LLC	Delaware
Tioga Solar Kona, LLC	Delaware
Tioga Solar Melville, LLC	Delaware
Tioga Solar Middlesex, LLC	Delaware
Tioga Solar Mililani, LLC	Delaware
Tioga Solar Phoenix I, LLC	Delaware
Tioga Solar West Hartford, LLC	Delaware
Tioga Solar Westborough, LLC	Delaware
Townline Batavia Solar 1, LLC	Delaware
Townsend Solar LLC	Delaware
Tozer Road Solar, LLC	Massachusetts
Trailside Solar Holding LLC	Delaware
Trailside Solar LLC	Delaware
Transmisora Tal Tal SpA	Chile
Travertine Solar LLC	Delaware
Treasure Lane Solar 1, LLC	Delaware

Triple S Solar I LLC	Delaware
Triple S Solar II LLC	Delaware
Tucano F1 Geração de Energias S.A.	Brazil
Tucano F2 Geração de Energias S.A.	Brazil
Tucano F3 Geração de Energias S.A.	Brazil
Tucano F4 Geração de Energias S.A.	Brazil
Tucano F5 Geração de Energias S.A.	Brazil
Tucano F6 Geração de Energias SPE S.A.	Brazil
Tucano F7 Geração de Energias SPE S.A.	Brazil
Tucano F8 Geração de Energias SPE S.A.	Brazil
Tucano Holdings III S.A.	Brazil
Tulip Solar LLC	Delaware
Tuliptree Wind Farm, LLC	Delaware
Tunica Windpower LLC	Delaware
Turkey Branch Owner, LLC	North Carolina
Turkey Branch Solar, LLC	North Carolina
Twin Palms Solar, LLC	Delaware
University Solar, LLC	Delaware
UofU Solar 1, LLC	Delaware
UofU Solar II, LLC	Delaware
Uplight Inc.	Delaware
Upper Freehold Solar LLC	Delaware
Valcour Altona Windpark, LLC	Delaware
Valcour Bliss Windpark, LLC	Delaware
Valcour Chateaugay Windpark, LLC	Delaware
Valcour Clinton Windpark, LLC	Delaware
Valcour Ellenburg Windpark, LLC	Delaware
Valcour Intermediate Holdings Pledgor, LLC	Delaware
Valcour Power 2006 Holdco, LLC	Delaware
Valcour Power 2008 Holdco, LLC	Delaware
Valcour Repower DevCo, LLC	Delaware
Valcour Wethersfield Windpark, LLC	Delaware
Valcour Wind Energy, LLC	Delaware
Valparaiso Solar LLC	Indiana
Veleiros Holdings S.A.	Brazil
Ventos de Santa Brígida I Energias Renováveis S.A.	Brazil
Ventos de Santa Brígida II Energias Renováveis S.A.	Brazil
Ventos de Santa Brígida III Energias Renováveis S.A.	Brazil
Ventos de Santa Brígida IV Energias Renováveis S.A.	Brazil
Ventos de Santa Brígida V Energias Renováveis S.A.	Brazil
Ventos de Santa Brígida VI Energias Renováveis S.A.	Brazil
Ventos de Santa Brígida VII Energias Renováveis S.A.	Brazil
Ventos de Santa Joana II Energias Renováveis S.A.	Brazil
Ventos de Santa Joana VI Energias Renováveis S.A.	Brazil
Ventos de Santa Joana VIII Energias Renováveis S.A.	Brazil
Ventos de Santa Joana XIV Energias Renováveis S.A.	Brazil
Ventos de Santa Tereza 01 Energias Renováveis S.A.	Brazil

