

OGE Energy Corp

**Compelling value, but rates cloud outlook –
Reiterate Neutral**

Reiterate Rating: NEUTRAL | PO: 39.00 USD | Price: 35.60 USD

Trending in the right direction, but too much uncertainty

We reiterate Neutral on OGE Energy (OGE) with a busy Fall coming as investors await a refreshed look at the long-term EPS growth trajectory. While delivering on solar approvals & navigating IRP (Integrated Resource Planning) should provide opportunity – proof will in delivery. On balance, interest rates and an unclear outlook on HoldCo debt needs clouds the outlook for EPS growth.

Rate case(s) coming: but not as worried as in past

The key risk to OGE will prove its next case (likely in 2H23). We see the Oklahoma case as likely still de-risked vs previous iterations but carefully watch the ultimate approval of American Electric Power's (AEP) still pending settlement before the OCC (Oklahoma Corporation Commission). Recent dynamics merit some scrutiny. On balance, not overly concerned considering elevated & persistent sales growth. See Arkansas case in '24 as small but trickier given need for full case after '23 under Formula Rate Plan (FRP).

Lower fuel costs & elevated volume growth favorable

Elevated fuel rates remain unchanged despite lower gas, helping to rapidly paydown presumably the deferred balances from last year. Recall this had proven the thorniest regulatory subject in '22 for OGE. Timing of new rates remains key in our view (and biased towards a rate case filing sooner) in order to help 'step' between a lower fuel rate (slated to step-down around November this year) vs. new rates in the case. Overall, declining fuel rates should uniquely help the fact pattern (\$370M balance as of 1Q23).

Still, interest rates and financing needs give us pause

Despite the above-mentioned positives, our outlook for shares hinges on uncertain trajectory for HoldCo financing needs in an elevated interest rate environment. Our refreshed estimates imply only a 5.4% consolidated EPS CAGR through 2027, which is the low end of the long-held 5-7% utility growth rate. That said, we stress this contemplates a steep ramp in capex which exceeds the Company's current plan. Given the stretch from a capex standpoint on our part, and the unclear HoldCo outlook, we remain on the sidelines. PO remains unchanged at \$39.

Estimates (Dec) (US\$)	2021A	2022A	2023E	2024E	2025E
EPS	2.36	2.16	2.01	2.13	2.23
GAAP EPS	3.68	3.32	2.01	2.13	2.23
EPS Change (YoY)	13.5%	-8.5%	-6.9%	6.0%	4.7%
Consensus EPS (Bloomberg)			2.00	2.12	2.25
DPS	1.62	1.64	1.66	1.69	1.73
Valuation (Dec)					
P/E	15.1x	16.5x	17.7x	16.7x	16.0x
GAAP P/E	9.7x	10.7x	17.7x	16.7x	16.0x
Dividend Yield	4.5%	4.6%	4.7%	4.7%	4.8%
EV / EBITDA*	15.4x	13.1x	14.5x	13.8x	12.5x
Free Cash Flow Yield*	-15.3%	-2.9%	-0.6%	0.1%	-2.2%

* For full definitions of *IQmethod*SM measures, see page 8.

18 July 2023

Equity

Key Changes

(US\$)	Previous	Current
2025E Rev (m)	3,435.5	3,452.2
2025E EPS	2.18	2.23

Julien Dumoulin-Smith

Research Analyst

BofAS

+1 646 855 5855

julien.dumoulin-smith@bofa.com

Paul Zimbardo

Research Analyst

BofAS

+1 646 855 1470

paul.zimbardo@bofa.com

Cameron Lochridge

Research Analyst

BofAS

cameron.lochridge@bofa.com

Stock Data

Price	35.60 USD
Price Objective	39.00 USD
Date Established	24-Feb-2023
Investment Opinion	B-2-7
52-Week Range	33.28 USD - 42.91 USD
Mrkt Val (mn) / Shares Out	7,130 USD / 200.3 (mn)
Average Daily Value (mn)	38.38 USD
BofA Ticker / Exchange	OGE / NYS
Bloomberg / Reuters	OGE US / OGE.N
ROE (2023E)	9.1%
Net Dbt to Eqty (Dec-2022A)	101.1%
ESGMeter TM	High

ESGMeter is not indicative of a company's future stock price performance and is not an investment recommendation or rating. ESGMeter is independent of BofA Global Research's equity investment rating, volatility risk rating, income rating, and price objective for that company. For full details, refer to ["BofA ESGMeter Methodology"](#).

BofA Securities does and seeks to do business with issuers covered in its research reports. As a result, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision. Refer to important disclosures on page 9 to 11. Analyst Certification on page 6. Price Objective Basis/Risk on page 6.

12580311

Timestamp: 18 July 2023 05:30AM EDT

iQprofileSM OGE Energy Corp

iQmethodSM – Bus Performance*

(US\$ Millions)	2021A	2022A	2023E	2024E	2025E
Return on Capital Employed	4.1%	4.4%	3.7%	3.5%	3.9%
Return on Equity	12.3%	10.2%	9.1%	9.4%	9.7%
Operating Margin	14.9%	19.6%	15.5%	16.3%	18.2%
Free Cash Flow	(1,092)	(207)	(41)	4	(156)

iQmethodSM – Quality of Earnings*

(US\$ Millions)	2021A	2022A	2023E	2024E	2025E
Cash Realization Ratio	-0.7x	1.9x	2.2x	2.2x	2.2x
Asset Replacement Ratio	1.9x	2.3x	1.9x	1.8x	2.1x
Tax Rate	16.0%	21.0%	15.0%	21.0%	21.0%
Net Debt-to-Equity Ratio	122.9%	101.1%	107.8%	113.0%	121.2%
Interest Cover	3.4x	4.2x	2.8x	2.8x	3.0x

Income Statement Data (Dec)

(US\$ Millions)	2021A	2022A	2023E	2024E	2025E
Sales	3,654	3,376	3,314	3,329	3,452
% Change	72.2%	-7.6%	-1.8%	0.5%	3.7%
Gross Profit	1,526	1,713	1,651	1,666	1,790
% Change	3.3%	12.3%	-3.6%	0.9%	7.4%
EBITDA	960	1,123	1,018	1,069	1,176
% Change	5.1%	17.0%	-9.4%	5.0%	9.9%
Net Interest & Other Income	18	79	(177)	(188)	(204)
Net Income (Adjusted)	474	434	404	428	448
% Change	13.8%	-8.3%	-6.9%	5.8%	4.8%

Free Cash Flow Data (Dec)

(US\$ Millions)	2021A	2022A	2023E	2024E	2025E
Net Income from Cont Operations (GAAP)	737	666	404	428	448
Depreciation & Amortization	416	461	505	526	547
Change in Working Capital	(191)	(446)	0	0	0
Deferred Taxation Charge	126	(154)	0	0	0
Other Adjustments, Net	(1,402)	317	0	0	0
Capital Expenditure	(779)	(1,051)	(950)	(950)	(1,150)
Free Cash Flow	-1,092	-207	-41	4	-156
% Change	NM	81.0%	80.2%	NM	NM

