

## US Electric Utilities &amp; IPPs

## Texas Power Grid Remains Tight into Winter: Will Policy Change? The key risk.

Industry Overview

**ERCOT cancels 3,000MW RFP after receiving only 11MW offers**

On November 17<sup>th</sup>, the Electric Reliability Council of Texas (ERCOT) cancelled its October 2<sup>nd</sup> request for proposal (RFP) for up to 3,000MW December 2023-February 2024 winter capacity. ERCOT received only 11MW of responses, well less than 1% of the goal. ERCOT stated it was “disappointed” by the results which included the fact that no mothballed assets were willing to bid-into the RFP. The RFP was driven by ERCOT’s Monthly Outlook for Resource Adequacy (MORA) assessment that if there were to be a storm comparable to December 2023’s Winter Storm Elliott, there is an 18% probability of emergency conditions and 14% of controlled outages at the 8am hour. The assessment for normal weather shows most hours at 99%+ with 3GW+ availability. Compared with winter 2022-2023, ERCOT forecasts substantial peak load growth and is incorporating recent & proposed retirements of dispatchable generation. ERCOT emphasized that it does not anticipate emergency conditions and expects adequate supply to meet demand under normal conditions.

**PUCT pushback on ‘capacity market’. Legal uncertainty**

Public Utilities Commission of Texas (PUCT) Commissioner McAdams issued a memo on November 1<sup>st</sup> calling the RFP a “shock” and an attempt to move Texas towards a capacity market without the appropriate level of oversight. McAdams continued to state that the lack of a budget or cost cap was a core concern. McAdam’s filing in Docket 55633 preceded the November 2<sup>nd</sup> PUCT Open Meeting in a 3-1 vote, the PUCT did place additional cost guardrails on the RFP. Subsequently McAdams is reportedly leaving the PUCT per local media. Texas’ IMM is set to leave her role as well.

**What does the failed RFP mean? Robust economics today**

The failure of the RFP is not overly surprising as there was just a ~35 day window to submit bids during a period of legal and regulatory uncertainty. In the intermediate and long-term, we view Texas’ challenges in spurring the development of new dispatchable resources as a risk for wholesale and retail operators. From our stakeholder conversations, we believe there is still receptivity to state supported generation ala the ‘Berkshire Plan’. Realistically we do not envision materially new dispatchable capacity before 2027 at the earliest. This is positive for existing generating assets; however, if there are reliability issues or price spikes, *the odds of a regulatory/political response rise.*

**Is a tight grid a risk or an opportunity? Depends on assets**

After Winter Storm Uri, investors seem to have generally viewed scarcity pricing and grid emergency events as more of a risk rather than an opportunity for power companies such as Vistra (VST) and Constellation Energy (CEG). Vistra has responded by committing less capacity via hedges, etc. We maintain Buy on shares of VST which have an attractive adjusted free cash flow yield. We maintain Neutral on share of CEG which trade closer to fair value. [See our latest on prospects of new gas generation here.](#)

27 November 2023

Equity  
United States  
Electric Utilities

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ERCOT: Electric Reliability Council of Texas  
RFP: Request for proposal  
MORA: Monthly Outlook for Resource Adequacy  
IMM: Independent Market Monitor  
ECRS: ERCOT Contingency Reserve Service  
MW: Megawatt | GW: Gigawatt  
CAFOR: Capacity Available for Operating Reserves

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Timestamp: 27 November 2023 05:45AM EST

## Houston do we have a problem? Not with normal weather

The first Exhibit shows ERCOT's Hourly Risk Assessment of Capacity Available for Operating Reserves (CAFOR) for December 2023. The scenario presented shows Winter Storm Elliott Weather Conditions:

- 78,900MW plus large flexible loads
- Peak Winter Storm Elliott outages, less assumed benefit from weatherization standards
- Battery storage capacity availability refresh where there has been an increase.

This compares with typical grid conditions where there is a 5% probability of an energy emergency alert at 8AM. There have been critical changes made in Texas besides weatherization. There is now a program available for natural gas infrastructure to identify as critical infrastructure and hopefully avoid being impacted by controlled outages.

### Exhibit 1: Winter Storm Elliott Hourly Risk Assessment of Capacity Available for Operating Reserves (CAFOR) – Rounded to Nearest Percentage Point

ERCOT has scenarios with extreme weather where controlled outages could occur

Hour Ending	Probability of 3,000MW+ Availability	Probability of <2,500MW Availability	Probability of <1,500MW Availability
7AM	81%	11%	8%
8AM	73%	18%	14%
9AM	87%	7%	5%
10AM	99%	1%	0%
11AM	100%	0%	0%
12PM	100%	0%	0%
1PM	100%	0%	0%
2PM	100%	0%	0%
3PM	100%	0%	0%
4PM	100%	0%	0%
5PM	100%	0%	0%
6PM	100%	0%	0%
7PM	97%	1%	0%
8PM	96%	2%	1%
9PM	94%	2%	1%
10PM	95%	2%	1%

Source: ERCOT: Electric Reliability Council of Texas

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Tesla (TSLA) filed a notice of intent to **not** participate and highlighted that some of the program rules were not comparable with other regions which could lead to “bad operational outcomes and bad customer outcomes”.

