

PART I

ITEM 1. IDENTITY OF DIRECTORS, SENIOR MANAGEMENT AND ADVISERS

Not applicable.

ITEM 2. OFFER STATISTICS AND EXPECTED TIMETABLE

Not applicable.

ITEM 3. KEY INFORMATION

Item 3.A. [Reserved]

Item 3.B. Capitalization and Indebtedness

Not applicable.

Item 3.C. Reasons for the Offer and Use of Proceeds

Not applicable.

Item 3.D. Risk Factors

Our business and operations are subject to various risks, many of which are beyond our control. If any of the risks described below actually occurs, our business, financial condition or results of operations could be seriously harmed. Such risks fall primarily under the categories below:

Risks relating to KEPCO primarily include:

- increases in fuel prices which may not be passed on to customers;
- Governmental policies that may affect the industry or our operations;
- capacity expansion plans based on projections of long-term supply and demand of electricity proving to be inadequate against actual supply and demand;
- being subject to various environmental legislations, regulations and Government initiatives;
- incurrence of additional indebtedness;
- the movement of Won against other currencies;
- risks associated with new business strategies and overseas expansion opportunities;
- an increase in electricity generated by and/or sourced from independent power producers eroding our market position;
- labor unrest and increases in labor cost;
- risks associated with the operation of nuclear power generation facilities;
- difficulties in the construction and operation of our facilities due to opposition from civic groups and uncertainties in maintaining permits and licenses;
- risk management policies and procedures failing to be effective, including but not limited to failing to prevent losses in our debt and foreign currency positions;
- limited amount and scope of insurance coverage;

- inability to raise share capital without the Government's participation;
- claims by current or previous employees for unpaid wages;
- cyberattacks;
- Russia-related dealings; and
- the effects of COVID-19.

Risks relating to Korea and Global Economy primarily include:

- unfavorable financial and economic conditions in Korea;
- tensions with North Korea;
- being subject to Korean corporate governance and disclosure standards; and
- risks associated with enforcing a foreign judgment against us.

Risks relating to Our American Depositary Shares (ADSs) primarily include:

- restrictions on withdrawal and deposit of common shares under the depositary facility;
- ownership of our shares being restricted under Korean law;
- no preemptive rights in certain circumstances;
- being affected by the volatility of the Korean securities market;
- dividend payments being affected by fluctuations in the exchange rate; and
- restriction on the depositary bank from converting and remitting dividends under emergency circumstances.

Risks Relating to KEPCO

Increases in fuel prices may adversely affect our results of operations and profitability as we may not be able to pass on the increased cost to customers at a sufficient level or on a timely basis.

In 2022, fuel costs constituted 34.4% of our cost of sales, and the ratio of fuel costs to our sales was 49.1%. Our generation subsidiaries purchase substantially all of the fuel that they use (except for anthracite coal) from suppliers outside Korea at prices determined in part by prevailing market prices in currencies other than Won. For example, most of the bituminous coal requirements (which accounted for approximately 39.8% of our fuel requirements in 2022 in terms of electricity output) are imported principally from Australia, Indonesia, Russia and, to a lesser extent, South Africa and others, which accounted for approximately 30.9%, 26.7%, 19.9%, 8.5% and 14.0%, respectively, of the annual bituminous coal requirements of our generation subsidiaries in 2022. Approximately 91.8% of the bituminous coal requirements of our generation subsidiaries in 2022 were purchased under long-term contracts and the remaining 8.2% from the spot market. Pursuant to the terms of our long-term supply contracts, prices are adjusted periodically based on prevailing market conditions. In addition, our generation subsidiaries purchase a significant portion of their fuel requirements under contracts with limited duration. See Item 4.B. "Business Overview—Fuel Sources and Requirements."

The prices of our main fuel types, namely, bituminous coal, oil and liquefied natural gas, or LNG, fluctuate, sometimes significantly, in tandem with their international market prices. For example, the average weekly spot price of "free on board" Newcastle coal 5500 NAR (Net As Received) published on Korea Mineral Resource Information Service by Korea Mine Rehabilitation and Mineral Resources Corporation increased from US\$84.77 per ton in 2021 to US\$179.13 per ton in 2022 and decreased to US\$123.26 per ton as of April 7, 2023. The prices of oil and LNG are substantially dependent on the price of crude oil, and according to Bloomberg (Bloomberg

Ticker: PGCRDUBA), the average daily spot price of Dubai crude oil increased from US\$69.01 per barrel in 2021 to US\$97.03 per barrel in 2022 and decreased to US\$85.25 per barrel as of April 7, 2023. Furthermore, because the prices of LNG are dependent on the price of crude oil, an increase in such fuel prices can result in an increase in the prices of LNG, which, in turn, affect the cost of purchasing electricity from independent power producers. We cannot assure you that fuel prices will remain stable or will not significantly increase in the remainder of 2023 or thereafter. In addition, following the International Maritime Organization's regulation referred to as IMO 2020 that regulates sulfur content of ships' fuel oil, IMO 2023 was mandated from January 1, 2023. IMO 2023 regulates energy efficiency and carbon emissions of ships by setting specific indices that all ships are required to comply with. While we have seen mixed reactions in the market, there is a likelihood that installation of energy saving devices or modification of ships to improve their carbon emissions level may increase as the regulation strengthens. Such trends may significantly increase the operating cost of the shipping lines and the increased costs are expected to be passed onto customers like us via higher freight rates. If fuel prices increase substantially in the future within a short span of time, our generation subsidiaries may be unable to secure adequate fuel supplies at prices commercially acceptable to them. In addition, any significant interruption or delay in the supply of fuel, bituminous coal in particular, from any of their suppliers may cause our generation subsidiaries to purchase fuel on the spot market at prices higher than the prices available under existing supply contracts, which would result in an increase in fuel costs.

As of January 1, 2021, we implemented a new cost pass-through tariff system to reinforce the correlation between the costs we incur and the tariff we charge to our customers and to enhance transparency by separately billing fuel costs and climate/environment related costs. Previously, the electricity tariff consisted of two main components: (i) the base charge (the "Base Charge") and (ii) the usage charge (the "Usage Charge") based on the amount of electricity consumed by end-users. Under the new tariff system, there are new components to the tariff called the fuel cost adjusted charge (the "Fuel Cost Adjusted Charge") and the climate/environment related charge (the "Climate/Environment Related Charge"). In principle, the Fuel Cost Adjusted Charge is calculated on a quarterly basis and the formula for calculating the amount of the Fuel Cost Adjusted Charge is multiplying (i) the unit price of the Fuel Cost Adjusted Charge (the "Unit Price of the Fuel Cost Adjusted Charge"), which is the difference between a base fuel cost (the "Base Fuel Cost") and an actual fuel cost (the "Actual Fuel Cost") and (ii) the amount of electricity consumed. The Base Fuel Cost is the past twelve-month average fuel price of bituminous coal, LNG and Bunker C oil as posted by the Korea Customs Service. The twelve-month average fuel price is measured by taking the average of monthly fuel prices from twelve months in between thirteen and one month prior to the time a new Base Fuel Cost becomes effective. To illustrate, the Base Fuel Cost effective from 2023 is the average of the fuel prices from December 2021 to November 2022. The Base Fuel Cost can be adjusted upon the revision of the electricity tariff as a whole as described in the penultimate paragraph of this risk factor. On the other hand, the Actual Fuel Cost is the past three-month average fuel price of the same fuels we use to measure the Base Fuel Cost. The past three-month average fuel price is measured by taking the average of monthly fuel prices from three months in between four and one month prior to the time the Fuel Cost Adjusted Charge is updated. To illustrate, for the first quarter of 2023, we used the fuel costs for September, October and November 2022 to calculate the three-month average fuel price.

The quarterly-adjusted Fuel Cost Adjusted Charge has built-in limits in view of price stability and other public policy considerations. First, there is a limit on any change in the Unit Price of the Fuel Cost Adjusted Charge to be no less than Won ±1 per kilowatt-hour. In other words, any change less than Won ±1 per kilowatt-hour will not be reflected. However, such limit does not apply if it is the first quarter during which the Base Fuel Cost has been newly updated. Separately, the Won ±3 per kilowatt-hour limit that previously existed to limit any change in the Unit Price of Fuel Cost Adjusted Charge to be no greater than Won ±3 per kilowatt-hour as compared to the preceding quarter was repealed since the third quarter of 2022 on account of high volatility in recent global fuel prices. Second, the Unit Price of the Fuel Cost Adjusted Charge that exceeds Won ±5 per kilowatt-hour will not be reflected. In other words, the maximum adjustment that can be incorporated to the Unit Price of the Fuel Cost Adjusted Charge is equal to Won ±5 per kilowatt-hour from the Base Fuel Cost that is in effect. For example, in the second quarter of 2023, the Unit Price of the Fuel Cost Adjusted Charge was Won 6.8 per kilowatt-hour, meaning the Actual Fuel Cost was higher than the Base Fuel Cost by Won 6.8 per kilowatt-

hour, but after being subjected to the limit of Won ±5 per kilowatt-hour, the Unit Price of the Fuel Cost Adjusted Charge came out to be Won 5.0 per kilowatt-hour.

However, our ability to pass on fuel and other cost increases to our customers may be limited due to the regulation of the Government on the rates we charge for the electricity we sell to our customers. In addition to the built-in limits described in the preceding paragraph, the new tariff system gives discretion to the Government to not wholly or partially adjust the quarterly Fuel Cost Adjusted Charge in case of extenuating circumstances, as determined by the Government. For example, in the second and third quarter of 2021, although the Unit Price of the Fuel Cost Adjusted Charge was Won -0.2 and Won 0.0 per kilowatt-hour respectively, the Government notified us to keep it at the same Won -3.0 per kilowatt-hour as the first quarter of 2021. In the fourth quarter of 2021, we increased the Unit Price of the Fuel Cost Adjusted Charge to Won 0.0 per kilowatt-hour. In the first and second quarters of 2022, although the Unit Price of the Fuel Cost Adjusted Charge as calculated should have been Won 3.0 per kilowatt-hour as the quarterly limit of Won ±3 per kilowatt-hour had existed back then, the Government notified us to keep it at the same Won 0.0 per kilowatt-hour as the fourth quarter of 2021. The Government cited different policy reasons for withholding the application of the quarterly Fuel Cost Adjusted Charge in the past but one of the more consistent reasons has been alleviating the hardship caused by the prolonged economic effects of COVID-19 pandemic. As the quarterly limit of Won ±3 per kilowatt-hour was repealed in the third quarter of 2022 and with the approval by the Government, we ultimately increased the Unit Price of the Fuel Cost Adjusted Charge to Won 5.0 per kilowatt-hour in the third quarter of 2022, which was the maximum amount allowed in 2022 under the Won ±5 per kilowatt-hour limit. From then to the second quarter of 2023, the Unit Price of the Fuel Cost Adjusted Charge has been kept at Won 5.0 per kilowatt-hour.

Also, because the Fuel Cost Adjusted Charge takes into account the fuel prices posted by Korea Customs Service, there may still be a mismatch in value between the actual prices the domestic generation companies pay for their fuels in the open market and the adjustment that can be made through the Fuel Cost Adjusted Charge. The domestic generation companies include not only our generation subsidiaries but also independent power producers that are not affiliated with us and we do not have access to fuel costs incurred by the independent power producers. As such, we use fuel prices posted by Korea Customs Service, which are easily accessible to our customers, for calculating the Fuel Cost Adjusted Charge.

Due to the likelihood of the Actual Fuel Cost being substantially over the built-in limits of the new tariff system and the Government's discretion not to wholly or partially adjust the quarterly Fuel Cost Adjusted Charge in case of extenuating circumstances, there may be certain portions of the fuel costs that cannot be charged to our customers, even though those portions should have been included in the Fuel Cost Adjusted Charge. In such cases, we may accumulate such portions and reflect them in what is called the total comprehensive cost (the "Total Comprehensive Cost"), which is a variable we use to calculate the Base Charge and the Usage Charge of the tariff. The Total Comprehensive Cost, submitted yearly to the Government for its review by us, is calculated using the relevant costs according to our settled accounts from the previous year and the proposed budget for the upcoming year. Under the Total Comprehensive Cost approach, the Base Charge and the Usage Charge are established at levels that would enable us to recover fair operating costs as well as fair investment return on the capital used in our operations. For further information on fair operating costs and fair investment return, please see Item 4.B. "Business Overview—Sales and Customers—Electricity Rates." The Base Charge and the Usage Charge that are derived from the Total Comprehensive Cost need to be approved by the Government before they can be revised. The Government may, from time to time, consider different policy objectives to regulate the time and magnitude of such revision of the Base Charge and the Usage Charge of the electricity tariff. Therefore, changes in the fuel costs may not be timely or fully reflected even through the Usage Charge of the tariff where they would typically be reflected. Recently, to reflect the rise in the Base Fuel Cost, the Usage Charge needed to increase by Won 9.8 per kilowatt-hour from January 2022. With the approval by the Government, we increased the Usage Charge by Won 4.9 per kilowatt-hour on April 1, 2022 and October 1, 2022 respectively, which resulted in a total increase of Won 9.8 per kilowatt-hour. Such increases were spread out into two rounds to relieve people's hardship including the prolonged effects of COVID-19 pandemic. In addition, in October 2022, we increased the Usage Charge of the tariff by Won 7.0 to Won 11.7 per kilowatt-hour on industrial and

commercial consumers and by Won 2.5 per kilowatt-hour on all other consumers, reflecting additional accumulated fuel cost rises. In January 2023, with the approval by the Government, we increased the Usage Charge by Won 11.4 per kilowatt-hour to reflect a portion of the increase in the Base Fuel Cost. The Government announced in its economic policy direction statement for 2023 that it will work towards normalizing the tariff in stages so that our cumulative deficit is resolved by 2026. However, there is no assurance on whether such announcement will be realized or how long it will take to be realized.