Balance Sheet Data (Dec)

(US\$ Millions)	2021A	2022A	2023E	2024E	2025E
Cash & Equivalents	0	88	44	44	44
Trade Receivables	162	250	250	250	250
Other Current Assets	451	1,003	1,003	1,003	1,003
Property, Plant & Equipment	9,833	10,547	10,992	11,416	12,019
Other Non-Current Assets	2,160	657	657	657	657
Total Assets	12,606	12,545	12,946	13,370	13,973
Short-Term Debt	487	1,000	0	0	0
Other Current Liabilities	603	802	802	802	802
Long-Term Debt	4,496	3,549	4,878	5,212	5,713
Other Non-Current Liabilities	2,964	2,780	2,780	2,780	2,780
Total Liabilities	8,550	8,131	8,461	8,795	9,296
Total Equity	4,056	4,413	4,485	4,575	4,677
Total Equity & Liabilities	12,606	12,545	12,946	13,369	13,973

* For full definitions of iQmethodSM measures, see page 8.

Company Sector

Electric Utilities

Company Description

OGE Energy Corp is an Oklahoma-based public utility holding company. In addition to its regulated utility business in Oklahoma and Western Arkansas through Oklahoma Gas and Electric (OG&E). The company has over 850,000 customers and 7-gigawatts of power generation. The supply mix is approximately 70% natural gas, 20% coal, and 10% renewables.

Investment Rationale

We rate OGE Energy Neutral with a balanced risk/return profile. The utility is guided to grow EPS 5-7% but the need to increase parent leverage to finance the dividend leads to a below-average 4-5% consolidated growth rate. While there are incremental spending opportunities not yet in plan, it appears less likely that these will lead to a materially higher spending plan. OGE is very mindful of the customer rate impact of its spending so we see less absolute upside to earnings.

Stock Data

Average Daily Volume 1,078,057

Quarterly Earnings Estimates

	2022	2023
Q1	0.24A	0.19E
Q2	0.45A	0.45E
Q3	1.23A	1.13E
Q4	0.24A	0.23E

See 2Q23 beat, FY guide intact

We show our 2023 EPS walk for OGE in Exhibit 1. For 2Q23, we forecast EPS of \$0.45, which is flat compared to 2Q22 levels and ~16% above current Consensus. For the FY, our EPS estimate is unchanged at \$2.01, which is \$0.01 above current Consensus and near the midpoint of mgmt's guide of \$1.93-2.07. We discuss key components of our assumptions for 2Q23 below.

Exhibit 1: OGE 2023 EPS walk

We forecast a 2Q23 beat vs. Consensus, but our FY estimate remains within guide and is unchanged at \$2.01

OGE Earnings Walk	EPS	1Q	2Q	3Q	4Q
2022 Adjusted EPS	\$2.16	\$0.24	\$0.45	\$1.23	\$0.23
Recovery of Capital Investment: \$0.13	0.13	0.05	0.07	0.01	0.01
OK Rate Case: 1H23 Benefit	0.10	0.04	0.06		
OK Grid Enhancement: +\$6Mn: \$0.005/Qtr	0.03	0.01	0.01	0.01	0.01
Other					
Weather	(0.21)	(0.03)	(0.07)	(0.11)	-
Weather vs Normal: FY22 \$2.19A vs \$1.92 Guide	(0.18)	(0.02)	(0.05)	(0.11)	-
Weather in Current Year	(0.03)	(0.01)	(0.02)		
Customer and Load Growth: +\$0.06 guidance	0.08	0.03	0.02	0.02	0.01
Flat Bill Program	-	0.02		(0.02)	
Arkansas Rates: \$0.07	0.12	0.07	0.02	0.02	0.02
Formula Rate Plan (FRP): \$4.3Mn/\$9.6Mn April '23	0.04	0.00	0.01	0.01	0.01
Uri Weighted Average Cost of Capital	0.08	0.06	0.01	0.01	0.01
Other Income and AFUDC	0.09	0.03	0.03	0.02	0.02
O&M: ~1% Increase YoY	(0.04)	(0.07)	(0.01)	(0.00)	0.04
Plant Depreciation	(0.17)	(0.06)	(0.06)	(0.02)	(0.03)
Interest Expense	(0.17)	(0.03)	(0.05)	(0.05)	(0.05)
Effective Tax Rate: ~15% vs ~16% FY22	0.03	0.00	0.00	0.02	-
HoldCo: ~\$0.01 drag increase. (\$0.04) from (\$0.03)	(0.01)	(0.06)	0.05	0.02	(0.02)
Dilution	-	-	-	-	-
2023 Adjusted EPS	\$2.01	\$0.19	\$0.45	\$1.13	\$0.22
2023 Consensus	\$2.00	\$0.19	\$0.39	\$1.02	\$0.41
BofA Expected Beat/(Miss) vs Consensus	0%	1%	16%	11%	-45%
2023 Guidance Midpoint	1.93-2.07				
Expected Beat/(Miss) vs Guidance	0%	-5%	-9%	3%	11%
	2.00	0.20	0.50	1.10	0.20
Weighted Shares in 2023	200.2	200.2	200.2	200.2	200.2
Weighted Shares in 2022	200.2	200.2	200.2	200.2	200.2
Effective Tax Rate in 2023	15.0%	15.0%	15.0%	15.0%	15.0%
Effective Tax Rate in 2022	15.9%	16.5%	15.3%	16.4%	15.0%

Source: Company filings, Bloomberg, BofA Global Research

BofA GLOBAL RESEARCH

Oklahoma: The mid-2022 rate case benefits 1H23 and is similarly skewed to the heavier load in 2Q23 vs 1Q23 shoulder period. The programmatic grid enhancement recovery step increase is modest at approximately half a penny per quarter. This will become more meaningful in 2024 based upon the regulatory order of capex.

Weather: 2022 had significant positive weather in 3Q22 but 2Q22 and 1Q22 also had favorable contributions. This reverses out unfavorably but naturally was known to management. This is a key area to be mindful of when reviewing management's 2022 original guidance midpoint to 2023 guidance midpoint walk. We layer in an incremental \$(0.02) driver for 2Q23 mild weather.

Customer and load growth: The guided \$0.06 benefit should be fairly ratable through the year thanks to an increasing crypto mining and industrial base that is less weather



sensitive. The higher Bitcoin and oil commodity backdrop should dampen the impact of weaker natural gas and an overall more challenged macroeconomic backdrop.

Arkansas Rates: Two different components to be mindful here.

- 2Q23 should benefit from recovery on the \$80-\$100Mn Winter Storm Uri capital carrying costs. This represents a +\$0.01 benefit in 2Q23
- The Arkansas Formula Rate Plan (FRP) step-up was effective in April 2023. While this rounds to a penny quarterly benefit, there is a modest FY23 YoY contribution from the smaller jurisdiction.