We look to see how often ERCOT relies upon its newly created (June 2023) ERCOT Contingency Reserve Service (ECRS) product for the upcoming winter. We believe this was a material driver of the additional compensation for Texas generators in 2023.

## Mothballed units not coming back with a short window

In the report there is a total of 135MW winter capacity of seasonally mothballed assets and 573MW fully mothballed capacity. The largest of which is Barney Davis STG 292MW that was scheduled to enter indefinite mothball status November 24, 2023. Given supply chain and labor constraints, we believe it will be increasingly difficult for any mothballed units reenter service without an extended lead time.

CPS Energy CEO stated that it was impossible to bring assets back on-line that had closed years earlier, particularly in such a short period of time.

## Strong economics today for incumbents

Market implied heat rates are very high in 2023-2024 and normalize in 2025 but at a sustained higher level across the power and gas forward curves. West Texas power forwards have rallied to \$54/MWh 2025, an all-time high for the contract. This contrasts with west Texas gas that has moderated YTD.

### Exhibit 2: Market Implied Heat Rates

2025 heat rates are 13-17x. Moderating from 15-21x 2023 but still well above historical levels

Market Implied Heat Rates	2023	2024	2025	2026	2027	2028	2029
ERCOT Houston	16.9x	19.0x	13.7x	13.0x	13.0x	13.3x	13.5x
ERCOT North	14.6x	17.6x	12.8x	12.4x	12.5x	12.8x	12.8x
ERCOT South	17.4x	19.1x	14.3x	13.5x	13.6x	13.9x	13.9x
ERCOT West	21.4x	30.2x	17.0x	15.6x	15.5x	15.5x	15.5x

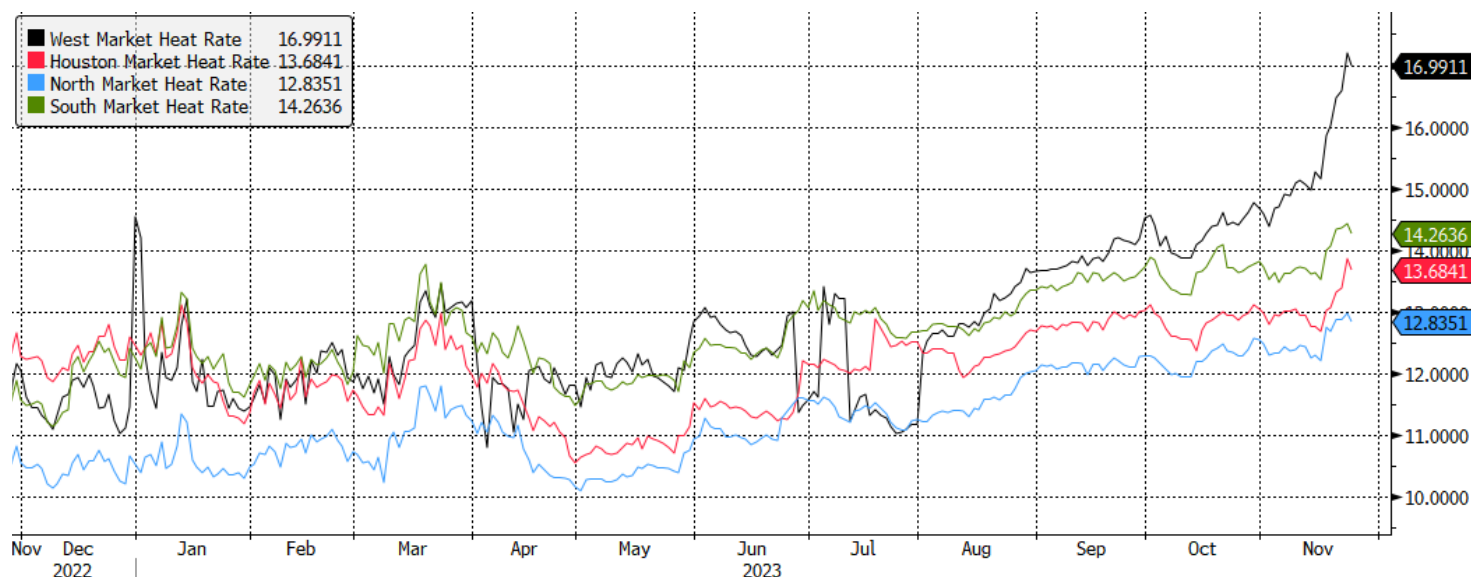
Source: Bloomberg & BofA Global Research

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2025 market implied heat rates using local gas hubs have expanded meaningfully. All regions of Texas are now above 12x versus a 10.3-12.3x spread one year ago on the forwards. The most meaningful expansion began in late August and there has been a spike in mid-November, particularly for West and Houston.