Overall, despite the new tariff system, we may not be able to adjust our tariff in accordance with such system due to the reasons we described in this risk factor. In addition, if fuel prices increase rapidly and substantially and the current level of electricity tariff is not increased to a level sufficient to offset the impact of high fuel prices or not adjusted responsive to fuel price movements, our profit margins will be adversely affected and/or we can even have operating and/or net losses, and our business, financial condition, results of operations and cash flows may be adversely affected. For example, as the fuel prices have increased rapidly in the last several years, we have experienced substantial operating and net losses and may continue to experience them if the electricity tariff is not increased to a level sufficient to cover such increase in fuel prices. For instance, in 2022, we incurred operating and net losses of Won 32,241 billion and Won 24,429 billion respectively due to a rise in fuel prices among other reasons.

The Government may adopt policy measures to substantially restructure the Korean electric power industry or our operational structure, which may have a material adverse effect on our business, operations and profitability.

From time to time, the Government considers various policy initiatives to foster efficiency in the Korean electric power industry and at times have adopted policy measures that have substantially modified our business and operations. For example, in January 1999, with the aim of introducing greater competition in the Korean electric power industry and thereby improving its efficiency, the Government announced a restructuring plan for the Korean electric power industry, or the Restructuring Plan. For a detailed description of the Restructuring Plan, see Item 4.B. “Business Overview—Restructuring of the Electric Power Industry in Korea.” As part of this initiative, in April 2001 the Government established the Korea Power Exchange to enable the sale and purchase of electricity through a competitive bidding process, established the Korea Electricity Commission to ensure fair competition in the Korean electric power industry, and, in order to promote competition in electricity generation, split off our electricity generation business to form one nuclear generation company and five non-nuclear generation companies, in each case, to be wholly owned by us. In 2002, the Government introduced a plan to privatize one of our five non-nuclear generation subsidiaries, but this plan was suspended indefinitely in 2004 due to prevailing market conditions and other policy considerations.

In August 2010, the Ministry of Trade, Industry and Energy announced the Proposal for the Improvement in the Structure of the Electric Power Industry, which was designed to promote responsible management by and improve operational efficiency of Government-affiliated electricity companies by fostering competition among them. Pursuant to this proposal, while our six generation subsidiaries continued to be our wholly-owned subsidiaries, in January 2011 the six generation subsidiaries were officially designated as “market-oriented public enterprises” (same as us) under the Act on the Management of Public Institutions, whereupon the President of Korea appoints the president and the standing director who is to become a member of the audit committee of each such subsidiary; the selection of non-standing directors of each such subsidiary is subject to approval by the Minister of the Ministry of Economy and Finance; the president of each such subsidiary is required to enter into a management contract directly with the Minister of the Ministry of Trade, Industry and Energy; and the Committee for Management of Public Institutions (which is comprised largely of Government officials and those recommended by Government officials) conducts performance evaluation of such subsidiaries. Previously, our president appointed the president and the statutory auditor of each such subsidiary; the selection of non-standing directors of each such subsidiary was subject to approval by our president; the president of each such subsidiary entered into a management contract with our president; and our evaluation committee conducted performance

evaluation of such subsidiaries. As a result of these changes, our six generation subsidiaries took on additional operational responsibilities and management autonomy with respect to construction and management of generation units and procurement of fuel, while we as the parent company continued to oversee and coordinate, among others, finances, corporate governance, overseas businesses, including nuclear export technology and overseas resource development, that jointly affect us and our generation subsidiaries. See also Item 16.G. “Corporate Governance—The Act on the Management of Public Institutions –Applications of the Act on Our Generation Subsidiaries.”

In June 2016, the Government announced the Proposal for Adjustment of Functions of Public Institutions (Energy Sector) for the purpose of streamlining the operations of Government-affiliated energy companies by discouraging them from engaging in overlapping or similar businesses with each other, reducing non-core assets and activities and improving management and operational efficiency. The initiatives contemplated in this proposal that would affect us and our generation subsidiaries include the following: (i) the generation companies should take on greater responsibilities in overseas resource exploration and production projects as these involve procurement of fuels necessary for electricity generation while fostering cooperation among each other through closer coordination, (ii) KHNP should take a greater role in export of nuclear technology, and (iii) the current system of retail sale of electricity to end-users should be liberalized to encourage more competition. In accordance therewith, we transferred a substantial portion of our assets and liabilities in our overseas resource business to our generation subsidiaries as of December 31, 2016. In addition, pursuant to this Proposal, we considered a sale in the public market of a minority of our shares in our five non-nuclear generation subsidiaries, KEPCO KDN and KHNP. However, the planned sales have been put on hold, primarily due to prevailing market conditions. In any event, we plan to maintain a controlling stake in each of these subsidiaries.

Other than as set forth above, we are not aware of any specific plans by the Government to resume the implementation of the Restructuring Plan or otherwise change the current structure of the electric power industry or the operations of us or our generation subsidiaries materially in the near future. However, for reasons relating to changes in policy considerations, socio-political, economic and market conditions and/or other factors, the Government may resume the implementation of the Restructuring Plan or initiate other steps that may change the structure of the Korean electric power industry or the operations of us or our generation subsidiaries materially. Any such measures may have a negative effect on our business, results of operations and financial condition. In addition, the Government, which beneficially owns a majority of our shares and exercises significant control over our business and operations, may from time to time pursue policy initiatives that could directly or indirectly impact our business and operations, and such initiatives may vary from the interest and objectives of our other shareholders.

The Government may adopt policy measures that affect the tariff rates in order to ease the burden on certain consumers, which may burden us financially.

Previously, there have been several adjustments to the existing tariff rates for certain consumers in order to ease the burden of electricity tariff on them. But these adjustments may be independent from fuel price movements and our business, results of operations, financial condition and profitability may suffer as a result. For example, effective on January 1, 2017, the progressive rate structure applicable to the residential sector, which applies a gradient of increasing tariff rates for heavier electricity usage, was changed from a six-tiered structure with the highest rate being no more than 11.7 times the lowest rate (which gradient system has been in place since 2005) into a three-tiered structure with the highest rate being no more than three times the lowest rate, in order to reflect the changes in the pattern of electricity consumption and reduce the electricity charges payable by consumers. Additionally, a new tariff structure was implemented to encourage energy saving by offering rate discounts to residential consumers that voluntarily reduce electricity consumption while charging special high rates to residential consumers with heavy electricity consumption during peak usage periods in the summer and the winter. Further, during July and August 2018, the residential electricity charges were reduced by temporarily relaxing the application of the then tariff structure and offering higher rate discounts to economically or otherwise disadvantaged customers to ease the burden on households that have significantly increased their use

of air conditioners during a heatwave. Subsequently, a joint task force team, consisting of industry experts, scholars and Government officials, was formed, which announced a proposal for amending the tariff structure aimed to lower electricity rates for households during the summer. As a result, in July 2019, the residential electricity tariff rate system was amended to expand the usage ceiling for the first two tiers of rates (from 200 kilowatts to 300 kilowatts for the first tier and from 400 kilowatts to 450 kilowatts for the second tier) applied during July and August each year. With the implementation of the new tariff system as of September 1, 2021, the residents were given a new benefit to opt for a new schedule of residential tariff, which is an option we have already been providing to our industrial and commercial customers. The new schedule is called a seasonal and hourly tariff and it allows residents to be charged under a monthly Base Charge plus increments depending on time, day and season. Each household may also choose to stay under the current tariff schedule which in contrast is a progressive schedule with seasonal adjustments. Our plan is to provide this option to households in Jeju Province in Korea first as many of these households are equipped with the Advanced Metering Infrastructure (“AMI”) already and review rolling it out to the rest of the country depending on the penetration rate of the AMI in each region.

On the other hand, there are also policy measures that have been repealed. For example, the rate discounts offered to residential consumers who voluntarily reduced electricity consumption and those offered to traditional wet markets were abolished in December 2019. The rate discounts for electric vehicles have been terminated in June 2022 and the rate discounts for households that use less than 200 kilowatt-hours were phased out to 50% in July 2021 and was terminated in July 2022. We also discontinued the 50% discount offered for customers who installed a renewable energy generator for their own industrial and general uses in 2020 while only maintaining it for customers who are unable to sell their electricity in the market because of their small generation capacities (less than 10 kilowatts). The discount for such customers is planned to be discontinued in 2023. Despite these, there can be no assurance that the current and future adjustments in electricity tariff rates and rate discounts will not have an adverse impact on our business, results of operations, financial condition and profitability. See Item 4.B. “Business Overview-Sales and Customers-Electricity Rates” for more information on electricity tariff charged to our consumers.

Our capacity expansion plans, which are principally based on projections on long-term supply and demand of electricity in Korea, may prove to be inadequate.

We and our generation subsidiaries make plans for expanding or upgrading our generation capacity and transmission infrastructure based on the Basic Plan Relating to the Long-Term Supply and Demand of Electricity, or the Basic Plan, which is generally revised and announced every two years by the Government. In January 2023, the Government announced the Tenth Basic Plan which is effective for the period from 2023 to 2036. The Tenth Basic Plan focuses on (i) establishing practical and balanced mixture of power sources and (ii) optimizing nuclear power sources while minimizing coal-fired power sources and developing eco-friendly power sources. The Tenth Basic Plan includes the following specific measures: (i) construction of nuclear power plants, Shin-Manul #3 and 4, would resume and operation of ten other nuclear generation units including Kori #2 may continue beyond their original retirement dates in or before 2030 subject to KHNP’s intention and only upon the Nuclear Safety and Security Commission (“NSSC”)’s approval following a satisfactory safety evaluation; as a result, nuclear generation capacities will increase from 26.1 gigawatts in 2023 to 31.7 gigawatts by 2036, (ii) 28 decrepit coal-fired power plants with total capacity of 14.1 gigawatts will be retired and converted into using LNG instead, decreasing coal generation capacities from 40.2 gigawatts in 2023 to 27.1 gigawatts by 2036 and expanding LNG generation capacities from 43.5 gigawatts in 2023 to 64.6 gigawatts by 2036 as a consequence, (iii) domestic renewable energy generation capacity is projected to expand from 32.8 gigawatts in 2023 to 108.3 gigawatts by 2036, and (iv) carbon-free power sources such as hydrogen-LNG and ammonia-coal blended combustion will be utilized to achieve 2050 carbon neutrality. The introduction of such carbon-free power sources can minimize stranded assets, i.e., assets that have become obsolete or non-performing, by recycling existing coal-fired power plants and system facilities connected thereto. Hydrogen and ammonia-blended power generation is expected to reach 47.4 terawatt-hour in 2036, accounting for 7.1% of the total annual power generation.

In June 2019, the Ministry of Trade, Industry and Energy adopted the Third Basic National Energy Plan following consultations with representatives from civic groups, the energy industry and academia. The Third Basic National Energy Plan, which is a comprehensive plan that covers the entire spectrum of energy industries in Korea, covers the period from 2019 to 2040. The Third Basic National Energy Plan is consistent with the First and the Second Basic National Energy Plans in terms of the general policy direction and aims to promote sustainable growth and improvement of people's quality of life by converting to renewable energy. Specifically, it establishes the following five key tasks: (i) strengthening management of energy demand from various sectors, such as commerce and transportation, and promoting a rational electricity tariff system to improve the national energy consumption efficiency by 38% and reduce the energy demand by 18.6% by 2040; (ii) converting to clean and safe energy through gradual reduction of nuclear power generation and decisive reduction of coal power generation by prohibiting construction of new coal-fired power plants and increasing the proportion of renewable energy sources to approximately 35% by 2040; (iii) expanding the power distribution in areas near those with demands for renewable energy and fuel cells and strengthening the roles and responsibilities of local governments; (iv) fostering the growth of the future energy industries (including renewable energy, hydrogen fuel and other efficient sources of energy linked to technology), promoting the value-add for traditional energy industries and maintaining a core energy ecosystem for nuclear power plants; and (v) improving the energy, gas and heat market systems to facilitate the national energy conversion and building platforms based on big data to foster creation of new energy industries.

The Ministry of Trade, Industry and Energy is currently preparing the Fourth Basic National Energy Plan to be announced in 2024. The Government inaugurated in May 2022 announced the draft direction of the new Government's energy policy in July 2022 that set the following five fundamental basis for the Fourth Basic National Energy Plan: first, redefining a feasible and rational energy mix; second, establishing strong resource and energy security; third, improving efficiency of energy demand and restructuring the energy market based on market principles; fourth, promoting the development and export of new energy businesses; and finally, strengthening energy welfare and the applicability of relevant policies. Through this policy direction, we expect to promote balanced development in nuclear power, renewable energy, and hydrogen energy nationwide, which will decrease the proportion of energy generated from fossil fuels.

However, we cannot assure that the Tenth Basic Plan, the Third and Fourth Basic National Energy Plans, or their respective successor plans will successfully achieve their intended goals, the foremost of which is to ensure, through carefully calibrated capacity expansion and other means, balanced overall electricity supply and demand in Korea to end users while promoting efficiency and environmental friendliness in the consumption and production of electricity. If there is significant variance between the projected electricity supply and demand considered in planning our capacity expansions and the actual electricity supply and demand, or if these plans otherwise fail to meet their intended goals or have other unintended consequences, this may result in inefficient use of our working capital, and undue financing costs on the part of us and our generation subsidiaries, among others, which may have a material adverse effect on our results of operations, financial condition and cash flows.

From time to time, we may experience temporary power shortages or circumstances bordering on power shortages due to factors beyond our control, such as extreme weather conditions. Such circumstances may lead to increased end-user complaints and greater public scrutiny, which may in turn require us to modify our capacity expansion plans, and if we were to substantially modify our capacity plans, this might result in additional capital expenditures and, as a result, have a material adverse effect on our results of operations, financial condition and cash flows.

Although the Government makes significant efforts to encourage conservation of electricity, including through demand management programs, there is no assurance that such efforts will have the desired effect of substantially reducing the demand for electricity or improving efficient use thereof. See Item 4.B. "Business Overview—Sales and Customers."