Other including AFUDC: Other is a large driver with limited disclosure and less for investors to rely upon. In the 10Q other income guidance is ~\$32Mn including \$10Mn allowance for funds used during construction (AFUDC). This compares with 2022 \$6.5Mn other income, \$6.9Mn AFUDC, and \$(3.4)Mn other expense. AFUDC is a clear element and disclosed but the balance we rely upon management's 10Q guidance for increase.

O&M: Cost guidance is for only modest increase after more robust inflation in 2022. Spending could be throttled back to a degree in the short term if there is a mild summer. Unlike revenue, O&M spending is more ratable throughout the year. That said, following a steep increase year-over-year in 1Q23, we look for a more modest increase in 2Q23 and 3Q23 followed by a year-over-year tailwind in 4Q23.

Plant depreciation: The Oklahoma rate case outcome resulted in higher depreciation rates in 2H22. As a result, the bulk of the year-over-year drag from depreciation is in 2H23, and we model accordingly.

Interest expense: There have been two executed debt offerings in 2023: \$540Mn at 5.4% in January 2023 and \$350Mn at 5.6% in April 2023. We calculate \$(0.17) YoY impact vs \$(0.10) net shown by management 2023 vs 2022 guidance midpoint, emphasizing that this not fully comparable.

Income tax: Lastly, we estimate that a ~90bp lower corporate tax rate is a +\$0.03 benefit during the full year.

Other Operations/HoldCo: Corporate & Other cadence in 2022 was significantly skewed and not a ratable approximately \$(0.01) drag per quarter. EPS was +\$0.05/\$(0.05)/\$(0.03)/breakeven in 2022. The \$(0.05) drag in 2Q22 was primarily the result of a reversal of one-time gains from Energy Transfer units, and we reverse that out in 2Q23.

Estimates still barely in the 5-7% long-term growth range

Below we show our estimates for OGE through 2027. We note our forecast implies a 5.4% consolidated EPS CAGR, which includes a 6.8% CAGR for the utility. We stress that given elevated interest rates and an unclear outlook on financing needs at the HoldCo, our conviction in our long-term forecast is below average. We believe this is at the center of the debate on OGE considering the Company's long-term 5-7% utility EPS CAGR. Given our marginal confidence in a forecast at the low-end of this consolidated range, we reiterate Neutral.

We perceive conviction of a consolidated roll-forward with the 4Q call by next year. While this has been long anticipated and given the scale (\$1bn+ of incremental capex opportunities prior to reflecting the more substantive CSAPR EPA regs nor updated CCR regs from EPA- which don't even seem likely for IRP yet either) we see potential for this

to come to pass. See 5-7% roll as still likely despite Holdco interest pressures but admittedly likely on weaker end still if do so. Starting point matters for this calc too.

Moreover, despite concerns of sustained slower load growth in adjacent Kansas in EVRG's IRP, we perceive clear confidence from OGE in its own load growth trends of late.

Exhibit 2: OGE EPS dashboard

We forecast a long-term EPS CAGR of 5.4% through 2027, but stress below-average confidence considering uncertain HoldCo financing needs

OGE Energy Financial Snapshot	2021A	2022E	2023E	2024E	2025E	2026E	2027E	'21-'27 CAGR	'23-'27 CAGR
OG&E (Electric Utility)	1.81	2.19	2.05	2.22	2.39	2.48	2.68	6.8%	6.9%
Guidance: 5-7% CAGR \$1.81 Starting Point	1.79-1.83	2.08-2.12	1.99-2.09	2.16	2.29	2.42	2.57		5.9%
HoldCo	(0.04)	(0.03)	(0.04)	(0.09)	(0.16)	(0.21)	(0.26)	36.7%	62.6%
Guidance		(0.01)-(0.02)	(0.02)-(0.06)	(0.09)	(0.13)	(0.17)	(0.21)		51.4%
Midstream [ET (previously ENBL)]	0.60	1.16	0.00	0.00	0.00	0.00	0.00		
Consolidated	2.36	2.16	2.01	2.13	2.23	2.27	2.42	5.4%	4.7%
Guidance	NA	2.09	1.93-2.07	2.07	2.16	2.25	2.36	4.9%	4.2%
BofA vs Guidance		3.7%	0.6%	3.1%	3.5%	0.8%	2.5%		
Consensus		2.09	2.00	2.12	2.25	2.39	2.49	5.9%	5.6%
BofA vs Consensus			0.6%	0.5%	-0.9%	-5.0%	-3.0%		
Dividend per Share	1.62	1.64	1.66	1.69	1.73	1.77	1.81	1.9%	2.1%
YoY Growth		1.6%	1.1%	1.5%	2.4%	2.3%	2.3%		
Change in Estimates		0.1%	0.1%	0.0%	2.3%	-0.9%	0.7%		
Implied OK ROE	10.3%	10.6%	9.1%	9.3%	9.4%	9.2%	9.4%		
FFO / Debt: 17.5-18% 2023-2027	21.4%	20.5%	22.5%	18.2%	17.9%	17.0%	16.5%		
Payout Ratio	68.4%	76.1%	82.6%	79.2%	77.4%	77.8%	74.7%		

Source: Company filings, Bloomberg, BofA Global Research estimates

BofA GLOBAL RESEARCH

Compelling value, but difficult considering cloudy outlook

We mark-to-market our peer multiple to 16.0x 2025E from 16.5x, which results in a \$(1) decline in our PO. Conversely, our updated 2025 EPS estimates of \$2.39 for the utility (up from \$2.30 previously) and \$(0.16) for the HoldCo (from \$(0.12) previously) result in a +\$1 increase in our PO. Net, our PO is unchanged at \$39.

Exhibit 3: OGE SotP

We maintain our \$39 PO

OGE Energy Corp Sum-of-the-Parts

Valuation

Base Electric P/E Calculation	Group Peer P/E	Group EPS CAGR	Group Valuation P/E	
	16.0x	5.0%	16.8x	
	16.0x +	0.8x	=	16.8x
Earnings Segments	2025 EPS	Premium/(Discount)	Multiple Applied	\$ per Share
OG&E Electric Utility	\$2.39	0.5x	17.3x	\$41.30
HoldCo	-\$0.16	0.5x	17.3x	-\$2.71
Total Equity Value per Share	\$2.23	0.7x	17.5x	\$39.00
Potential Price Appreciation				9.6%
NTM Yield				4.7%
Potential Total Return				14.2%

Source: Company filings, Bloomberg, BofA Global Research estimates

BofA GLOBAL RESEARCH



Price objective basis & risk

OGE Energy Corp (OGE)

Our OGE PO is \$39/share based on a sum of the parts. For the utility and holdco we apply the FY25 peer multiple of 16.0x. Electric peer P/E multiple is grossed up for +5% to reflect capital appreciation across the sector, a consistent methodology across our coverage universe. We apply a 1x premium for incremental growth not yet embedded in plan as well as the above-average balance sheet metrics

Upside and downside risks are changes in: 1) regulatory, legislative, and political outcomes, 2) ability to earn the allowed rate of return, 3) interest rates and commodity costs, 4) customer and sales growth, particularly energy and data mining customers, 5) natural disasters, 6) credit rating agency requirements, 7) capital expenditure plan, and 8) request for proposal outcomes.