Ventos de Santa Tereza 02 Energias Renováveis S.A.	Brazil
Ventos de Santa Tereza 03 Energias Renováveis S.A.	Brazil
Ventos de Santa Tereza 04 Energias Renováveis S.A.	Brazil
Ventos de Santa Tereza 05 Energias Renováveis S.A.	Brazil
Ventos de Santa Tereza 06 Energias Renováveis S.A.	Brazil
Ventos de Santa Tereza 07 Energias Renováveis S.A.	Brazil
Ventos de Santa Tereza 08 Energias Renováveis S.A.	Brazil
Ventos de Santa Tereza 09 Energias Renováveis S.A.	Brazil
Ventos de Santa Tereza 10 Energias Renováveis S.A.	Brazil
Ventos de Santa Tereza 11 Energias Renováveis S.A.	Brazil
Ventos de Santa Tereza 12 Energias Renováveis S.A.	Brazil
Ventos de Santa Tereza 13 Energias Renováveis S.A.	Brazil
Ventos de Santa Tereza 14 Energias Renováveis S.A.	Brazil
Ventos de Santa Tereza Energias Renováveis S.A.	Brazil
Ventos de São Onofre I Energias Renováveis S.A.	Brazil
Ventos de São Onofre II Energias Renováveis S.A.	Brazil
Ventos de São Onofre III Energias Renováveis S.A.	Brazil
Ventos de São Ricardo 01 Energias Renováveis S.A.	Brazil
Ventos de São Ricardo 02 Energias Renováveis S.A.	Brazil
Ventos de São Ricardo 03 Energias Renováveis S.A.	Brazil
Ventos de São Ricardo 04 Energias Renováveis S.A.	Brazil
Ventos de São Ricardo 05 Energias Renováveis S.A.	Brazil
Ventos de São Ricardo 06 Energias Renováveis S.A.	Brazil
Ventos de São Ricardo 07 Energias Renováveis S.A.	Brazil
Ventos de São Ricardo 08 Energias Renováveis S.A.	Brazil
Ventos de São Ricardo 09 Energias Renováveis S.A.	Brazil
Ventos de São Ricardo 10 Energias Renováveis S.A.	Brazil
Ventos de São Ricardo 11 Energias Renováveis S.A.	Brazil
Ventos de São Ricardo 12 Energias Renováveis S.A.	Brazil
Ventos de São Ricardo 13 Energias Renováveis S.A.	Brazil
Ventos de São Ricardo Energias Renováveis S.A.	Brazil
Ventos de São Tito Holding S.A.	Brazil
Ventos de São Tomé Holding S.A.	Brazil
Ventus Holding de Energia Eólica Ltda.	Brazil
Vermilion Solar I LLC	Delaware
Vermilion Solar II LLC	Delaware
Victor Dry Farm Ranch A LLC	Delaware
Victor Dry Farm Ranch B LLC	Delaware
Victor Mesa Linda B2 LLC	Delaware
Victor Mesa Linda C2 LLC	Delaware
Victor Mesa Linda D2 LLC	Delaware
Victor Mesa Linda E2 LLC	Delaware
Vientos Neuquinos I S.A.	Argentina
Village of Waterbury Solar I, LLC	Delaware
W. Orange RD Solar LLC	Delaware
Waiawa Phase 2 Solar, LLC	Delaware
Wallace Solar, LLC	Delaware

Warsaw Solar 2, LLC	Delaware
Warsaw Solar, LLC	Delaware
Waterford Solar 1, LLC	Delaware
Waterloo Solar, LLC	Indiana
West Atlantic Solar I LLC	Delaware
West Atlantic Solar II LLC	Delaware
West Brookfield Boston Post Road Solar LLC	Delaware
West Camp Wind Farm, LLC	Delaware
West Line Solar Land Borrower, LLC	Delaware
West Line Solar, LLC	Delaware
West Street Solar 1, LLC	Delaware
Western Antelope Blue Sky Ranch A LLC	Delaware
Western Antelope Blue Sky Ranch B LLC	Delaware
Western Antelope Dry Ranch LLC	Delaware
Western Solar Parent, LLC	Delaware
Westminster CC Solar 1, LLC	Delaware
Westport Stone & Sand Solar, LLC	Massachusetts
Westtown Solar LLC	Delaware
WFS Highlander Holdings, LLC	Delaware
WFS Highlander Managing Member, LLC	Delaware
WFS Mountain View Holdings, LLC	Delaware
WFS Mountain View Managing Member, LLC	Delaware
WFS Solar Holdings 1, LLC	Delaware
WFS Solar Holdings 2, LLC	Delaware
WFS Solar Managing Member 1, LLC	Delaware
WFS Solar Managing Member 2, LLC	Delaware
White Creek Solar LLC	Delaware
Wibaux Wind, LLC	Delaware
Wilbur Woods Solar LLC	Delaware
WildRoseWind Holdings, LLC	Delaware
WildRoseWind LLC	Texas
Williamsburg East Street Solar LLC	Delaware
Winchendon Ash Street Solar 1 LLC	Delaware
Winchendon Lincoln Avenue Solar 1 LLC	Delaware
Winchendon Lincoln Avenue Solar 2 LLC	Delaware
Windsor PV1, LLC	Virginia
Yakima Solar LLC	Delaware
Yampa Valley Solar LLC	Delaware
York Chester Solar, LLC	Delaware
Your Energy Holdings Limited	England & Wales
ZPD-PT Solar Project 2017-001 LLC	Massachusetts
ZPD-PT Solar Project 2017-003 LLC	Massachusetts
ZPD-PT Solar Project 2017-006 LLC	Massachusetts
ZPD-PT Solar Project 2017-007 LLC	Massachusetts
ZPD-PT Solar Project 2017-008 LLC	Massachusetts
ZPD-PT Solar Project 2017-011 LLC	Massachusetts
ZPD-PT Solar Project 2017-014 LLC	Massachusetts