We are subject to various environmental legislations, regulations and related Government initiatives, including in relation to climate change and carbon neutrality, which could cause significant compliance costs and operational liabilities.

We are subject to national, local and overseas environmental laws and regulations, including increasing pressure to reduce emission of carbon dioxide from our electricity generation. Our operations could expose us to the risk of substantial liability relating to environmental, health and safety issues, such as those resulting from the discharge of pollutants and carbon dioxide into the environment and the handling, storage and disposal of hazardous materials. We may be responsible for the investigation and remediation of environmental conditions at current or former operational sites. We may also be subject to related liabilities (including liabilities for environmental damage, third-party property damage or personal injury) resulting from lawsuits brought by the Government or private litigants. In the course of our operations, hazardous wastes may be generated, disposed of or treated at third-party-owned or -operated sites. If those sites become contaminated, we could also be held responsible for the cost of investigation and remediation of such sites for any related liabilities, as well as for civil or criminal fines or penalties.

We intend to fully comply with our environmental obligations. However, our environmental measures, including the use of, or replacement with, environment-friendly but more expensive parts and equipment and budgeting capital expenditures for the installation or modification of such facilities, may result in increased operating costs and liquidity requirement. The actual cost of installation, replacement, modification and/or operation of such equipment and related liquidity requirement may depend on a variety of factors that are beyond our control. There is no assurance that we will continue to be in material compliance with legal or regulatory requirements or satisfy social norms and expectations in the future in relation to the environment, including in respect of climate change.

In recent years, partly driven by growing public awareness and sensitivity toward climate change and other environmental issues as well as in an effort to capture the economic and social potential associated with renewable energy and “new energy”-related industries (such as smart grids, energy storage systems and electrical vehicles, among others), the Government has introduced and implemented a number of new measures designed to reduce greenhouse gas emission, minimize environmental damage and spur related business opportunities. Some key examples of such Government initiatives pertinent to our and our generation subsidiaries’ operations are as follows:

- *Greenhouse Gas Emission Trading System, Related Emission Reduction Targets and the Greenhouse Gas Reduction Roadmap.*
 - i In accordance with the Act on Allocation and Trading of Greenhouse Gas Emission Allowances enacted in March 2013, the Government implemented a greenhouse gas emission trading system under which the Government will allocate the amount of permitted greenhouse gas emission to companies by industry and a company whose business emits more carbon than the permitted amount is required to purchase the right to emit more carbon through the Korea Exchange. The categories of allowances traded include the Korean Allowance Unit (KAU), which is the emissions allowance allocated to applicable companies by the Government; Korean Credit Unit (KCU), which is a tradable unit converted from external carbon offset certifications including the Korean Offset Credit; and Korean Offset Credit (KOC), which is the verified carbon offset credit obtained by companies for reducing carbon emissions through absorption or otherwise. The greenhouse gas emission trading system is expected to be implemented in three stages. During the first phase (2015 to 2017), the Government gradually has set up and conducted a test run of the trading system to ensure its smooth operation, allocating the greenhouse gas emission allowances free of charge. In July 2018, the Government released the allocation plan for the second phase (2018 to 2020), during which 97% of the greenhouse gas emission allowances were allocated free of charge, with 3% allocated through an auction. During the third phase (2021 to 2025), the Government expanded the scale of the system with aggressive greenhouse gas emission reduction targets and allocating 10% of the greenhouse gas emission allowances through an auction.

- i In connection with the Climate Change Response Initiatives and the 2030 National Greenhouse Gas Reduction Roadmap announced by the Government in December 2016, the Government subsequently announced the Long-term Low Greenhouse Gas Emission Development Strategies, which presents a long-term vision and national strategy for achieving carbon neutrality in 2050, and the Nationally Determined Contributions ("NDC"), which sets forth the greenhouse gas reduction targets by 2030. According to the Enforcement Decree of the Framework Act on Carbon Neutrality and Green Growth to Cope with Climate Crisis established in March 2022 and the latest figures of NDC announced by the Government in October 2021, the national target emission level in 2030 was 436.6 million tons and represents 40% reduction as compared to 2018. The target emission level for the Transformation sector (electricity and heating) as a whole which we are the part of was 149.9 million tons and represents 44.4% reduction as compared to 2018. Following the National Basic Plan for Carbon Neutrality & Green Growth established in April 2023, the Government has mandated annual sector-specific greenhouse gas reduction targets for the next 20 years from 2023 to 2042 and measures to achieve such targets to be formulated and implemented every five years. In terms of the NDC, the national target emission level remained unchanged but the latest target emission level in 2030 of the Transformation sector increased to 145.9 million tons, which represents 45.9% reduction compared to 2018. We cannot assure you that the reduction target will not be further raised in the future.
- i Adhering to such emission and greenhouse gas reduction requirement may result in significant additional compliance costs. For example, the daily market price of the Korean Allowance Units (KAU), one of the categories of allowance traded on the Korea Exchange and allocated to applicable companies by the Government, was Won 8,640 per ton in early 2015, and the price has increased continuously thereafter, reaching its peak price at Won 42,500 per ton on April 2, 2020. Since then, the price has decreased and, as of the March 31, 2023, the price has been formed around Won 14,650 per ton. We cannot predict how the price of the KAUs will fluctuate over time, and such volatility may adversely affect our results of operation, financial condition and cash flows.
- *Obligatory and Voluntary Regulation of Coal-Fired Generation Units.* As a measure to address the high level of particulate matter pollution, in October 2018, the Government introduced a pilot regulation to lower the output of 35 coal-fired generation units to approximately 80% of their capacity that emit more than a certain amount of particulate matter. The regulation was formally implemented in January 2019, targeting 40 coal-fired power plants with high emissions of particulate matter. From March to June 2019, the scope expanded to cover 60 units in total. From November 2019, the Government pursued a reduction of coal-fired generation units in order to implement the Special Measures to Respond to the High Concentration Period (December to March) of Particulate Matter. We plan to continue to participate in the effort to reduce the particulate matter emissions from coal-fired generation units, not only during the winter but also during the spring. For example, from December 2022 to March 2023, up to 9 coal-fired generation units were shut down, with a maximum of 36 coal-fired generation units subject to a cap of 80% on the output within the remaining reserve capacity range. Additionally, the Government adjusted the schedule to close down two decrepit coal-fired generation units (Boryeong #1 and #2), which were shut down in December 2020. Also, other coal-fired generation units, Samcheonpo #1 and #2 were shut down in May 2021 and Honam #1 and #2 units in December 2021. According to the Tenth Basic Plan announced in January 2023, the total coal-fired power plant capacity in 2036 will decrease to 27.1 gigawatts from 40.2 gigawatts in 2023, and its percentage of total power generation capacity will decrease to 11.3% in 2036 from 27.1% in 2023. In 2021 and 2022, our generation subsidiaries introduced a voluntary regulation to lower the output of coal-fired generation units, suspending the operations and imposing a cap of 80% on the output of some coal-fired generation units. While such measures may be subject to change, we expect to incur significant costs of complying with such measures, including in connection with more stringent particulate matter pollution regulations, retrofitting and overall replacement of environmental facilities.

- Coal and LNG Consumption Taxes.** In January 2014, largely based on policy considerations of tax equity among different fuel types as well as environmental concerns, the Ministry of Economy and Finance announced that, effective July 1, 2014, consumption tax will apply to bituminous coal, which previously was not subject to consumption tax unlike other fuel types such as LNG or bunker oil. Pursuant to the amended Individual Consumption Tax Act effective as of April 1, 2019, which involved an increase of the unit tax rate for coal by Won 10 per kilogram across the board, the base tax rate (which is subject to certain adjustments) is Won 46 per kilogram for bituminous coal; however, due to concerns on the potential adverse effect on industrial activities, the applicable tax rate is applied differently based on the net heat generation amount. The currently applicable tax rate for bituminous coal is Won 43 per kilogram for net heat generation of less than 5,000 kilocalories, Won 46 per kilogram for net heat generation of 5,000 to 5,500 kilocalories and Won 49 per kilogram for net heat generation of 5,500 kilocalories or more. In contrast, the consumption tax and surcharge on importation of LNG decreased by Won 48 and Won 20.4 per kilogram, respectively, which came into effect in April 2019. The currently applicable consumption tax rate and surcharge on importation of LNG are Won 12 and Won 3.8 per kilogram, respectively. However, following rapid increases in the price of LNG and bituminous coal, in order to mitigate the adverse impact of price increases in the global energy market and manage the inflation rate, the applicable individual consumption tax rates for coal and LNG have been temporarily decreased. From August 2022 to June 2023, the relevant individual consumption tax rate for coal and LNG decreased by 15%. The individual consumption tax rate for LNG decreased from Won 12 per kilogram to Won 10.2 per kilogram, and the individual consumption tax rate for bituminous coal for net heat generation of 5,000 to 5,500 kilocalories decreased from Won 46 per kilogram to Won 39.1 per kilogram (for net heat generation of less than 5,000 kilocalories, the rate decreased from Won 43 per kilogram to Won 36.5 per kilogram, and for net heat generation of 5,500 kilocalories or more, the rate decreased from Won 49 per kilogram to Won 41.6 per kilogram). Notwithstanding the recent trend, we expect any future increase in tax rates may adversely affect our overall fuel costs and power purchase cost.
- Renewable Portfolio Standard.** Under this program, each of our generation subsidiaries is required to generate a specified percentage of total electricity to be generated by such generation subsidiary in a given year in the form of renewable energy or, in case of a shortfall, purchase a corresponding amount of a Renewable Energy Certificate (a form of renewable energy credit) from other generation companies whose renewable energy generation surpass such percentage. The target percentage was 6.0% in 2019, 7.0% in 2020, 9.0% in 2021 and 12.5% in 2022. In 2021, all six of our generation subsidiaries met the target through renewable energy generation and/or the purchase of a Renewable Energy Certificate. Compliance by our generation subsidiaries of the 2022 target is currently under evaluation, and if any generation subsidiary is found to have failed to meet the target for 2022 or for subsequent years, such generation subsidiary may become subject to fines. From October 2021, an amendment to the Act on the Promotion of the Development, Use, and Diffusion of New and Renewable Energy raised the upper limit of the target percentage even higher to 25% from the previous threshold of 10%. The Enforcement Decree of the Act on the Promotion of the Development, Use, and Diffusion of New and Renewable Energy was amended and became effective on January 4, 2022 to gradually increase the annual upper limit of target percentage to 14.5% in 2023, 17.0% in 2024, 20.5% in 2025 in order to raise the upper limit of target percentage to 25% in 2026. However, as the Tenth Basic Plan decreased the target percentage of domestic renewable energy generation from 30.2% to 21.6% in 2030, on January 13, 2023, an amended bill to the Enforcement Decree has been introduced, proposing to change the target rate for 2023 to 13.0%, for 2024 to 13.5%, for 2025 to 14.0% in order to raise the upper limit of target percentage to 25% after 2030. Even though the recent amendment will delay the target dates, the proposed target percentages may result in additional expenses for our generation subsidiaries.

	2023	2024	2025	2026	2027
Target Percentage under Renewable Portfolio Standard	13.0%	13.5%	14.0%	15.0%	17.0%

- *Renewable Energy Expansion Plan.* In December 2017, the Ministry of Trade, Industry and Energy announced the Renewable Energy 3020 Plan, an initiative to increase the generation and use of renewable energy on a nationwide basis. According to the plan, the Government planned to increase the required percentage of total electricity to be generated from renewable energy sources from 7% in 2016 to 20% by 2030 and the domestic renewable energy generation capacity to 72.7 gigawatts by 2030 through the expansion of solar and wind power generation capacities to 46.5 gigawatts and 19.3 gigawatts, respectively. According to the Tenth Basic Plan announced in January 2023, the Government has set national targets of 108.3 gigawatts in renewable energy generation capacity in 2036, with the goal of increasing the percentage of total electricity to be generated from renewable energy sources to 30.6% by 2036.
- *New Energy Industry Fund.* In January 2016, the Ministry of Trade, Industry and Energy announced an initiative to promote the new energy industry by creating the New Energy Industry Fund, which is made up of funds sponsored by Government-affiliated energy companies. We contributed Won 500 billion to the funds in 2016. The purpose of these funds is to invest in substantially all frontiers of the new energy industry, including renewable energy, energy storage systems, electric vehicles, small-sized self-sustaining electricity generation grids known as “micro-grids,” among others, as well as invest in start-up companies, ventures, small- to medium-sized enterprise and project businesses that engage in these businesses but have not previously attracted sufficient capital from the private sector.
- *Environmental and safety considerations in electricity supply and demand planning.* In March 2017, the Electric Utility Act was amended to the effect that starting in June 2017, future national planning for electricity supply and demand in Korea should consider the environmental and safety impacts of such planning. Accordingly, the costs related to environmental and safety impacts, such as the desulfurization costs, have been reflected in the variable cost of generating electricity of each generation unit since August 2019. In December 2019, the Regulation on the Operation of the Electricity Market was revised to reflect the cost of trading greenhouse gas emission allowances in the variable cost of generating electricity of each generation unit and the revision was implemented in January 2022.
- *Renewable Energy 100.* In line with the spread of Renewable Energy 100 (“RE100”), a global campaign by companies around the world to cover 100% of their electricity use with renewable energy by 2050, the Government introduced its own version of RE100 that allows companies and other consumers to choose energy sources from which their electricity is generated. In order for a domestic company to participate in RE100, it may purchase renewable energy through us in a competitive bidding process and be issued with a certificate of use of renewable energy, which we refer to as the Green Premium system, or enter into a power purchase agreement (“PPA”) either with a renewable energy generator through us as an intermediary (“third-party PPA”) or with a renewable energy generator directly such that the generator will supply electricity to the company without going through the existing electricity market (“direct PPA”). The relevant legislation for the direct PPA was enacted in the National Assembly in March 2021 and has been in force since October 2021. The Ministry of Trade, Industry and Energy finalized and announced detailed guideline for direct PPA in September 2022. As of March 31, 2023, there are four third-party PPA of total contracted capacity of 9.5 megawatts and one direct-PPA of total contracted capacity of 2.3 megawatts, which are effective under the related law and guideline. If there is an expansion in the use of direct PPA, it may adversely affect our market share in electricity sales.
- *2050 Carbon-Neutrality Declaration.* In response to the Paris Agreement and the United Nations Framework Convention on Climate Change (“UNFCCC”)’s goal to comprehensively replace fossil fuels and achieve global net-zero emission by 2050, the Korean national assembly has passed a non-binding resolution on September 24, 2020 to establish a special committee on climate change and urge the Government to meet its 2030 carbon reduction goal and bolster its efforts to achieve carbon neutrality by 2050. On November 27, 2020, the Government officially announced the Government’s commitment to implement policies in all areas of the industry to achieve Korea’s carbon neutrality by 2050. On