Analyst Certification

I, Julien Dumoulin-Smith, hereby certify that the views expressed in this research report accurately reflect my personal views about the subject securities and issuers. I also certify that no part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or view expressed in this research report.

North America - Utilities and Alt Energy Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
BUY				
	Alliant Energy Corporation	LNT	LNT US	Julien Dumoulin-Smith
	Ameren Corporation	AEE	AEE US	Julien Dumoulin-Smith
	Ameresco	AMRC	AMRC US	Julien Dumoulin-Smith
	Array Technologies	ARRY	ARRY US	Julien Dumoulin-Smith
	Atlantica Sustainable Infrastructure	AY	AY US	Julien Dumoulin-Smith
	Atmos Energy Corporation	ATO	ATO US	Julien Dumoulin-Smith
	Bloom Energy	BE	BE US	Julien Dumoulin-Smith
	CenterPoint Energy	CNP	CNP US	Julien Dumoulin-Smith
	ChargePoint Holdings	CHPT	CHPT US	Alex Vrabel
	Cheniere Energy Inc	LNG	LNG US	Julien Dumoulin-Smith
	CMS Energy	CMS	CMS US	Julien Dumoulin-Smith
	DTE Energy	DTE	DTE US	Julien Dumoulin-Smith
	Duke Energy	DUK	DUK US	Julien Dumoulin-Smith
	Enlight Renewable Energy Ltd	ENLT	ENLT US	Julien Dumoulin-Smith
	Enlight Renewable Energy Ltd	XENLF	ENLT IT	Julien Dumoulin-Smith
	Exelon	EXC	EXC US	Paul Zimbardo
	FREYR Battery	FREY	FREY US	Julien Dumoulin-Smith
	FTC Solar	FTCI	FTCI US	Julien Dumoulin-Smith
	Hydro One	YH	H CN	Dariusz Lozny, CFA
	Maxon Solar Technologies	MAXN	MAXN US	Julien Dumoulin-Smith
	MDU Resources Group, Inc.	MDU	MDU US	Dariusz Lozny, CFA
	Nextracker Inc	NXT	NXT US	Julien Dumoulin-Smith
	NiSource Inc	NI	NI US	Julien Dumoulin-Smith
	NorthWestern Corporation	NWE	NWE US	Julien Dumoulin-Smith
	NRG Energy	NRG	NRG US	Julien Dumoulin-Smith
	PG&E Corporation	PCG	PCG US	Julien Dumoulin-Smith
	PNM Resources Inc.	PNM	PNM US	Julien Dumoulin-Smith
	Portland General Electric Company	POR	POR US	Julien Dumoulin-Smith
	PPL Corporation	PPL	PPL US	Paul Zimbardo
	Public Service Enterprise Group	PEG	PEG US	Julien Dumoulin-Smith
	ReNew Power	RNW	RNW US	Julien Dumoulin-Smith
	Sempra Energy	SRE	SRE US	Julien Dumoulin-Smith
	SolarEdge Technologies	SEDG	SEDG US	Julien Dumoulin-Smith
	Sunnova Energy	NOVA	NOVA US	Julien Dumoulin-Smith
	SunRun	RUN	RUN US	Julien Dumoulin-Smith
	TPI Composites	TPIC	TPIC US	Julien Dumoulin-Smith
	Vistra Energy	VST	VST US	Julien Dumoulin-Smith

North America - Utilities and Alt Energy Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
	WEC Energy Group Inc	WEC	WEC US	Julien Dumoulin-Smith
	Xcel Energy Inc	XEL	XEL US	Julien Dumoulin-Smith
NEUTRAL				
	AES	AES	AES US	Julien Dumoulin-Smith
	Algonquin Power & Utilities Corp	AQN	AQN US	Dariusz Lozny, CFA
	Algonquin Power & Utilities Corp	YAQN	AQN CN	Dariusz Lozny, CFA
	AltaGas	YALA	ALA CN	Dariusz Lozny, CFA
	American Electric Power	AEP	AEP US	Julien Dumoulin-Smith
	Clearway Energy	CWENA	CWEN/A US	Julien Dumoulin-Smith
	Clearway Energy	CWEN	CWEN US	Julien Dumoulin-Smith
	Consolidated Edison	ED	ED US	Julien Dumoulin-Smith
	Constellation Energy Corp	CEG	CEG US	Paul Zimbardo
	Emera Inc	YEMA	EMA CN	Dariusz Lozny, CFA
	Entergy	ETR	ETR US	Paul Zimbardo
	Essential Utilities	WTRG	WTRG US	Julien Dumoulin-Smith
	First Solar, Inc.	FSLR	FSLR US	Julien Dumoulin-Smith
	Fluence Energy	FLNC	FLNC US	Julien Dumoulin-Smith
	Hannon Armstrong	HASI	HASI US	Julien Dumoulin-Smith
	Idacorp	IDA	IDA US	Paul Zimbardo
	New Fortress Energy	NFE	NFE US	Cameron Lochridge
	NextEra Energy	NEE	NEE US	Julien Dumoulin-Smith
	NextEra Energy Partners	NEP	NEP US	Julien Dumoulin-Smith
	Northwest Natural Holdings	NWN	NWN US	Julien Dumoulin-Smith
	OGE Energy Corp	OGE	OGE US	Julien Dumoulin-Smith
	ONE Gas, Inc.	OGS	OGS US	Julien Dumoulin-Smith
	Ormat Technologies	ORA	ORA US	Julien Dumoulin-Smith
	Pinnacle West	PNW	PNW US	Julien Dumoulin-Smith
	Southwest Gas Holdings	SWX	SWX US	Julien Dumoulin-Smith
	SunPower Corp.	SPWR	SPWR US	Julien Dumoulin-Smith
	TransAlta Corp	TAC	TAC US	Dariusz Lozny, CFA
	TransAlta Corporation	YTA	TA CN	Dariusz Lozny, CFA
UNDERPERFORM				
	Allete Inc	ALE	ALE US	Julien Dumoulin-Smith
	American Water Works	AWK	AWK US	Julien Dumoulin-Smith
	Avangrid	AGR	AGR US	Paul Zimbardo
	Avista	AVA	AVA US	Julien Dumoulin-Smith
	Black Hills Corporation	BKH	BKH US	Julien Dumoulin-Smith
	Dominion Energy	D	D US	Paul Zimbardo
	Edison International	EIX	EIX US	Paul Zimbardo
	Enphase Energy	ENPH	ENPH US	Julien Dumoulin-Smith
	Evergy, Inc	EVRG	EVRG US	Julien Dumoulin-Smith
	Eversource Energy	ES	ES US	Paul Zimbardo
	EVgo Inc.	EVGO	EVGO US	Alex Vrabel
	FirstEnergy	FE	FE US	Julien Dumoulin-Smith
	Fortis	YFTS	FTS CN	Dariusz Lozny, CFA
	Fortis Inc	FTS	FTS US	Dariusz Lozny, CFA
	Generac Holdings Inc.	GNRC	GNRC US	Julien Dumoulin-Smith
	Hawaiian Electric Industries	HE	HE US	Julien Dumoulin-Smith
	MGE Energy	MGEE	MGEE US	Julien Dumoulin-Smith
	New Jersey Resources Corp	NJR	NJR US	Julien Dumoulin-Smith
	Southern Company	SO	SO US	Julien Dumoulin-Smith
	Spire	SR	SR US	Julien Dumoulin-Smith
	Stem, Inc.	STEM	STEM US	Julien Dumoulin-Smith
	Tellurian Inc	TELL	TELL US	Julien Dumoulin-Smith
	UGI Corp.	UGI	UGI US	Julien Dumoulin-Smith
	Unitil Corporation	UTL	UTL US	Julien Dumoulin-Smith