ZPD-PT Solar Project 2017-017 LLC	Massachusetts
ZPD-PT Solar Project 2017-021 LLC	Massachusetts
ZPD-PT Solar Project 2017-023 LLC	Massachusetts
ZPD-PT Solar Project 2017-024 LLC	Massachusetts
ZPD-PT Solar Project 2017-038 LLC	Massachusetts
ZPD-PT Solar Project 2017-044 LLC	Massachusetts

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the following Registration Statements and in the related Prospectuses of The AES Corporation:

- (1) Registration Statements No. 333-203684, 333-156242, 333-26225, 333-28883, 333-30352, 333-38535, 333-57482, 333-66952, 333-66954, 333-82306, 333-83574, 333-84008, 333-97707, 333-108297, 333-112331, 333-115028, 333-150508, 333-135128, 333-158767, 333-166607, 333-179701, and 333-233037 on Form S-8;
- (2) Registration Statements No. 333-64572, 333-161913, 333-186888, 333-209671, and 333-229896 on Form S-3;
- (3) Registration Statements No. 333-38924, 333-40870, 333-44698, 333-46564, 333-37924, 333-83767, 333-81953, 333-46189, 333-39857; 333-15487, and 333-01286 on Form S-3/A, and
- (4) Registration Statements No. 333-45916, 333-49644, 333-43908, 333-44845, 333-147951, 333-33283, 333-22513, and 333-180388 on Form S-4/A;

of our reports dated March 1, 2023, with respect to the consolidated financial statements and schedule of The AES Corporation and the effectiveness of internal control over financial reporting of The AES Corporation included in this Annual Report (Form 10-K) of The AES Corporation for the year ended December 31, 2022.

/s/ Ernst & Young LLP
Tysons, Virginia
March 1, 2023

The AES Corporation (the “Company”)
Power of Attorney

The undersigned, acting in the capacity or capacities stated opposite their respective names below, hereby constitute and appoint Stephen Coughlin and Paul L. Freedman and each of them severally, the attorneys-in-fact of the undersigned with full power to them and each of them to sign for and in the name of the undersigned in the capacities indicated below the Company’s 2022 Annual Report on Form 10-K and any and all amendments and supplements thereto. This Power of Attorney may be executed in one or more counterparts, each of which together shall constitute one and the same instrument.

Name	Title	Date
/s/ Andrés Gluski Andrés Gluski	Principal Executive Officer and Director	February 24, 2023
/s/ Janet G. Davidson Janet G. Davidson	Director	February 24, 2023
/s/ Tarun Khanna Tarun Khanna	Director	February 24, 2023
/s/ Holly K. Koeppel Holly K. Koeppel	Director	February 24, 2023
/s/ Julia M. Laulis Julia M. Laulis	Director	February 24, 2023
/s/ James H. Miller James H. Miller	Director	February 24, 2023
/s/ John B. Morse, Jr. John B. Morse, Jr.	Chair and Lead Independent Director	February 24, 2023
/s/ Moisés Naim Moisés Naim	Director	February 24, 2023
/s/ Alain Monié Alain Monié	Director	February 24, 2023
/s/ Teresa M. Sebastian Teresa M. Sebastian	Director	February 24, 2023
/s/ Maura Shaughnessy Maura Shaughnessy	Director	February 24, 2023

CERTIFICATIONS

I, Andrés Gluski, certify that:

1. I have reviewed this Form 10-K of The AES Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting.
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 1, 2023

/s/ ANDRÉS GLUSKI

Name: Andrés Gluski

President and Chief Executive Officer

CERTIFICATIONS

I, Stephen Coughlin, certify that:

1. I have reviewed this Form 10-K of The AES Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting.
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 1, 2023

/s/ STEPHEN COUGHLIN

Name: Stephen Coughlin

Executive Vice President and Chief Financial Officer

CERTIFICATION OF PERIODIC FINANCIAL REPORTS

I, Andrés Gluski, President and Chief Executive Officer of The AES Corporation, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) the Form 10-K for the year ended December 31, 2022, (the "Periodic Report") which this statement accompanies fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m or 78o(d)); and
- (2) information contained in the Periodic Report fairly presents, in all material respects, the financial condition and results of operations of The AES Corporation.

Date: March 1, 2023

/s/ ANDRÉS GLUSKI

Name: Andrés Gluski
President and Chief Executive Officer

CERTIFICATION OF PERIODIC FINANCIAL REPORTS

I, Stephen Coughlin, Executive Vice President and Chief Financial Officer of The AES Corporation, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) the Form 10-K for the year ended December 31, 2022, (the "Periodic Report") which this statement accompanies fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m or 78o(d)); and
- (2) information contained in the Periodic Report fairly presents, in all material respects, the financial condition and results of operations of The AES Corporation.

Date: March 1, 2023

/s/ STEPHEN COUGHLIN

Name: Stephen Coughlin
Executive Vice President and Chief Financial Officer