December 10, 2020, the Government followed up with broad 2050 carbon neutrality development strategies. In May 2021, the Government launched a carbon neutrality committee which issued a preliminary draft of the carbon neutrality scenario in August 2021. After going through the process of collecting opinions from the consultative bodies in various sectors and citizen participation groups, the committee deliberated and finalized the 2050 carbon neutrality scenarios in October 2021. According to the two scenarios that have been finalized, both them will aim to achieve net-zero domestic carbon dioxide emissions by 2050. Scenario A will completely suspend thermal power generation, while scenario B will actively utilize technologies such as carbon capture, utilization and storage ("CCUS") while allowing some thermal power generation to continue. If any specific regulation or policy affecting our business is announced or implemented, we may experience an increased regulatory scrutiny over carbon dioxide emission from our electricity generation activities and related projects overseas. We and our generation subsidiaries announced the 2050 Carbon-Neutrality Vision in November 2021 and will further invest in various renewable energy power generation projects, new business opportunities and core technology development with a goal of entirely replacing domestic coal power generation by 2050. In the process of pursuing such, our business strategy and investment plan may change from time to time and it may result in additional costs to us, including, among other things, increased production costs, additional taxes, reduced emission allowances or additional restrictions on production or operations, particularly as they may relate to our power generation business. In addition, the achievement of carbon neutrality by 2050 may be delayed or made impossible due to unexpected changes in policies or power market conditions including a major shift in the supply and demand of electricity.

- Hydrogen Energy Related Legislations.** Following the amendment to the Hydrogen Economy Promotion and Hydrogen Safety Management Act in June 2022 and its Enforcement Decree in December 2022, the Minister of Trade, Industry and Energy has designated KEPCO and other entities under Community Energy System as the buyers of hydrogen-generated electricity. We will be required to enter into contract with a hydrogen-generation business entity who is selected as the contractor after competitive bidding process. The bidding market is comprised of the general hydrogen market and the clean hydrogen power generation market, as categorized based on the type of fuel used. In consideration of the current ecosystem in which fuel cells are used, the general hydrogen power generation market is open to all kinds of hydrogen plants including plants using extracted or by-product hydrogen. On the other hand, the clean hydrogen power generation market is a market where only generators using clean hydrogen plants can participate. Clean hydrogen is categorized into carbon-free hydrogen, low-carbon hydrogen, and low-carbon hydrogen compounds (including ammonia) according to greenhouse gas emissions in the production and import procedure of hydrogen. The system for certifying clean hydrogen plants will be put in place based on criteria, such as the amount of carbon dioxide emissions, set by relevant enforcement ordinances. The bidding market commences two years earlier in the general hydrogen market and three years earlier in the clean hydrogen market than the actual commercial operation of plants and purchase of power generated. In March 2023 but prior to an official announcement, the Government notified the bidding volume for the period from 2023 to 2025 in accordance with the Tenth Basic Plan, as shown in the table below.

	Year of bidding market commencement					
	2023		2024		2025	
	Year of commercial operation commencement	Volume (GWh)	Year of commercial operation commencement	Volume (GWh)	Year of commercial operation commencement	Volume (GWh)
General hydrogen market	2025	1,300	2026	1,300	2027	1,300
Clean hydrogen market	—	—	2027	3,500	2028	3,000

The amount of hydrogen-generated electricity to be purchased by us will be determined by the Minister of Trade, Industry and Energy after taking into consideration the Basic Plan Relating to the Long-Term Supply and Demand of Electricity and Hydrogen Economy Implementation Basic Plan and it shall be within 10% of the aggregate power generated domestically during the previous year. The Minister shall allow us to reflect the cost arising from the purchase of hydrogen energy into the electricity tariff pursuant to the above Act but a detailed method has not been specified yet.

Complying with these Government initiatives and operating programs in furtherance thereof has involved and will likely continue to involve significant costs and resources on our part, which may adversely affect our results of operation, financial condition and cash flows. Our cost of complying with the Renewable Portfolio Standard increased as the target percentage for compliance increased in 2022. We expect our future compliance costs may increase as the requirements under Government initiatives and operating programs continue to become more rigorous. We may not be able to pass on the increased cost to customers at a sufficient level or on a timely basis. Further, we and our generation subsidiaries could also become subject to substantial fines and other forms of penalties for non-compliance. Even without such financial losses, increased public awareness and adverse publicity about potential impacts on climate change or environmental harm from us or our industry could harm our reputation or otherwise impact the Company adversely. In recent years, investors have also begun to show increased interest about sustainability and climate change as it relates to their investment decisions.

According to the new tariff system which came into effect on January 1, 2021, the Government introduced an additional component to the tariff called the Climate/Environment Related Charge. Previously, our climate and environment costs were embedded in the Usage Charge component of the tariff and our consumers could not discern the exact magnitude of such costs. By separating it out as an independent component, we intend to provide more information and transparency to our customers while having the flexibility to adjust it in alignment with the underlying costs. The Climate/Environment Related Charge for the coming year is calculated by multiplying (i) our total estimated costs of complying with the Renewable Portfolio Standard program, the Greenhouse Gas Emission Trading System and the coal-fired generation reduction program for the current year, and then dividing it by the electricity sales projected for the coming year (the "Climate/Environment Related Base Rate"), and (ii) the amount of electricity consumed. The value of the Climate/Environment Related Base Rate for 2022 was Won 7.3 per kilowatt-hour. In accordance with the tariff increase plan we announced in December 2022, we further reflected increased environmental costs in 2023 to raise the Climate/Environment Related Base Rate by Won 1.7 to Won 9.0 per kilowatt-hour. As such case illustrates, even though the Climate/Environment Related Charge is planned to be adjusted every year by reflecting the change in climate and environment-related costs, the Government may change the date of adjustment in consideration of different policy objectives. Therefore, there is no guarantee that the Climate/Environment Related Charge will be regularly updated, even though our climate and environment-related costs will likely increase each year. If there are discrepancies between our costs and the Climate/Environment Related Charge, we may accumulate such discrepancies and reflect them in our Total Comprehensive Cost. However, the electricity rate based on the Total Comprehensive Cost needs to be approved by the Government to be revised. There is no assurance that, particularly given the wide-ranging policy priorities of the Government, it will in fact raise the electricity rate to a level sufficient to fully cover additional costs associated with implementing and operating programs as described in this risk factor and do so on a timely basis or at all. If the Government does not do so or provide us and our generation subsidiaries with other forms of assistance to offset the costs involved, our results of operation, financial condition and cash flows may be materially and adversely affected.

See Item 4.B. "Business Overview—Environmental, Social and Governance Programs."

We may require a substantial amount of additional indebtedness to refinance existing debt and for future capital expenditures.

We anticipate that a substantial amount of additional indebtedness will be required in the coming years in order to refinance existing debt, make capital expenditures for construction of generation plants and other

facilities and/or make acquisitions, invest in renewable energy and the “new energy industry” projects and fund our overseas businesses. In 2020, 2021 and 2022, our capital expenditures in relation to the foregoing amounted to Won 15,485 billion, Won 13,964 billion and Won 13,886 billion, respectively, and our budgeted capital expenditures for 2023, 2024 and 2025 amount to Won 16,927 billion, Won 16,306 billion and Won 17,908 billion, respectively.

Furthermore, as fuel prices surge, our cost of purchasing electricity from domestic generation companies through the Korea Power Exchange may increase significantly. If we fail to recoup more tariff from our customers to account for such electricity sales-related costs, our debt may further increase.

As we experienced increased net losses in 2022 as global energy prices increased significantly and the power purchase costs increased accordingly, we recently issued more debt securities than before to meet increased working capital requirement. On December 28, 2022, the National Assembly of Korea passed an amendment to Article 16 of KEPCO Act which increased our debt ceiling on total outstanding debt securities on a separate basis to be no greater than five times (or six times if the Minister of the Ministry of Trade, Industry and Energy approves if it is urgently required to resolve a business crisis situation) the sum of our share capital and reserves updated at the end of each year. Such share capital and reserves are calculated on a separate basis under the KEPCO Act. Before such amendment, our debt ceiling was two times the sum of our share capital and reserves. Such increase in debt ceiling will be effective until December 31, 2027 and we may make use of the new debt ceiling to issue more debt securities to cover our losses, refinance existing debt and finance new capital expenditures. However, if the sum of our share capital and reserves decrease (including as a result of continued significant net losses), our debt ceiling will decrease as well and there will be no assurance that we can meet our funding requirements for capital or operational expenditures or debt repayment obligations, which situation could have a material adverse impact on our business, results of operations and financial condition.

While we are not currently experiencing material difficulties in procuring long-term and short-term borrowings, there is no assurance that we will continue to be able to do so, particularly given the potential risk of increasing financial losses and the adverse business environment as discussed above. We expect that a portion of our long-term debt will need to be paid or refinanced through foreign currency-denominated borrowings and capital raising in international capital markets. Such financing may not be available on terms commercially acceptable to us or at all, especially if the global financial markets experience significant turbulence or a substantial reduction in liquidity or due to other factors beyond our control. If we are unable to obtain financing on commercially acceptable terms on a timely basis, or at all, we may be unable to meet our funding requirements for capital expenditures or debt repayment obligations, which could have a material adverse impact on our business, results of operations and financial condition.

We and our generation subsidiaries have undertaken various programs to reduce debt and improve the overall financial health. For further information, see Item 4.B. “Business Overview—Financial Stabilization Plan and Related Activities.” Despite our best efforts, however, for reasons beyond our control, including macroeconomic environments, government regulations and market forces (such as international market prices for our fuels), we cannot assure whether we or our generation subsidiaries will be able to successfully reduce debt burdens or otherwise improve our financial health to a level that would be optimal for our capital structure. If we or our generation subsidiaries fail to do so or the measures taken by us or our generation subsidiaries to reduce debt levels or improve financial health have unintended adverse consequences, such developments may have an adverse effect on our business, results of operations and financial condition.

The movement of Won against the U.S. dollar and other currencies may have a material adverse effect on us.

The Won has fluctuated significantly against major currencies from time to time. Even slight depreciation of Won against U.S. dollar and other foreign currencies may result in a material increase in the cost of fuel and equipment purchased by us from overseas since the prices for substantially all of the fuel materials and a significant portion of the equipment we purchase are denominated in currencies other than Won, generally in U.S. dollar.

Changes in foreign exchange rates may also impact the cost of servicing our foreign currency-denominated debt. As of December 31, 2022, 14.7% of our long-term debt (including the current portion but excluding original issue discounts and premium) without taking into consideration of swap transactions, was denominated in foreign currencies, principally U.S. dollar. In addition, even if we make payments in Won for certain fuel materials and equipment, some of these fuel materials may originate from other countries and their prices may be affected accordingly by the exchange rates between the Won and foreign currencies, especially the U.S. dollar. Since the substantial majority of our revenues are denominated in Won, we must generally obtain foreign currencies through foreign currency-denominated financings or from foreign currency exchange markets to make such purchases or service such debt. As a result, any significant depreciation of Won against the U.S. dollar or other major foreign currencies will have a material adverse effect on our profitability and results of operations.

We may not be successful in implementing new business strategies.

As part of our overall medium- to long-term business strategies created in 2022, we plan to (i) establish power grid system which could further contribute to achieving carbon neutrality, (ii) expand clean energy and promote strategic demand response, (iii) lead future energy market and improve sales competitiveness, (iv) lead platform-based new businesses, (v) transform overseas business portfolio to focus on eco-friendly projects and core competencies, (vi) secure future technologies and build a research and development ecosystem, (vii) promote digitalization in overall supply chain, and (viii) establish a highly reliable and highly efficient management system with respect to human beings and environment.

Due to their inherent uncertainties, such new and expanded strategic initiatives expose us to a number of risks and challenges, including the following:

- there may be restrictions on business diversification due to various regulations that we and our subsidiaries must comply with;
- new and expanded business activities may require unanticipated capital expenditures, although our revenue may not be sufficient to cover such expenditures;
- if domestic and foreign competitions intensify due to a limited pool of professionals and core technology to pursue new businesses, we may lose competitiveness;
- new and expanded business activities may result in less growth or profit than we currently anticipate, and there can be no assurance that such business activities will become profitable at the level we desire or at all;
- certain of our new and expanded businesses, particularly in the areas of renewable energy, require substantial Government subsidies to become profitable, and such subsidies may be substantially reduced or entirely discontinued;
- we may fail to identify and enter into new business opportunities in a timely fashion, putting us at a disadvantage vis-à-vis competitors; and
- we may need to hire or retrain personnel to supervise and conduct the relevant business activities.