IQmethodSM Measures Definitions

Business Performance

Return On Capital Employed

Return On Equity
Operating Margin
Earnings Growth
Free Cash Flow

Quality of Earnings

Cash Realization Ratio
Asset Replacement Ratio
Tax Rate
Net Debt-To-Equity Ratio
Interest Cover

Valuation Toolkit

Price / Earnings Ratio
Price / Book Value
Dividend Yield
Free Cash Flow Yield
Enterprise Value / Sales

EV / EBITDA

Numerator

NOPAT = (EBIT + Interest Income) × (1 – Tax Rate) + Goodwill Amortization

Net Income
Operating Profit
Expected 5 Year CAGR From Latest Actual
Cash Flow From Operations – Total Capex

Numerator

Cash Flow From Operations
Capex
Tax Charge
Net Debt = Total Debt – Cash & Equivalents
EBIT

Numerator

Current Share Price
Current Share Price
Annualised Declared Cash Dividend
Cash Flow From Operations – Total Capex
EV = Current Share Price × Current Shares + Minority Equity + Net Debt +
Other LT Liabilities
Enterprise Value

Denominator

Total Assets – Current Liabilities + ST Debt + Accumulated Goodwill
Amortization
Shareholders' Equity
Sales
N/A
N/A

Denominator

Net Income
Depreciation
Pre-Tax Income
Total Equity
Interest Expense

Denominator

Diluted Earnings Per Share (Basis As Specified)
Shareholders' Equity / Current Basic Shares
Current Share Price
Market Cap = Current Share Price × Current Basic Shares
Sales

Basic EBIT + Depreciation + Amortization

IQmethodSM is the set of BofA Global Research standard measures that serve to maintain global consistency under three broad headings: Business Performance, Quality of Earnings, and validations. The key features of *IQmethod* are: A consistently structured, detailed, and transparent methodology. Guidelines to maximize the effectiveness of the comparative valuation process, and to identify some common pitfalls.

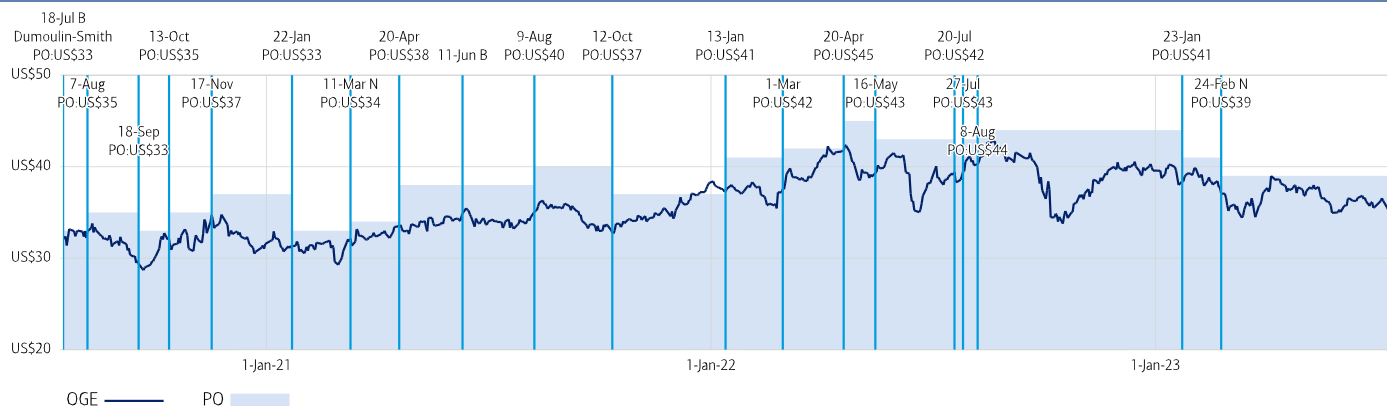
IQdatabase[®] is our real-time global research database that is sourced directly from our equity analysts' earnings models and includes forecasted as well as historical data for income statements, balance sheets, and cash flow statements for companies covered by BofA Global Research.

IQprofileSM, *IQmethodSM* are service marks of Bank of America Corporation. *IQdatabase[®]* is a registered service mark of Bank of America Corporation.

Disclosures

Important Disclosures

OGE Energy Corp (OGE) Price Chart



B: Buy, N: Neutral, U: Underperform, PO: Price Objective, NA: No longer valid, NR: No Rating

The Investment Opinion System is contained at the end of the report under the heading "Fundamental Equity Opinion Key". Dark grey shading indicates the security is restricted with the opinion suspended. Medium grey shading indicates the security is under review with the opinion withdrawn. Light grey shading indicates the security is not covered. Chart is current as of a date no more than one trading day prior to the date of the report.

Equity Investment Rating Distribution: Utilities Group (as of 30 Jun 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships ^{R1}	Count	Percent
Buy	80	51.61%	Buy	52	65.00%
Hold	40	25.81%	Hold	29	72.50%
Sell	35	22.58%	Sell	23	65.71%

Equity Investment Rating Distribution: Global Group (as of 30 Jun 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships ^{R1}	Count	Percent
Buy	1877	53.28%	Buy	1040	55.41%
Hold	815	23.13%	Hold	464	56.93%
Sell	831	23.59%	Sell	385	46.33%

^{R1} Issuers that were investment banking clients of BofA Securities or one of its affiliates within the past 12 months. For purposes of this Investment Rating Distribution, the coverage universe includes only stocks. A stock rated Neutral is included as a Hold, and a stock rated Underperform is included as a Sell.