As part of our business strategy, we may also seek, evaluate or engage in potential acquisitions, joint ventures, strategic alliances, restructurings, combinations, rationalizations, divestments or other similar opportunities. The prospects of these initiatives are uncertain, and there can be no assurance that we will be able to successfully implement or grow new ventures, and these ventures may prove more difficult or costly than what we originally anticipated. In addition, we regularly review the profitability and growth potential of our existing and new businesses. As a result of such review, we may decide to exit from or to reduce the resources that we allocate to new or existing ventures in the future. There is a risk that these ventures may not achieve profitability or operational efficiencies to the extent originally anticipated, and we may fail to recover investments or

expenditures that we have already made. Any of the foregoing may have a material adverse effect on our reputation, business, results of operations, financial condition and cash flows.

We plan to pursue overseas expansion opportunities that may subject us to different or greater risks than those associated with our domestic operations.

While our operations have, to-date, been primarily based in Korea, we and our generation subsidiaries may expand, on a selective and opportunistic basis, overseas operations in the future. In particular, we and our generation subsidiaries may further expand the construction and operation of renewable energy power plants, transmission and distribution.

Overseas operations often involve risks that are different from those we face in our domestic operations, including the following:

- challenges of complying with multiple foreign laws and regulatory requirements, including tax laws and laws regulating our operations and investments;
- volatility of overseas economic conditions, including fluctuations in foreign currency exchange rates;
- difficulties in enforcing creditors' rights in foreign jurisdictions;
- risk of expropriation and exercise of sovereign immunity where the counterparty is a foreign government;
- difficulties in establishing, staffing and managing foreign operations;
- differing labor regulations;
- political and economic instability, natural calamities, war and terrorism;
- lack of familiarity with local markets and competitive conditions;
- changes in applicable laws and regulations in Korea that affect foreign operations;
- obstacles to the repatriation of earnings and cash; and
- environmental regulations and public complaints regarding overseas coal-fired power plants.

Any failure by us to recognize or respond to these differences may adversely affect the success of our operations in those markets, which in turn could materially and adversely affect our business and results of operations.

Furthermore, while we seek to enter into overseas business opportunities in a prudent manner, some of our new international business ventures carry inherent risks that are different from our traditional business of electricity power generation, transmission and distribution. While the overseas businesses in the aggregate currently do not comprise a material portion of our overall business, the actual revenues and profitability from, and investments and expenditures into, such ventures may be substantially different from what we plan or anticipate and may have a material adverse impact on our overall business, results of operations, financial condition and cash flows.

An increase in electricity generated by and/or sourced from independent power producers may erode our market position and hurt our business, growth prospects, revenues and profitability.

As of December 31, 2022, we and our generation subsidiaries owned approximately 59.9% of the total electricity generation capacity in Korea (excluding plants generating electricity for private or emergency use). New entrants to the electricity business will erode our market share and create significant competition, which could have a material adverse impact on our financial condition and results of operations.

In particular, we compete with independent power producers with respect to electricity generation. The independent power producers accounted for 31.3% of total power generation in 2022 and 40.1% of total generation capacity as of December 31, 2022. As of December 31, 2022, there were 36 independent power producers in Korean electricity market, excluding 5,313 renewable energy producers. Private enterprises became permitted to own and operate coal-fired power plants in Korea only after the Ministry of Trade, Industry and Energy approved plans for independent power producers to construct coal-fired power plants under the Sixth Basic Plan announced in February 2013. Under the Tenth Basic Plan announced in January 2023, three coal-fired power plants are planned to be constructed by independent power producers by 2024. Two of the three coal-fired power plants planned for construction will be completed in 2023, followed by one in 2024. While it remains to be seen whether construction of these generation units will be completed as scheduled, if these units were to be completed as scheduled and/or independent power producers are permitted to build additional generation capacity (whether coal-fired or not), our market share in Korea may decrease, which may have a material adverse effect on our results of operations and financial condition.

In addition, under the Community Energy System adopted by the Government in 2004, a minimal amount of electricity is supplied directly to consumers on a localized basis by independent power producers outside the cost-based pool system. Such system is used by our generation subsidiaries and most independent power producers to distribute electricity nationwide. The purpose of this system is to geographically decentralize electricity supply and thereby reduce transmission losses and improve the efficiency of energy use. These entities do not supply electricity on a national level but are licensed to supply electricity on a limited basis to their respective districts under the Community Energy System. As of March 31, 2023, the aggregate generation capacity of suppliers participating in the Community Energy System amounted to less than 2% of that of our generation subsidiaries in the aggregate. We currently do not expect the Community Energy System to be widely adopted, especially in light of the significant level of capital expenditure required for such direct supply. However, if the Community Energy System is widely adopted, it may erode our currently dominant market position in the generation and distribution of electricity in Korea and may have a material adverse effect on our business, results of operations and financial condition.

While we are currently the dominant market player in the electricity distribution in Korea, we cannot assure you that our market dominance will not face potential erosion in the future. For example, in June 2016, the Government announced the Proposal for Adjustment of Functions of Public Institutions (Energy Sector), which contemplated a gradual opening of the electricity trading market to the private sector. Although the proposal was withdrawn after a year of deliberation, a number of economists and civic groups are continuing to demand for the liberalization of the electricity trading market. It is difficult to predict whether and in what direction the liberalization of the electricity trading market will happen in the future, and such event may result in substantial reduction of our market share in electricity distribution in Korea, which would have a material adverse effect on our business, results of operation and cash flows.

See also Item 4.B. “Business Overview–Competition.”

Labor unrest or increases in labor cost may adversely affect our operations.

We and each of our generation subsidiaries have separate labor unions. As of December 31, 2022, approximately 74.0% of our and our generation subsidiaries’ employees in the aggregate were members of these labor unions. Since a six-week labor strike in 2002 by union members of our generation subsidiaries in response to a proposed privatization of one of our generation subsidiaries, there has been no material labor dispute. However, we cannot assure you that there will not be a major labor strike or other material disruptions of operations by the labor unions of us and our generation subsidiaries if the Government resumes privatization or other restructuring initiatives or for other reasons, which may adversely affect our business and results of operations.

Furthermore, the Government, as part of a response to low fertility amidst an aging population in Korea and to make the lives of workers more stable, has pledged to reduce the number of non-permanent workers and

increase the employment of permanent workers, in part by transitioning from non-permanent to permanent positions in the public sector. We have completed transitioning temporary workers to permanent workers at the end of 2019. Our generation subsidiaries have partially completed transitioning of non-permanent workers to permanent positions by hiring them for an indefinite period or establishing subsidiaries and hiring them through such subsidiaries. Our thermal generation subsidiaries plan to form a labor-management consultative body to transition the in-house subcontracted workers for the fuel and environmental facilities to permanent positions. Although the Government guidelines suggest that we transition the non-permanent workers to permanent positions within our existing budget for the related business, we cannot assure you that this will not result in increased costs for us or our generation subsidiaries and have an adverse impact on us or our generation subsidiaries' financial condition and results of operations.

Additionally, domestic and international policy changes may affect our relationship with our employees, such as the Government's ratification of seven of the eight essential conventions of International Labor Organization and potential reformation of the public employee wage structure. We cannot assure you that such policy changes will not negatively affect our relationship with our employees, which may in turn adversely affect our business and results of operations.

Operation of nuclear power generation facilities inherently involves numerous hazards and risks, any of which could result in a material loss of revenues or increased expenses.

Through KHNP, we currently operate 25 nuclear-fuel generation units, among which Kori #2 has been shut down since April 8, 2023. KHNP submitted a safety evaluation report to the NSSC in April 2022 to seek approval for an extension of the life of Kori #2.

Operation of nuclear power plants is subject to certain hazards, including environmental hazards such as leaks, ruptures and discharge of toxic and radioactive substances and materials. These hazards can cause personal injuries or loss of life, severe damage to or destruction of property and natural resources, pollution or other environmental damage, clean-up responsibilities, regulatory investigation and penalties and suspension of operations. Nuclear power has a stable and relatively inexpensive cost structure (which is least costly among the fuel types used by our generation subsidiaries) and is the second largest source of Korea's electricity supply, accounting for 29.6% of electricity generated in Korea in 2022. Due to significantly lower unit fuel costs compared to those for thermal power plants, our nuclear power plants are generally operated at full capacity with only routine shutdowns for fuel replacement and maintenance, with limited exceptions.

From time to time, our nuclear generation units may experience unexpected shutdowns or maintenance-related stoppage. For example, following an earthquake in the vicinity in September 2016, four nuclear generation units at the Wolsong site were shut down for approximately three months as part of a preventive and safety assurance program although these units were not directly affected by the earthquake. Any prolonged or substantial breakdown, failure or suspension of operation of a nuclear unit could result in a material loss of revenues, an increase in fuel costs related to the use of alternative power sources, additional repair and maintenance costs, greater risk of litigation and increased social and political hostility to the use of nuclear power, any of which could have a material adverse impact on our financial condition and results of operations.

In order to prevent damages to the nuclear facilities such as a result of the tsunami and earthquake in March 2011 in Japan, KHNP prepared a comprehensive safety improvement plan including, but are not limited to, installing additional automatic shut-down systems for earthquakes, extending coastal barriers for seismic waves, procuring mobile power generators and storage batteries, installing passive hydrogen removers at nuclear facilities and improving the radiology emergency medical system. All follow-up measures will be finalized in December 2024 due to changes in the plan. KHNP also developed 10 additional supplementary safety measures by analysis of overseas plants and its current operations and implemented nine of such measures in 2017, with the one remaining measure to be implemented by 2023. However, there is no assurance that a similar or worse natural disaster may require the adoption and implementation of additional safety measures, which may be costly and have a material adverse impact on our financial condition and results of operations.

In January 2023, the Government announced the Tenth Basic Plan which focuses on, among other things, optimizing nuclear power sources while minimizing coal-fired power sources and developing eco-friendly power sources. Accordingly, construction of nuclear generation units in a planning stage (Shin-Hanul #3 and #4) would resume and operation of ten other nuclear generation units including Kori #2 may continue beyond their original retirement dates in or before 2030 subject to KHNP's intention and only upon the NSSC's approval following a satisfactory safety evaluation. As for new nuclear plants under construction, we expect the construction of Shin-Hanul #2 will be completed in 2023 following Shin-Hanul #1 which commenced its commercial operation in December 2022, while construction of Saeul #3 and #4 (formerly named as Shin-Kori #5 and #6) is expected to complete in 2024 and 2025 respectively. We cannot assure you that there will not be new challenges by civic groups or changes in the Government's policies that may interfere with the construction of these new nuclear units in the future. We may experience a loss of revenues and an increase in fuel costs (as nuclear fuel is the cheapest compared to coal, LNG or oil) as a result of such challenges, which could adversely affect our results of operation and financial condition. For example, in May 2019, a group of 730 Korean nationals brought a lawsuit against the NSSC to suspend the operation of Saeul #2 (formerly named as Shin-Kori #4). In July 2019, we applied to participate in the lawsuit as a stakeholder. In February 2021, the Seoul Administrative Court dismissed the plaintiffs' claim. The plaintiffs subsequently appealed in March 2021 and the plaintiff's appeal was dismissed by the Seoul High Court in November 2022. The plaintiff has filed a petition to appeal to the Supreme Court of Korea.

As mentioned above, there are ten other nuclear generation units whose life under their initial operating license will expire by 2030 including Kori #2 which has been shut down since April 8, 2023. Under the Tenth Basic Plan, we aim to continue their operation after such expirations, but we may find it difficult to have the life of those nuclear units extended. In April 2022, KHNP submitted a safety evaluation report to the NSSC to seek approval for an extension of the life of Kori #2, which shut down in April 2023. In September 2022, KHNP also submitted a safety evaluation report to the NSSC to seek approval for an extension of the lives of Kori #3 and Kori #4, which are scheduled to shut down in September 2024 and August 2025, respectively. As future procedures will be carried out in accordance with relevant laws and regulations, it is uncertain at this time whether such extension of life will be granted. The failure to extend the life of these units would result in a loss of revenues from such units and the increase in our overall fuel costs (as nuclear fuel is cheaper compared to coal, LNG or oil), which could adversely affect our results of operation and financial condition. In addition, heightened concerns regarding the safety of operating nuclear generation units could impede with our ability to operating them for an extended period of time or at all. For example, the nuclear power plant at Wolsong #1 unit began operations in 1982 and ended its operations in 2012 pursuant to its 30-year operating license. In February 2015, the NSSC evaluated the safety of operating Wolsong #1 unit and approved its extended operation until November 2022. However, a civic group filed a lawsuit to annul such decision, and in February 2017, the Seoul Administrative Court ruled against the NSSC. The NSSC appealed this decision, and the civic group filed an injunction to suspend the operation of the Wolsong #1 unit. The civic group's injunction was denied in July 2017. KHNP, which operated the unit pursuant to the NSSC's initial decision, has joined this lawsuit.

In addition, the current scheme for the construction and operation of nuclear generation units may be altered in the future and we cannot assure you that the current or future policies will not have an adverse impact on our or our generation subsidiaries' financial condition and results of operations. In the past, in keeping with previous Eighth and Ninth Basic Plans to decrease the reliance on nuclear power sources, on June 15, 2018, the board of directors of KHNP decided to (i) retire Wolsong #1 unit earlier than planned due to comprehensive evaluation of the economic viability and regional sentiment of its continuing operation and (ii) discontinue the construction of Chunji #1 and #2 as well as Daejin #1 and #2 units. On December 24, 2019, the NSSC approved the permanent shutdown of Wolsong #1 unit. From the beginning of 2018 to the end of 2019, impairment loss in connection with the property, plant and equipment of Wolsong #1 unit accrued to Won 572,216 million and reversal of impairment loss was Won 16,693 million. From the beginning of 2018 to the end of 2019, impairment loss in connection with the property, plant and equipment of Chunji #1 and #2 as well as Daejin #1 and #2 units amounted to Won 38,886 million. From the beginning of 2018 to the end of 2019, impairment loss in connection with the property, plant and equipment of Shin-Hanul #3 and #4 units accrued to Won 134,736 million. However

as the Tenth Basic Plan announced in January 2023 aims to restart the construction of Shin-Hanul #3 and #4, we recognized the reversal of all the accrued impairment losses related to the Shin-Hanul #3 and #4. The Government revised the Enforcement Decree of the Electricity Business Act in June 2021 and enacted a notice that will allow KHNP to be compensated for reasonable costs incurred in relation to the phase-out of nuclear power plants in accordance with the Government's energy transition policy. KHNP applied for such compensation related to Wolsong #1 in June 2022. However, even if KHNP may apply for such compensation, there is no guarantee that it will cover the entire cost as the scope of such compensation has not been specifically determined yet. If KHNP cannot recoup its total cost, it may have an adverse impact on our financial condition.