FUNDAMENTAL EQUITY OPINION KEY: Opinions include a Volatility Risk Rating, an Investment Rating and an Income Rating. **VOLATILITY RISK RATINGS**, indicators of potential price fluctuation, are: A - Low, B - Medium and C - High. **INVESTMENT RATINGS** reflect the analyst's assessment of both a stock's absolute total return potential as well as its attractiveness for investment relative to other stocks within its Coverage Cluster (defined below). Our investment ratings are: 1 - Buy stocks are expected to have a total return of at least 10% and are the most attractive stocks in the coverage cluster; 2 - Neutral stocks are expected to remain flat or increase in value and are less attractive than Buy rated stocks and 3 - Underperform stocks are the least attractive stocks in a coverage cluster. An investment rating of 6 (No Rating) indicates that a stock is no longer trading on the basis of fundamentals. Analysts assign investment ratings considering, among other things, the 0-12 month total return expectation for a stock and the firm's guidelines for ratings dispersions (shown in the table below). The current price objective for a stock should be referenced to better understand the total return expectation at any given time. The price objective reflects the analyst's view of the potential price appreciation (depreciation).

Investment rating	Total return expectation (within 12-month period of date of initial rating)	Ratings dispersion guidelines for coverage cluster ^{R2}
Buy	≥ 10%	≤ 70%
Neutral	≥ 0%	≤ 30%
Underperform	N/A	≥ 20%

^{R2} Ratings dispersions may vary from time to time where BofA Global Research believes it better reflects the investment prospects of stocks in a Coverage Cluster.

INCOME RATINGS, indicators of potential cash dividends, are: 7 - same/higher (dividend considered to be secure), 8 - same/lower (dividend not considered to be secure) and 9 - pays no cash dividend. **Coverage Cluster** is comprised of stocks covered by a single analyst or two or more analysts sharing a common industry, sector, region or other classification(s). A stock's coverage cluster is included in the most recent BofA Global Research report referencing the stock.

Price Charts for the securities referenced in this research report are available on the [Price Charts website](#), or call 1-800-MERRILL to have them mailed.

BofA or one of its affiliates acts as a market maker for the equity securities recommended in the report: OGE Energy Corp.

The issuer is or was, within the last 12 months, an investment banking client of BofA and/or one of its affiliates: OGE Energy Corp.

BofA or an affiliate has received compensation from the issuer for non-investment banking services or products within the past 12 months: OGE Energy Corp.

The issuer is or was, within the last 12 months, a non-securities business client of BofA and/or one of its affiliates: OGE Energy Corp.

BofA or an affiliate has received compensation for investment banking services from this issuer within the past 12 months: OGE Energy Corp.

BofA or one of its affiliates is willing to sell to, or buy from, clients the common equity of the issuer on a principal basis: OGE Energy Corp.

BofA Global Research personnel (including the analyst(s) responsible for this report) receive compensation based upon, among other factors, the overall profitability of Bank of America Corporation, including profits derived from investment banking. The analyst(s) responsible for this report may also receive compensation based upon, among other factors, the overall profitability of the Bank's sales and trading businesses relating to the class of securities or financial instruments for which such analyst is responsible.



Other Important Disclosures

From time to time research analysts conduct site visits of covered issuers. BofA Global Research policies prohibit research analysts from accepting payment or reimbursement for travel expenses from the issuer for such visits.

Prices are indicative and for information purposes only. Except as otherwise stated in the report, for any recommendation in relation to an equity security, the price referenced is the publicly traded price of the security as of close of business on the day prior to the date of the report or, if the report is published during intraday trading, the price referenced is indicative of the traded price as of the date and time of the report and in relation to a debt security (including equity preferred and CDS), prices are indicative as of the date and time of the report and are from various sources including BofA Securities trading desks.

The date and time of completion of the production of any recommendation in this report shall be the date and time of dissemination of this report as recorded in the report timestamp.

Recipients who are not institutional investors or market professionals should seek the advice of their independent financial advisor before considering information in this report in connection with any investment decision, or for a necessary explanation of its contents.

Officers of BofAS or one or more of its affiliates (other than research analysts) may have a financial interest in securities of the issuer(s) or in related investments.

Refer to [BofA Global Research policies relating to conflicts of interest](#).

'BofA Securities' includes BofA Securities, Inc. ('BofAS') and its affiliates. Investors should contact their BofA Securities representative or Merrill Global Wealth Management financial advisor if they have questions concerning this report or concerning the appropriateness of any investment idea described herein for such investor. 'BofA Securities' is a global brand for BofA Global Research.

Information relating to Non-US affiliates of BofA Securities and Distribution of Affiliate Research Reports:

BofAS and/or Merrill Lynch, Pierce, Fenner & Smith Incorporated ("MLPF&S") may in the future distribute, information of the following non-US affiliates in the US (short name: legal name, regulator): Merrill Lynch (South Africa): Merrill Lynch South Africa (Pty) Ltd., regulated by The Financial Service Board; MLI (UK): Merrill Lynch International, regulated by the Financial Conduct Authority (FCA) and the Prudential Regulation Authority (PRA); BofASE (France): BofA Securities Europe SA is authorized by the Autorité de Contrôle Prudentiel et de Résolution (ACPR) and regulated by the ACPR and the Autorité des Marchés Financiers (AMF). BofA Securities Europe SA ("BofASE") with registered address at 51, rue La Boétie, 75008 Paris is registered under no. 842 602 690 RCS Paris. In accordance with the provisions of French Code Monétaire et Financier (Monetary and Financial Code), BofASE is an établissement de crédit et d'investissement (credit and investment institution) that is authorised and supervised by the European Central Bank and the Autorité de Contrôle Prudentiel et de Résolution (ACPR) and regulated by the ACPR and the Autorité des Marchés Financiers. BofASE's share capital can be found at www.bofam.com/BofASEdisclaimer; BofA Europe (Milan): Bank of America Europe Designated Activity Company, Milan Branch, regulated by the Bank of Italy, the European Central Bank (ECB) and the Central Bank of Ireland (CBI); BofA Europe (Frankfurt): Bank of America Europe Designated Activity Company, Frankfurt Branch regulated by BaFin, the ECB and the CBI; BofA Europe (Madrid): Bank of America Europe Designated Activity Company, Sucursal en España, regulated by the Bank of Spain, the ECB and the CBI; Merrill Lynch (Australia): Merrill Lynch Equities (Australia) Limited, regulated by the Australian Securities and Investments Commission; Merrill Lynch (Hong Kong): Merrill Lynch (Asia Pacific) Limited, regulated by the Hong Kong Securities and Futures Commission (HKSCF); Merrill Lynch (Singapore): Merrill Lynch (Singapore) Pte Ltd, regulated by the Monetary Authority of Singapore (MAS); Merrill Lynch (Canada): Merrill Lynch Canada Inc, regulated by the Investment Industry Regulatory Organization of Canada; Merrill Lynch (Mexico): Merrill Lynch Mexico, SA de CV, Casa de Bolsa, regulated by the Comisión Nacional Bancaria y de Valores; Merrill Lynch (Argentina): Merrill Lynch Argentina SA, regulated by Comisión Nacional de Valores; BofAS Japan: BofA Securities Japan Co., Ltd., regulated by the Financial Services Agency; Merrill Lynch (Seoul): Merrill Lynch International, LLC Seoul Branch, regulated by the Financial Supervisory Service; Merrill Lynch (Taiwan): Merrill Lynch Securities (Taiwan) Ltd., regulated by the Securities and Futures Bureau; BofAS India: BofA Securities India Limited, regulated by the Securities and Exchange Board of India (SEBI); Merrill Lynch (Israel): Merrill Lynch Israel Limited, regulated by Israel Securities Authority; Merrill Lynch (DIFC): Merrill Lynch International (DIFC Branch), regulated by the Dubai Financial Services Authority (DFSA); Merrill Lynch (Brazil): Merrill Lynch S.A. Corretora de Títulos e Valores Mobiliários, regulated by Comissão de Valores Mobiliários; Merrill Lynch KSA Company: Merrill Lynch Kingdom of Saudi Arabia Company, regulated by the Capital Market Authority.