The construction and operation of our generation, transmission and distribution facilities involve difficulties, such as opposition from civic groups and uncertainties in maintaining permits and licenses, which may have an adverse effect on us.

From time to time, we encounter social and political opposition against construction and operation of our generation facilities (particularly nuclear units) and, to a lesser extent, our transmission and distribution facilities. For example, we recently faced intense opposition from local residents and civic groups to the construction of transmission lines in the Milyang area, which we resolved through various compensatory and other support programs. Such opposition delayed the schedule for completion of this project. Although we and the Government have undertaken various community programs to address concerns of residents in areas near our facilities, civic and community opposition could result in delayed construction or relocation of our planned facilities. In addition, our generation, transmission and distribution facilities generally require permits and licenses from the Government before we can operate them. For example, our nuclear power plants are operated under licenses for a fixed duration of time and such licenses can only be extended upon an approval by the NSSC following a satisfactory safety evaluation. Even in the case of a satisfactory safety evaluation and following approval, a civic or other group may file a lawsuit to challenge such evaluation and approval and apply for an injunction to prevent us from operating our facilities. Such civic and community opposition and the uncertainties in maintaining permits and licenses for our facilities could give rise to a material adverse impact on our business and results of operations.

Our risk management policies and procedures may not be fully effective at all times.

In the course of our operations, we must manage a number of risks, such as regulatory risks, market risks and operational risks. Although we devote significant resources to developing and improving our risk management policies and procedures and expect to continue to do so in the future, our risk management practices may not be fully effective at all times in eliminating or mitigating risk exposures in all market environments or against all types of risk, including risks that are unidentified or unanticipated, such as natural disasters or employee misconduct. For example, in November 2019, prosecutors indicted six of KHNP's employees for, among others, failing to immediately shut down Hanbit #1 reactor when its thermal output exceeded the threshold specified by the nuclear safety technical operations manual and filing false reports to the NSSC. KHNP is also indicted for secondary liability from its employees' alleged wrongdoings. The case arose from the NSSC's investigations into the manual shutdown of Hanbit #1 reactor during a diagnostic test in May 2019. On October 27, 2022, the Supreme Court of Korea dismissed the appeal and upheld the judgement that the employees are not guilty of violating the safety technical operations manual and driving a reactor without a license. In connection with filing false reports to the NSSC, the Supreme Court upheld that, of the five employees who were up for trial, three employees are guilty but two employees are not guilty. To prevent similar incidents from occurring again, KHNP is working to improve its risk monitoring and management system. For additional information, see Item 4.B. "Business Overview—Nuclear Safety."

In April 2019, a forest fire broke out in Goseong in Gangwon Province, about 210 kilometers from Seoul, causing damages to nearby towns, covering approximately 1,260 hectares. The National Forensic Service has investigated the cause of the fire and has determined that the fire seems to have started by an electrical arc from our utility pole's wire, which broke as a result of a strong wind. Based on this finding, the Police Department of Goseong conducted follow-up investigations and issued a recommendation to prosecute seven employees of KEPCO in connection with the fire. In January 2023, the Seoul High Court acquitted the employees. The prosecutors have appealed to the Supreme Court and a trial is underway, the results of which may have a material

adverse effect on us, our reputation and our operating results. In the meantime, we have settled with and completed compensation payment of Won 62.8 billion to victims as of March 31, 2023. We expect settlements with the remaining victims would cost us approximately Won 6.0 billion. As of December 31, 2022, 68 lawsuits were filed against KEPCO for damages caused by the forest fire, with a total amount of claims around Won 292.5 billion. One claim was given judgment in favor of KEPCO, one claim was settled, and 66 lawsuits are pending. In addition, we are compensating the fire victims by providing a number of services, such as free supply of electricity, and implementing measures to prevent future fires that may result from an electrical arc, including a special maintenance program during the dry season between March and May. Also, we implemented operational measures such as tailored operation of protective devices and suspension of operation during periods of low loads and plan to change power facility designs to reflect regional and seasonal characteristics, all of which are intended to help prevent similar incidents from happening in the future. Despite our efforts, however, such incidents may occur again, and we cannot assure you that they will not have any material adverse effect on us, our reputation and our operating results.

Furthermore, our operational activities like the generation of electricity involve inherent operating risks that may result in accidents involving serious injury or loss of life, environmental damage or property damage. Even though we plan to prioritize on-site safety management by engaging in communications with different stakeholders and investing more in safe environment, there is no guarantee that there will not be future accidents due to our inherent operating risks.

The Serious Accident Punishment Act (the "SAPA") was enacted on January 26, 2021 and took effect on January 27, 2022. The SAPA imposes criminal liability on individuals and entities responsible for "serious accidents". Under SAPA, the term "serious accident" encompasses not only accidents at industrial sites (e.g., at factories or construction sites), but also "public" disasters caused by defects in the design, manufacture, installation and management of products, product ingredients or public facilities/transportation. The SAPA imposes criminal liability against (i) business owners or executives (as defined by the law) who fail to ensure the safety of their business operations and (ii) businesses or institutions who fail their supervisory duties. In case of willful misconduct or gross negligence, the SAPA also imposes punitive damages of up to five times the actual damages. The SAPA also impacts the impending class action and punitive damages legislation, since a serious accident could very well trigger liability under all three laws. For instance, if a serious accident leads to injury or death, and involves 50 or more claimants with a common question of law or fact, this would trigger a potential class action, punitive damages and criminal penalties under the SAPA. As such, the risks faced by companies and senior management under SAPA are amplified by the new class action/punitive damages system, and vice versa. Although we have analyzed the potential impacts on us of the SAPA and aligned our policies, internal regulations and manuals in preparation for the implement of the SAPA prior to the enactment of the SAPA, there is no guarantee that the SAPA would not adversely affect our business, financial condition and result of operations given that the SAPA is very broad but not yet tested by way of court precedents or official rulings of the Government.

We believe we and our subsidiaries are in compliance in all material respects with internal compliance policies and procedures and all other additional safety measures initiated internally or required by regulatory and governmental agencies. Under the SAPA, businesses may avoid punishment if it is found that they duly performed their duties to ensure the safety and health of the participants in their business operations. However, we cannot assure you that, despite all precautionary and preventative measures undertaken by us, these measures will prove to be fully effective at all times against all the risks we face or that an incident that could cause harm to our reputation and operation will not happen in the future, including due to factors beyond our control.

Our risk management procedures may not prevent losses in debt and foreign currency positions.

We manage interest rate exposure for our debt instruments by limiting our variable rate debt exposure as a percentage of our total debt and closely monitoring the movements in market interest rates. We also actively manage currency exchange rate exposure for our foreign currency-denominated liabilities by measuring the potential loss therefrom using risk analysis software and entering into derivative contracts to hedge such

exposure when the possible loss reaches a certain risk limit. To the extent we have unhedged positions or our hedging and other risk management procedures do not work as planned as a result of changes in global macroeconomic environment and/or other factors, our results of operations and financial condition may be adversely affected.

The amount and scope of coverage of our insurance are limited.

Substantial liability may result from the operations of our nuclear generation units, the use and handling of nuclear fuel and possible radioactive emissions associated with such nuclear fuel. KHNP carries insurance for its generation units and nuclear fuel transportation, and we believe that the level of insurance is generally adequate and is in compliance with relevant laws and regulations. In addition, KHNP is the beneficiary of Government indemnity that covers damages which the insurance cannot cover. However, such insurance is limited in terms of amount and scope of coverage and does not cover all types or amounts of losses which could arise in connection with the ownership and operation of nuclear plants. Accordingly, material adverse financial consequences could result from a serious accident or a natural disaster to the extent it is neither insured nor covered by the government indemnity.

In addition, our non-nuclear generation subsidiaries carry insurance covering certain risks, including fire, in respect of their key assets, including buildings and equipment located at their respective power plants, construction-in-progress and imported fuel and procurement in transit. Such insurance and indemnity, however, cover only a portion of the assets that these generation subsidiaries own and operate and do not cover all types or amounts of loss that could arise in connection with the ownership and operation of these power plants. In addition, our generation subsidiaries are not permitted to self-insure, and accordingly have not self-insured, against risks of their uninsured assets or business. Accordingly, material adverse financial consequences could result from a serious accident to the extent it is uninsured.

In addition, because neither we nor our non-nuclear generation subsidiaries carry any insurance against terrorist attacks, an act of terrorism would result in significant financial losses. See Item 4.B. "Business Overview—Insurance."

We may not be able to raise share capital in the future without the participation of the Government.

Under applicable laws, the Government is required to directly or indirectly own at least 51% of our issued capital stock. As of December 31, 2022, the Government, directly and through Korea Development Bank (a statutory banking institution wholly owned by the Government), owned 51.1% of our issued capital stock. Accordingly, without changes in the existing Korean law, it may be difficult or impossible for us to undertake, without the participation of the Government, any equity financing in the future.

We may be exposed to potential claims made by current or previous employees for unpaid wages for the past three years under the expanded scope of ordinary wages and become subject to additional labor costs arising from the broader interpretation of ordinary wages under such decision.

Under the Labor Standards Act, an employee is legally entitled to "ordinary wages." Under the guidelines previously issued by the Ministry of Employment and Labor, ordinary wages include base salary and certain fixed monthly allowances for work performed overtime during night shifts and holidays. Prior to the Supreme Court of Korea decision described below, many companies in Korea had typically interpreted these guidelines as excluding from the scope of ordinary wages fixed bonuses that are paid other than on a monthly basis, namely on a bi-monthly, quarterly or semi-annual basis, although such interpretation had been a subject of controversy and had been overruled in a few court cases.

In December 2013, the Supreme Court of Korea ruled that regular bonuses fall under the category of ordinary wages on the condition that those bonuses are paid regularly and uniformly, and that any agreement which excludes such regular bonuses from ordinary wage is invalid. One of the key rulings provides that bonuses that are given to employees (i) on a regular and continuous basis and (ii) calculated according to the actual

number of days worked (iii) that are not incentive-based must be included in the calculation of “ordinary wages.” The Supreme Court further ruled that in spite of invalidity of such agreements, employees shall not retroactively claim additional wages incurred due to such court decision, in case that such claims bring to employees unexpected benefits which substantially exceeds the wage level agreed by employers and employees and cause an unpredicted increase in expenditures for their company, which would lead the company to material managerial difficulty or would be a threat to the existence of the company. In that case, the claim is not acceptable since it is unjust and is in breach of the principle of good faith. However, in December 2021, the Supreme Court ruled that the claim of workers for additional wages should not be easily rejected for the reason of good faith if there is a possibility of overcoming business difficulties in the future.

As a result of such ruling by the Supreme Court of Korea, we and our subsidiaries became subject to a number of lawsuits filed by various industry-wide and company-specific labor unions based on claims that ordinary wage had been paid without including certain items that should have been included as ordinary wage. In July 2016, the court ruled against us, and in accordance with the court’s ruling, in August 2016 we paid Won 55.1 billion to the employees for three years of back pay plus interest. As of December 31, 2022, our subsidiaries set aside an aggregate amount of Won 115 billion to cover any potential future payments of additional ordinary wage in relation to the related lawsuits. We cannot presently assure you that the court will not rule against our subsidiaries in these lawsuits, or that the foregoing reserve amount will be sufficient to cover the amounts payable under the court rulings.

Furthermore, the issue of determining which labor costs should be additionally included as part of ordinary wages has not been fully resolved by the courts reviewing the lawsuits to which our subsidiaries are a party and other ordinary wage lawsuits filed against other companies. For instance, there are several cases pending review of the Supreme Court of Korea on whether the bonuses conditional to employee’s current employment status should be included as part of ordinary wages. The Supreme Court, in 2013, had ruled that such conditional bonuses are not a part of ordinary wages, yet there were several lower court cases challenging the Court’s interpretation. Although there was a case of the Supreme Court on November 2022 where it ceased the trial and dismissed the appeal against the lower court case challenging the Court’s interpretation, it is not clear from the above case whether the Supreme Court changed its previous interpretation. If the Supreme Court changes its previous interpretation in its review of the currently pending cases, it is expected to be followed by a series of lawsuits asking for additional payments of the ordinary wages. Due to such uncertainty, we cannot presently assure you that there will not be additional lawsuits in relation to ordinary wages and that we or our subsidiaries may not become liable for greater amount of damages as a result of these lawsuits. Furthermore, court decisions or labor legislations expanding the definition of ordinary wages may prospectively increase the labor costs of us and our subsidiaries. As a result, there can be no assurance that the above-described lawsuits and circumstances will not have a material adverse effect on our results of operations. See Item 8.A. “Consolidated Statements and Other Financial Information—Legal Proceedings.”

We are subject to cyber security risk.

Recently, our activities have been subject to an increasing risk of cyber-attacks and information leakages, the nature of which is continually evolving. For example, in December 2014, KHNP became subject to a cyber terror incident. Hackers hacked into the computer network of former KHNP employees and threatened to shut down certain of KHNP’s nuclear plants, even though such incident did not jeopardize our nuclear operation in any material respect and none of the stolen information was material to our nuclear operation or the national nuclear policy. Also, even though past cyber-attacks were mostly unspecified attacks, recent attacks are more targeted and intelligent attacks, such as a ransomware that encrypts a victim’s files, whereupon an attacker demands a ransom from the victim to restore access to the victim’s data upon payment. In particular, non-face-to-face business environment due to COVID-19 has led to more sophisticated phishing e-mail attacks that impersonate service providers and acquaintances. In light of the new developments, there is no assurance that a similar or more serious hacking or other forms of cyber terror will not happen with respect to us and our generation subsidiaries, which could have a material adverse impact on our business, financial condition and results of operations. See Item 4.B. “Business Overview—Cyber Security.”

We engage in Russia-related dealings, including purchasing fuel supply, goods and services from Russia and Russian companies, and we may be adversely impacted in a material manner by sanctions concerning Russia imposed by the United States and other jurisdictions.

In 2022, we met 19.9% of our bituminous coal requirements from coals that originated from Russia. Additionally, we also purchase uranium and conversion and enrichment services of uranium concentrates from Russian suppliers and also purchase Russian origin LNG. In 2022, the total value of all goods and services originated or purchased from Russia was approximately US\$3.2 billion.

United States, among other jurisdictions, adopted and maintains economic sanctions and export/import controls against Russia. U.S. Office of Foreign Assets Control's ("OFAC") sanctions block the property of certain designated individuals and entities, target certain sectors of the Russian economy, including the energy sector, and prohibit certain transactions by U.S. persons with certain targeted persons in targeted sectors of the Russian economy.

Since February 2022, the United States, the European Union, the United Kingdom, and other countries have imposed a host of additional economic sanctions on Russia, Belarus, and certain related persons in response to Russia's military activities in Ukraine. OFAC now maintains comprehensive, territory-wide sanctions on Crimea, the self-described Donetsk People's Republic ("DNR") and Luhansk People's Republic ("LNR") in Ukraine, generally prohibiting any dealings by U.S. persons with these regions. OFAC also has blocking sanctions on certain major Russian financial institutions and their affiliates, Russian oligarchs and persons active in the energy, banking and finance sectors (along with their family members) and Russian government officials, and debt and equity restrictions on certain Russian state-owned enterprises. The U.S. government imposed extensive export controls on all dual-use items destined to Russia, including technology and software, as well as certain commercial items. The U.S. government also imposed a ban on importation into the U.S. of Russian crude oil, certain petroleum products, LNG, and coal, and OFAC now prohibits all new investments in Russia by U.S. persons, wherever located. Non-U.S. persons that engage in certain prohibited transactions concerning Russia or with certain sanctioned Russian persons or entities may be subject to sanctions if any such dealings or transactions involve a nexus to U.S. jurisdiction, and they may also be subject to secondary sanctions for providing material support to Russian entities or individuals subject to certain blocking sanctions and certain other sanctionable transactions or activities. Additionally, the European Union, United Kingdom, and Switzerland, among other jurisdictions, have imposed a ban on the importation of coal and certain other solid fossil fuels. The Republic of Korea also announced export controls on certain non-strategic items for shipment to Russia or Belarus. Other countries, including Japan, have announced plans to phase out Russian coal imports in the future. Further sanctions by the U.S., Korea, and other jurisdictions including the European Union, Switzerland, and the United Kingdom may also be forthcoming.

We source Russian fuel products from counterparties in a number of these jurisdictions, including the European Union, Japan, and Switzerland and sanctions that have been or will be imposed by these and other jurisdictions may require us to restrict or modify our operations. While the U.S. and other countries' sanctions measures announced to date do not amount to a comprehensive embargo against Russia and Russian persons, it is not possible to predict with a reasonable degree of certainty how developments in Russia and Ukraine may impact our Russia-related business dealings, including but not limited to our purchase of fuel sources from Russia, such as bituminous coal, uranium, uranium concentrates conversion and enrichment services, and LNG or with regard to other business with Russian counterparties.

While we do not believe that our dealings related to Russia violate applicable economic sanctions, our ongoing dealings related to Russia expose us to risk. If the parties we are dealing or planning to deal with (directly or indirectly) become subject to sanctions, including suppliers of fuel sources, we may need to terminate our relationships with them and substitute them with alternative parties in order to comply with applicable sanctions. There is no guarantee that we will be able to procure contractual terms with the alternative parties that are better or at least similar to our current terms. In addition, the current and future sanctions against Russia-

related business dealings may cause the global prices of fuels including coal, uranium, and LNG to rise as the overall fuel supply will be curbed. Also, we may not be able to pursue other business with Russian counterparties. Our failure to comply with applicable economic sanctions or export or import controls affecting Russia or Russian companies may result in administrative, civil, or criminal penalties. Such events may have a material adverse effect on our reputation, business, results of operations, financial condition and cash flows.

The extent to which the coronavirus (COVID-19) outbreak impacts our business, results of operations and financial condition will depend on future developments, which are highly uncertain and cannot be predicted.

The rapid and diffuse spread of the coronavirus (COVID-19) and global health concerns relating to this outbreak have had severe negative impact on, among other things, financial markets, liquidity, economic conditions and trade and could continue to do so or could worsen for an unknown period of time, which could in turn have a material adverse impact on our business, results of operations and financial condition. Although we have seen some recoveries from COVID-19 both domestically and internationally in 2022, it is possible the virus may rebound again, for example, with the evolution of a novel variant of the virus, in which case the effects on the economy may be highly uncertain and cannot be predicted. Risks associated with an outbreak of COVID-19 may include but are not limited to:

- disruption in the normal operations of our industrial and commercial customers, which in turn may decrease demand for electricity for such uses;
- the likelihood that the Government may not increase our tariff in a timely manner in an effort to ease the burden on the public, which will lead to a decrease in our revenue;
- an increase in unemployment among, and/or decrease in disposable income of, Korean consumers, which may decrease demand for electricity for residential use and the products and services of our industrial and commercial customers, thereby also leading to a decrease in demand for electricity for such uses;
- disruption in the supply of fuel and equipment from our suppliers;
- disruptions or delays in the construction of new generation facilities or maintenance and refurbishment of existing generation facilities;
- disruption in the normal operations of our business resulting from contraction of COVID-19 by our employees, which may necessitate our employees to be quarantined and/or our generation facilities or offices to be temporarily shut down;
- disruption resulting from the necessity for social distancing, including implementation of temporary adjustment of work arrangements requiring employees to work remotely, which may lead to a reduction in labor productivity;
- depreciation of the Won against major foreign currencies, which in turn may increase the cost of imported raw materials and equipment;
- unstable global and Korean financial markets, which may adversely affect our ability to meet our funding needs on a timely and cost-effective basis;
- significant or extended incline in the prices of LNG, which may lead to the replacement of thermal generation with LNG-combined cycle generation;
- impairments in the fair value of our investments in companies that may be adversely affected by the pandemic; and
- global inflation caused by expansionary monetary policies and global supply chain disruptions leading to higher commodity prices including fuels.

In addition to the factors listed above, the Government may enact emergency measures such as electricity tariff adjustments to ease the burden on the economically disadvantaged customers, each of which could have an adverse impact on our financial condition, results of operations, and cash flows. Each of and any combination of the factors listed above and the emergency governmental measures could have an adverse impact on our financial conditions, results of operations and cash flows.

Risks Relating to Korea and the Global Economy

Unfavorable financial and economic conditions in Korea and globally may have a material adverse impact on us.

We are incorporated in Korea, where most of our assets are located and most of our income is generated. As a result, we are subject to political, economic, legal and regulatory risks specific to Korea, and our business, results of operations and financial condition are substantially dependent on the Korean consumers' demand for electricity, which are in turn largely dependent on developments relating to the Korean economy.

The Korean economy is closely integrated with, and is significantly affected by, developments in the global economy and financial markets. In recent years, global inflation caused by expansionary monetary policies, rising energy prices, global supply chain disruptions and the Russia-Ukraine conflict, rapidly changing monetary policies (including higher interest rates and quantitative tightening) led by developed countries in reaction to such inflation and the consequent economic slowdown, instability in the financial industries (including potential for bank runs) and capital flight risks in emerging economies caused by such changes in monetary policy, credit risks of Chinese real estate developers, ongoing U.S.-China trade conflicts, signs of economic slowdown in China and continuing geopolitical and social instability in various parts of the Middle East, including Iraq, Syria and Yemen, among others, significant uncertainty remains as to the global economic prospects in general and has adversely affected, and may continue to adversely affect, the Korean economy, which in turn could adversely affect our business, financial condition and results of operations. As the Korean economy is highly dependent on the health and direction of the global economy, the prices of our securities may be adversely affected by investors' reactions to developments in other countries. In addition, due to the ongoing volatility in the global financial markets, the value of the Won relative to the U.S. dollar has also fluctuated significantly in recent years, which in turn also may adversely affect our financial condition and results of operations.

Factors that determine economic and business cycles in the Korean or global economy are for the most part beyond our control and inherently uncertain. In light of the high level of interdependence of the global economy, any of the foregoing developments could have a material adverse effect on the Korean economy and financial markets, and in turn on our business and profitability.

More specifically, factors that could have an adverse impact on Korea's economy include, among others:

- the ongoing increases in inflation levels and consequent increases in interest rates to mitigate the inflation, volatility in foreign currency reserve levels, commodity prices (including oil, LNG and other fuel prices), exchange rates (particularly against the U.S. dollar), interest rates, stock market prices and inflows and outflows of foreign capital, either directly, into the stock markets, through derivatives or otherwise;
- difficulties in the financial sectors in the United States, Europe, China and elsewhere and increased sovereign default risks in certain countries and the resulting adverse effects on the global financial markets;
- adverse developments in the economies of countries and regions to which Korea exports goods and services (such as the United States, Europe, China and Japan), or in emerging market economies in Asia or elsewhere that could result in a loss of confidence in the Korean economy, including potentially as a result of the Brexit;

- potential escalation of the ongoing trade war between the U.S. and China as each country introduces tariffs on goods traded with the other;
- social and labor unrest or declining consumer confidence or spending resulting from lay-offs, increasing unemployment and lower levels of income;
- uncertainty and volatility in the market prices of Korean real estate;
- a decrease in tax revenues and a substantial increase in the Government's expenditures for unemployment compensation and other social programs that together could lead to an increased Government budget deficit;
- political uncertainty, including as a result of increasing strife among or within political parties in Korea, and political gridlock within the Government or in the legislature, which prevents or disrupts timely and effective policy making to the detriment of Korean economy, as well as the impeachment and indictment of the former president following a series of scandals and social unrest, which also involved the investigation of several leading Korean conglomerates and arrest of their leaders on charges of bribery and other possible misconduct;
- deterioration in economic or diplomatic relations between Korea and its trading partners or allies, including deterioration resulting from territorial or trade disputes or disagreements in foreign policy, including as a result of any potential renegotiation of free trade agreements;
- increases in social expenditures to support the aging population in Korea or decreases in economic productivity due to the declining population size in Korea;
- any other development that has a material adverse effect in the global economy, such as an act of war, the spread of terrorism or a breakout of an epidemic such as SARS, avian flu, swine flu, Middle East Respiratory Syndrome, Ebola or Zika virus, or natural disasters, earthquakes and tsunamis and the related disruptions in the relevant economies with global repercussions;
- hostilities involving oil-producing countries in the Middle East and elsewhere and any material disruption in the supply of oil or a material increase in the price of oil resulting from such hostilities; and
- an increase in the level of tensions or an outbreak of hostilities in the Korean peninsula or between North Korea and the United States.

Any future deterioration of the Korean economy could have an adverse effect on our business, financial condition and results of operations.

Tensions with North Korea could have an adverse effect on us and the market value of our shares.

Relations between Korea and North Korea have been tense throughout Korea's modern history. The level of tension between the two Koreas has fluctuated and may increase abruptly as a result of current and future events. In particular, there continues to be uncertainty regarding the long-term stability of North Korea's political leadership since the succession of Kim Jong-un to power following the death of his father in December 2011, which has raised concerns with respect to the political and economic future of the region. In February 2017, Kim Jong-un's half-brother, Kim Jong-nam, was reported to have been assassinated in an international airport in Malaysia.

In addition, there continues to be heightened security tension in the region stemming from North Korea's hostile military and diplomatic actions, including in respect of its nuclear weapons and long-range missile programs. Some examples from recent years include the following:

- In September 2022, North Korea legislated five conditions under which it would launch a preemptive nuclear strike: (i) when a nuclear or other weapon of mass destruction attack has been carried out against North Korea or is imminent, (ii) when a nuclear or non-nuclear strike on the leadership and national nuclear force command body of North Korea has been carried out or is imminent, (iii) when a lethal military attack on important strategic targets of North Korea has been carried out or is imminent, (iv) when it is operationally unavoidable to prevent the expansion of a war and seize the initiative in times of contingencies, and (v) when a situation that causes a catastrophic crisis to the existence of North Korea and the safety of the people.
- Following Pyongyang Joint Declaration in September 2018, Korea and North Korea also reached for an agreement on the implementation of such declaration to cease any hostile military activities. Despite such agreement, North Korea fired artillery shells in maritime buffer zones in November 2019 as well as from October 2022 to December 2022 and shots on a guard post of Korea in May 2020. In December 2022, five North Korean drones violated Korean airspace, one of which returned to the North but the rest disappeared. In November 2022 and from February 2023 to April 2023, North Korea conducted test launches of intercontinental ballistic missiles to East Sea.
- In April 2018, North Korea announced an end to nuclear explosive testing, yet with denuclearization talks stalled, in December 2019, Kim Jong-un announced that North Korea was no longer bound by the moratoria. In March 2022, satellite monitoring revealed that construction resumed at North Korea's nuclear test site.
- In November 2017, North Korea conducted a test launch of another intercontinental ballistic missile, which, due to its improved size, power and range of distance, may potentially enable North Korea to target the United States mainland.
- Recently, on September 3, 2017, North Korea conducted its sixth nuclear test, claiming it had tested a hydrogen bomb that could be mounted on an intercontinental ballistic missile. In response, on September 12, 2017, the United Nations Security Council unanimously adopted a resolution imposing additional sanctions on North Korea including new limits on gas, petrol and oil imports, a ban on textile exports and measures to limit North Korean laborers from working abroad.
- On August 29, 2017, North Korea tested an intermediate-range ballistic missile which flew directly over northern Japan before landing in the Pacific Ocean. In response, the United Nations Security Council unanimously adopted a statement condemning such launch, reiterating demands that North Korea halt its ballistic missile and nuclear weapons programs.
- On July 4, 2017, North Korea tested its first intercontinental ballistic missile. In response, the U.S. government and the Government both issued statements condemning North Korea and conducted a joint military exercise on July 5, 2017. On July 28, 2017, North Korea tested a second intercontinental ballistic missile which landed in the Sea of Japan, inside Japan's Economic Exclusion Zone. In response, on August 5, 2017, the United Nations Security Council unanimously adopted a resolution that strengthened sanctions on North Korea. The resolution includes a total ban on all exports of coal, iron, iron ore, lead, lead ore and seafood, which is expected to reduce North Korea's export revenue by a third each year.
- In March 2017, North Korea launched four mid-range missiles, which landed off the east coast of the Korean peninsula.
- On September 9, 2016, North Korea conducted its fifth nuclear test, which has been the largest in scale among North Korea's nuclear tests thus far. According to North Korean announcements, the test was successful in detonating a nuclear missile. The test created a sizable earthquake in Korea. In response, in February 2017 the U.N. Security Council adopted Resolution 2321 (2016) against North Korea, the

purpose of which is to strengthen its sanctions regime against North Korea and to condemn North Korea's September 9, 2016 nuclear test in the strongest terms.