This information: has been approved for publication and is distributed in the United Kingdom (UK) to professional clients and eligible counterparties (as each is defined in the rules of the FCA and the PRA) by MLI (UK), which is authorized by the PRA and regulated by the FCA and the PRA - details about the extent of our regulation by the FCA and PRA are available from us on request; has been approved for publication and is distributed in the European Economic Area (EEA) by BofASE (France), which is authorized by the ACPR and regulated by the ACPR and the AMF; has been considered and distributed in Japan by BofAS Japan, a registered securities dealer under the Financial Instruments and Exchange Act in Japan, or its permitted affiliates; is issued and distributed in Hong Kong by Merrill Lynch (Hong Kong) which is regulated by HKSCF; is issued and distributed in Taiwan by Merrill Lynch (Taiwan); is issued and distributed in India by BofAS India; and is issued and distributed in Singapore to institutional investors and/or accredited investors (each as defined under the Financial Advisers Regulations) by Merrill Lynch (Singapore) (Company Registration No 198602883D). Merrill Lynch (Singapore) is regulated by MAS. Merrill Lynch Equities (Australia) Limited (ABN 65 006 276 795), AFS License 235132 (MLEA) distributes this information in Australia only to 'Wholesale' clients as defined by s.761G of the Corporations Act 2001. With the exception of Bank of America N.A., Australia Branch, neither MLEA nor any of its affiliates involved in preparing this information is an Authorised Deposit-Taking Institution under the Banking Act 1959 nor regulated by the Australian Prudential Regulation Authority. No approval is required for publication or distribution of this information in Brazil and its local distribution is by Merrill Lynch (Brazil) in accordance with applicable regulations. Merrill Lynch (DIFC) is authorized and regulated by the DFSA. Information prepared and issued by Merrill Lynch (DIFC) is done so in accordance with the requirements of the DFSA conduct of business rules. BofA Europe (Frankfurt) distributes this information in Germany and is regulated by BaFin, the ECB and the CBI. BofA Securities entities, including BofA Europe and BofASE (France), may outsource/delegate the marketing and/or provision of certain research services or aspects of research services to other branches or members of the BofA Securities group. You may be contacted by a different BofA Securities entity acting for and on behalf of your service provider where permitted by applicable law. This does not change your service provider. Please refer to the [Electronic Communications Disclaimers](#) for further information.

This information has been prepared and issued by BofAS and/or one or more of its non-US affiliates. The author(s) of this information may not be licensed to carry on regulated activities in your jurisdiction and, if not licensed, do not hold themselves out as being able to do so. BofAS and/or MLPF&S is the distributor of this information in the US and accepts full responsibility for information distributed to BofAS and/or MLPF&S clients in the US by its non-US affiliates. Any US person receiving this information and wishing to effect any transaction in any security discussed herein should do so through BofAS and/or MLPF&S and not such foreign affiliates. Hong Kong recipients of this information should contact Merrill Lynch (Asia Pacific) Limited in respect of any matters relating to dealing in securities or provision of specific advice on securities or any other matters arising from, or in connection with, this information. Singapore recipients of this information should contact Merrill Lynch (Singapore) Pte Ltd in respect of any matters arising from, or in connection with, this information. For clients that are not accredited investors, expert investors or institutional investors Merrill Lynch (Singapore) Pte Ltd accepts full responsibility for the contents of this information distributed to such clients in Singapore.

General Investment Related Disclosures:

Taiwan Readers: Neither the information nor any opinion expressed herein constitutes an offer or a solicitation of an offer to transact in any securities or other financial instrument. No part of this report may be used or reproduced or quoted in any manner whatsoever in Taiwan by the press or any other person without the express written consent of BofA Securities.

This document provides general information only, and has been prepared for, and is intended for general distribution to, BofA Securities clients. Neither the information nor any opinion expressed constitutes an offer or an invitation to make an offer, to buy or sell any securities or other financial instrument or any derivative related to such securities or instruments (e.g., options, futures, warrants, and contracts for differences). This document is not intended to provide personal investment advice and it does not take into account the specific investment objectives, financial situation and the particular needs of, and is not directed to, any specific person(s). This document and its content do not constitute, and should not be considered to constitute, investment advice for purposes of ERISA, the US tax code, the Investment Advisers Act or otherwise. Investors should seek financial advice regarding the appropriateness of investing in financial instruments and implementing investment strategies discussed or recommended in this document and should understand that statements regarding future prospects may not be realized. Any decision to purchase or subscribe for securities in any offering must be based solely on existing public information on such security or the information in the prospectus or other offering document issued in connection with such offering, and not on this document.

Securities and other financial instruments referred to herein, or recommended, offered or sold by BofA Securities, are not insured by the Federal Deposit Insurance Corporation and are not deposits or other obligations of any insured depository institution (including, Bank of America, N.A.). Investments in general and, derivatives, in particular, involve numerous risks, including, among others, market risk, counterparty default risk and liquidity risk. No security, financial instrument or derivative is suitable for all investors. Digital assets are extremely speculative, volatile and are largely unregulated. In some cases, securities and other financial instruments may be difficult to value or sell and reliable information about the value or risks related to the security or financial instrument may be difficult to obtain. Investors should note that income from such securities and other financial instruments, if any, may fluctuate and that price or value of such

securities and instruments may rise or fall and, in some cases, investors may lose their entire principal investment. Past performance is not necessarily a guide to future performance. Levels and basis for taxation may change.

This report may contain a short-term trading idea or recommendation, which highlights a specific near-term catalyst or event impacting the issuer or the market that is anticipated to have a short-term price impact on the equity securities of the issuer. Short-term trading ideas and recommendations are different from and do not affect a stock's fundamental equity rating, which reflects both a longer term total return expectation and attractiveness for investment relative to other stocks within its Coverage Cluster. Short-term trading ideas and recommendations may be more or less positive than a stock's fundamental equity rating.

BofA Securities is aware that the implementation of the ideas expressed in this report may depend upon an investor's ability to "short" securities or other financial instruments and that such action may be limited by regulations prohibiting or restricting "shortselling" in many jurisdictions. Investors are urged to seek advice regarding the applicability of such regulations prior to executing any short idea contained in this report.