- On February 10, 2016, in retaliation of North Korea's recent launch of a long-range rocket, Korea announced that it would halt its operations of the Gaeseong Industrial Complex to impede North Korea's utilization of funds from the industrial complex to finance its nuclear and missile programs. In response, North Korea announced on February 11, 2016 that it would expel all Korean employees from the industrial complex and freeze all Korean assets there.
- On February 7, 2016, North Korea launched a rocket, claimed by them to be carrying a satellite intended for scientific observation. The launch was widely suspected by the international community to be a cover for testing a long-range missile capable of carrying a nuclear warhead. On February 18, 2016, the President of the United States signed into law mandatory sanctions on North Korea to punish it for its recent nuclear and missile tests, human rights violations and cybercrimes. The bill, which marks the first measure by the United States to exclusively target North Korea, is intended to seize the assets of anyone engaging in business related to North Korea's weapons program, and authorizes US\$50 million over five years to transmit radio broadcasts into the country and support humanitarian assistance projects. On March 2, 2016, the United Nations Security Council voted unanimously to adopt a resolution to impose sanctions against North Korea, which include inspection of all cargo going to and from North Korea, a ban on all weapons trade and the expulsion of North Korean diplomats who engage in "illicit activities." Also, on March 4, 2016, the European Union announced that it would expand its sanctions on North Korea, adding additional companies and individuals to its list of sanction targets. On April 1, 2016, North Korea fired a short-range surface-to-air missile in apparent protest of these sanctions adopted by the United States and the United Nations Security Council.
- On January 6, 2016, North Korea announced that it had successfully conducted its first hydrogen bomb test, hours after international monitors detected a 5.1 magnitude earthquake near a known nuclear testing site in the country. The claims have not been verified independently. The alleged test followed a statement made in the previous month by Kim Jong-un, who claimed that North Korea had developed a hydrogen bomb.
- North Korea renounced its obligations under the Nuclear Non-Proliferation Treaty in January 2003 and conducted three rounds of nuclear tests between October 2006 to February 2013, which increased tensions in the region and elicited strong objections worldwide. In response, the United Nations Security Council unanimously passed resolutions that condemned North Korea for the nuclear tests and expanded sanctions against North Korea.

North Korea's economy also faces severe challenges, including severe inflation and food shortages, which may further aggravate social and political tensions within North Korea. In addition, reunification of Korea and North Korea could occur in the future, which would entail significant economic commitment and expenditure by Korea that may outweigh any resulting economic benefits of reunification. On April 27, 2018, May 26, 2018 and September 18, 2018, President Moon Jae-in met Kim Jong-un in a summit to discuss, among other matters, denuclearization of the Korean Peninsula. On June 12, 2018, President Donald Trump and Kim Jong-un in turn had an official summit in Singapore and on February 27, 2019, the parties held the second official summit in Hanoi, Vietnam. However, in March 2019, announcement was made that no agreement was reached in the second bilateral summit meeting between the United States and North Korea. On June 30 2019, for the first time, President Moon Jae-in, President Donald Trump and Kim Jong-un met in Panmunjom, a symbolic place of division in Korea, and the parties agreed to resume the United States and North Korea working-level negotiations, and on October 4, 2019, such working-level negotiations took place in Stockholm, Sweden. However, the negotiations did not result in any definitive agreement or any follow-up plans. On June 16, 2020, North Korea destroyed the joint liaison office in Gaeseong, citing anti-regime propaganda allegedly disseminated using balloons across the border by Korean activists, and cut all other communication channels with Korea. On October 4, 2021, both Korea and North Korea announced that the communication channels have been reconnected. However, there has been no further discussion of resuming any operations in the Gaeseong Industrial Complex or any transactions that we are involved in.

There can be no assurance that the level of tension on the Korean peninsula will not escalate in the future or that the political regime in North Korea may not suddenly collapse. Any further increase in tension or uncertainty relating to the military, political or economic stability in the Korean peninsula, including a breakdown of diplomatic negotiations over the North Korean nuclear program, occurrence of military hostilities, heightened concerns about the stability of North Korea's political leadership or its actual collapse, a leadership crisis, a breakdown of high-level contacts or accelerated reunification could have a material adverse effect on our business, financial condition and results of operations, as well as the price of our common shares and our American depositary shares.

We are generally subject to Korean corporate governance and disclosure standards, which differ in significant respects from those in other countries.

Companies in Korea, including us, are subject to corporate governance standards applicable to Korean public companies which differ in many respects from standards applicable in other countries, including the United States. As a reporting company registered with the Securities and Exchange Commission and listed on the New York Stock Exchange, we are, and will continue to be, subject to certain corporate governance standards as mandated by the Sarbanes-Oxley Act of 2002, as amended. However, foreign private issuers, including us, are exempt from certain corporate governance standards required under the Sarbanes-Oxley Act or the rules of the New York Stock Exchange. We and our generation subsidiaries are also subject to a number of special laws and regulations to Government-controlled entities, including the Act on the Management of Public Institutions. For a description of significant differences in corporate governance standards, see Item 16.G. "Corporate Governance." There may also be less publicly available information about Korean companies, such as us, than is regularly made available by public or non-public companies in other countries. Such differences in corporate governance standards and less public information could result in less than satisfactory corporate governance practices or disclosure to investors in certain countries.

You may not be able to enforce a judgment of a foreign court against us.

We are a corporation with limited liability organized under the laws of Korea. Substantially all of our directors and officers and other persons named in this annual report reside in Korea, and all or a significant portion of the assets of our directors and officers and other persons named in this annual report and substantially all of our assets are located in Korea. As a result, it may not be possible for holders of the American depositary shares to affect service of process within the United States, or to enforce against them or us in the United States judgments obtained in United States courts based on the civil liability provisions of the federal securities laws of the United States. There is doubt as to the enforceability in Korea, either in original actions or in actions for enforcement of judgments of United States courts, of civil liabilities predicated on the United States federal securities laws.

Risks Relating to Our American Depositary Shares (ADSs)

There are restrictions on withdrawal and deposit of common shares under the depositary facility.

Under the deposit agreement, holders of shares of our common stock may deposit those shares with the depositary bank's custodian in Korea and obtain American depositary shares, and holders of American depositary shares may surrender American depositary shares to the depositary bank and receive shares of our common stock. However, under current Korean laws and regulations, the depositary bank is required to obtain our prior consent for the number of shares to be deposited in any given proposed deposit which exceeds the difference between (i) the aggregate number of shares deposited by us for the issuance of American depositary shares (including deposits in connection with the initial and all subsequent offerings of American depositary shares and stock dividends or other distributions related to these American depositary shares) and (ii) the number of shares on deposit with the depositary bank at the time of such proposed deposit. We have consented to the deposit of outstanding shares of common stock as long as the number of American depositary shares outstanding at any time does not exceed 80,153,810 shares. As a result, if you surrender American depositary shares and withdraw shares of common stock, you may not be able to deposit the shares again to obtain American depositary shares.

Ownership of our shares is restricted under Korean law.

Under the Financial Investment Services and Capital Markets Act, with certain exceptions, a foreign investor may acquire shares of a Korean company without being subject to any single or aggregate foreign investment ceiling. As one such exception, certain designated public corporations, such as us, are subject to a 40% ceiling on acquisitions of shares by foreigners in the aggregate. The Financial Services Commission may impose other restrictions as it deems necessary for the protection of investors and the stabilization of the Korean securities and derivatives market.

In addition to the aggregate foreign investment ceiling set out under the Financial Investment Services and Capital Markets Act, our Articles of Incorporation set a 3% ceiling on acquisition by a single investor (whether domestic or foreign) of the shares of our common stock. Any person (with certain exceptions) who holds our issued and outstanding shares in excess of such 3% ceiling cannot exercise voting rights with respect to our shares exceeding such limit.

The ceiling on aggregate investment by foreign investors applicable to us may be exceeded in certain limited circumstances, including as a result of acquisition of:

- shares by a depository issuing depository receipts representing such shares (whether newly issued shares or outstanding shares);
- shares by exercise of warrant, conversion right under convertible bonds, exchange right under exchangeable bonds, stock option or withdrawal right under depository receipts issued outside of Korea;
- shares from the exercise of shareholders' rights; or
- shares by gift, inheritance or bequest.

A foreign investor who has acquired our shares in excess of any ceiling described above may not exercise his voting rights with respect to our shares exceeding such limit and the Financial Services Commission may take necessary corrective action against him.

Holders of our ADSs will not have preemptive rights in certain circumstances.

The Korean Commercial Act and our Articles of Incorporation require us, with some exceptions, to offer shareholders the right to subscribe for new shares in proportion to their existing ownership percentage whenever new shares are issued. If we offer any rights to subscribe for additional shares of our common stock or any rights of any other nature, the depository bank, after consultation with us, may make the rights available to you or use reasonable efforts to dispose of the rights on your behalf and make the net proceeds available to you. The depository bank, however, is not required to make available to you any rights to purchase any additional shares unless it deems that doing so is lawful and feasible and:

- a registration statement filed by us under the U.S. Securities Act of 1933, as amended, is in effect with respect to those shares; or
- the offering and sale of those shares is exempt from or is not subject to the registration requirements of the U.S. Securities Act.

We are under no obligation to file any registration statement with the U.S. Securities and Exchange Commission in relation to the registration rights. If a registration statement is required for you to exercise preemptive rights but is not filed by us, you will not be able to exercise your preemptive rights for additional shares and you will suffer dilution of your equity interest in us.

The market value of your investment in our ADSs may fluctuate due to the volatility of the Korean securities market.

Our common stock is listed on the KRX KOSPI Division of the Korea Exchange, which has a smaller market capitalization and is more volatile than the securities markets in the United States and many European countries. The market value of ADSs may fluctuate in response to the fluctuation of the trading price of shares of our common stock on the Stock Market Division of the Korea Exchange. The Stock Market Division of the Korea Exchange has experienced substantial fluctuations in the prices and volumes of sales of listed securities and the Stock Market Division of the Korea Exchange has prescribed a fixed range in which share prices are permitted to move on a daily basis. Like other securities markets, including those in developed markets, the Korean securities market has experienced problems including market manipulation, insider trading and settlement failures. The recurrence of these or similar problems could have a material adverse effect on the market price and liquidity of the securities of Korean companies, including our common stock and ADSs, in both the domestic and the international markets.

The Korean government has the ability to exert substantial influence over many aspects of the private sector business community, and in the past has exerted that influence from time to time. For example, the Korean government has promoted mergers to reduce what it considers excess capacity in a particular industry and has also encouraged private companies to publicly offer their securities. Similar actions in the future could have the effect of depressing or boosting the Korean securities market, whether or not intended to do so. Accordingly, actual or perceived actions or inactions by the Korean government may cause sudden movements in the market prices of the securities of Korean companies in the future, which may affect the market price and liquidity of our common stock and ADSs.

Your dividend payments and the amount you may realize in connection with a sale of your ADSs will be affected by fluctuations in the exchange rate between the U.S. dollar and the Won.

Investors who purchase the American depositary shares will be required to pay for them in U.S. dollars. Our outstanding shares are listed on the Korea Exchange and are quoted and traded in Won. Cash dividends, if any, in respect of the shares represented by the American depositary shares will be paid to the depositary bank in Won and then converted by the depositary bank into U.S. dollars, subject to certain conditions. Accordingly, fluctuations in the exchange rate between the Won and the U.S. dollar will affect, among other things, the amounts a registered holder or beneficial owner of the American depositary shares will receive from the depositary bank in respect of dividends, the U.S. dollar value of the proceeds which a holder or owner would receive upon sale in Korea of the shares obtained upon surrender of American depositary shares and the secondary market price of the American depositary shares.

If the Government deems that certain emergency circumstances are likely to occur, it may restrict the depositary bank from converting and remitting dividends in U.S. dollars.

Under the Foreign Exchange Transaction Act, if the Government deems that certain emergency circumstances are likely to occur, it may impose restrictions such as requiring foreign investors to obtain prior Government approval for the acquisition of Korean securities or for the repatriation of interest or dividends arising from Korean securities or sales proceeds from disposition of such securities. These emergency circumstances include any or all of the following:

- sudden fluctuations in interest rates or exchange rates;
- extreme difficulty in stabilizing the balance of payments; and
- a substantial disturbance in the Korean financial and capital markets.

The depositary bank may not be able to secure such prior approval from the Government for the payment of dividends to foreign investors when the Government deems that there are emergency circumstances in the Korean financial markets.