Foreign currency rates of exchange may adversely affect the value, price or income of any security or financial instrument mentioned herein. Investors in such securities and instruments, including ADRs, effectively assume currency risk.

BofAS or one of its affiliates is a regular issuer of traded financial instruments linked to securities that may have been recommended in this report. BofAS or one of its affiliates may, at any time, hold a trading position (long or short) in the securities and financial instruments discussed in this report.

BofA Securities, through business units other than BofA Global Research, may have issued and may in the future issue trading ideas or recommendations that are inconsistent with, and reach different conclusions from, the information presented herein. Such ideas or recommendations may reflect different time frames, assumptions, views and analytical methods of the persons who prepared them, and BofA Securities is under no obligation to ensure that such other trading ideas or recommendations are brought to the attention of any recipient of this information.

In the event that the recipient received this information pursuant to a contract between the recipient and BofAS for the provision of research services for a separate fee, and in connection therewith BofAS may be deemed to be acting as an investment adviser, such status relates, if at all, solely to the person with whom BofAS has contracted directly and does not extend beyond the delivery of this report (unless otherwise agreed specifically in writing by BofAS). If such recipient uses the services of BofAS in connection with the sale or purchase of a security referred to herein, BofAS may act as principal for its own account or as agent for another person. BofAS is and continues to act solely as a broker-dealer in connection with the execution of any transactions, including transactions in any securities referred to herein.

BofA ESGMeter Methodology:

ESGMeter is a proprietary metric based on quantitative analysis and fundamental analyst inputs that reflects our assessment of a company's Environmental, Social and Governance-related attributes. The ESGMeter is intended to indicate a company's likelihood of experiencing stronger financial stability (higher return on equity and lower earnings and price volatility) over the next three years relative to peer group. There are three ESGMeter levels - Low, Medium, and High - which indicate whether a company has attributes most likely to translate into superior financial stability (in the case of a High level) or weaker financial stability (in the case of a Low level) over the next three years relative to its peer group. A Medium level suggests that a company exhibits ESG characteristics that are likely associated with financial stability results in line with its peer group over the next three years. Full details of our methodology, financial stability definition and disclaimers are available at [BofA ESGMeter methodology](#). ESGMeter is not indicative of a company's future stock price performance and is not an investment recommendation or rating.

ESGMeter is independent of the BofA Global Research fundamental equity analyst's investment rating, volatility risk rating, income rating or price objective for that company.

Copyright and General Information:

Copyright 2023 Bank of America Corporation. All rights reserved. iQdatabase® is a registered service mark of Bank of America Corporation. This information is prepared for the use of BofA Securities clients and may not be redistributed, retransmitted or disclosed, in whole or in part, or in any form or manner, without the express written consent of BofA Securities. BofA Global Research information is distributed simultaneously to internal and client websites and other portals by BofA Securities and is not publicly-available material. Any unauthorized use or disclosure is prohibited. Receipt and review of this information constitutes your agreement not to redistribute, retransmit, or disclose to others the contents, opinions, conclusion, or information contained herein (including any investment recommendations, estimates or price targets) without first obtaining express permission from an authorized officer of BofA Securities.

Materials prepared by BofA Global Research personnel are based on public information. Facts and views presented in this material have not been reviewed by, and may not reflect information known to, professionals in other business areas of BofA Securities, including investment banking personnel. BofA Securities has established information barriers between BofA Global Research and certain business groups. As a result, BofA Securities does not disclose certain client relationships with, or compensation received from, such issuers. To the extent this material discusses any legal proceeding or issues, it has not been prepared as nor is it intended to express any legal conclusion, opinion or advice. Investors should consult their own legal advisers as to issues of law relating to the subject matter of this material. BofA Global Research personnel's knowledge of legal proceedings in which any BofA Securities entity and/or its directors, officers and employees may be plaintiffs, defendants, co-defendants or co-plaintiffs with or involving issuers mentioned in this material is based on public information. Facts and views presented in this material that relate to any such proceedings have not been reviewed by, discussed with, and may not reflect information known to, professionals in other business areas of BofA Securities in connection with the legal proceedings or matters relevant to such proceedings.

This information has been prepared independently of any issuer of securities mentioned herein and not in connection with any proposed offering of securities or as agent of any issuer of any securities. None of BofAS or any of its affiliates or their research analysts has any authority whatsoever to make any representation or warranty on behalf of the issuer(s). BofA Global Research policy prohibits research personnel from disclosing a recommendation, investment rating, or investment thesis for review by an issuer prior to the publication of a research report containing such rating, recommendation or investment thesis.

Any information relating to the tax status of financial instruments discussed herein is not intended to provide tax advice or to be used by anyone to provide tax advice. Investors are urged to seek tax advice based on their particular circumstances from an independent tax professional.

The information herein (other than disclosure information relating to BofA Securities and its affiliates) was obtained from various sources and we do not guarantee its accuracy. This information may contain links to third-party websites. BofA Securities is not responsible for the content of any third-party website or any linked content contained in a third-party website. Content contained on such third-party websites is not part of this information and is not incorporated by reference. The inclusion of a link does not imply any endorsement by or any affiliation with BofA Securities. Access to any third-party website is at your own risk, and you should always review the terms and privacy policies at third-party websites before submitting any personal information to them. BofA Securities is not responsible for such terms and privacy policies and expressly disclaims any liability for them.

All opinions, projections and estimates constitute the judgment of the author as of the date of publication and are subject to change without notice. Prices also are subject to change without notice. BofA Securities is under no obligation to update this information and BofA Securities ability to publish information on the subject issuer(s) in the future is subject to applicable quiet periods. You should therefore assume that BofA Securities will not update any fact, circumstance or opinion contained herein.

Subject to the quiet period applicable under laws of the various jurisdictions in which we distribute research reports and other legal and BofA Securities policy-related restrictions on the publication of research reports, fundamental equity reports are produced on a regular basis as necessary to keep the investment recommendation current.

Certain outstanding reports or investment opinions relating to securities, financial instruments and/or issuers may no longer be current. Always refer to the most recent research report relating to an issuer prior to making an investment decision.

In some cases, an issuer may be classified as Restricted or may be Under Review or Extended Review. In each case, investors should consider any investment opinion relating to such issuer (or its security and/or financial instruments) to be suspended or withdrawn and should not rely on the analyses and investment opinion(s) pertaining to such issuer (or its securities and/or financial instruments) nor should the analyses or opinion(s) be considered a solicitation of any kind. Sales persons and financial advisors affiliated with BofAS or any of its affiliates may not solicit purchases of securities or financial instruments that are Restricted or Under Review and may only solicit securities under Extended Review in accordance with firm policies.

Neither BofA Securities nor any officer or employee of BofA Securities accepts any liability whatsoever for any direct, indirect or consequential damages or losses arising from any use of this information.