### Exhibit 3: 2025 Texas Market Implied Heat Rates

Sharp increase in 4Q23 for forward heat rates as power outpaced natural gas



.WS25 U Index (ERCOT West Spread 2025) Texas 2025 Spark Spreads Daily 26NOV2022-26NOV2023

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Source: Bloomberg & BofA Global Research

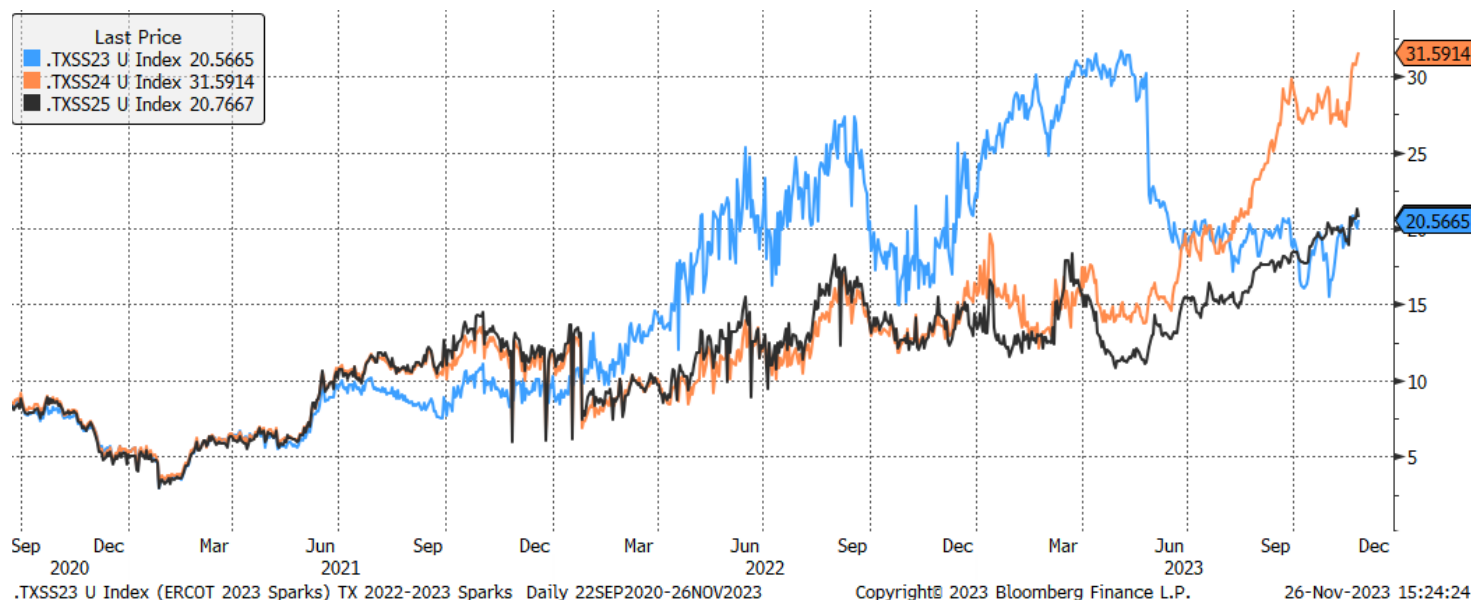
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The next Exhibit shows a blended spark spread for Vistra's Texas portfolio. For 2024, we estimate that spark spreads have doubled to \$30+/MWh from \$15/MWh for 1H23. Most of this appreciation was in 3Q23 and we believe is largely reflected in management's FY24 guidance although there does appear to be ~\$2/MWh upside in the past month.

2025 has marched higher as well from ~\$11/MWh in May 2023 to \$21/MWh currently. This also should accrue favorably to Vistra. With 2025 ERCOT North forwards at \$50/MWh and natural gas ~\$4/MWh, the 12-13x heat rate is elevated. Assuming a 10.5x heat rate from 2022 implies a \$42.50/MWh power price. Every hour at the \$4,500/MWh price cap represents ~\$0.50/MWh on an annual basis (\$4,500 divided by 8,760 hours). This implies that the forwards are pricing in approximately 15-16 hours of pricing at the cap for 2025. While difficult to compare to prior periods, this appears to be an elevated level. The novel ERCOT Contingency Reserve Service product also complicates the analysis.

**Exhibit 4: ERCOT 2023-2025 Spark Spreads (\$/MWh)**

2024-2025 spreads have increased significantly over the past year



Source: Company Filings, Bloomberg, & BofA Global Research

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**BofA Global Research Reports****Title: Subtitle**

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[US Utilities & IPPs: PowerPoints: TX Turnover](#)

[US Utilities & IPPs: PowerPoints: VST Power](#)

[US Electric Utilities & IPPs: ERCOT: Revisiting ancillaries and market monitor report](#)

[US Utilities & IPPs: ERCOT Dive: Lone Star State eyes big build cycle, potential repowerings, too](#)

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26 September 2023

24 July 2023

**Exhibit 5: Primary stocks mentioned in this report**

Prices and ratings for primary stocks mentioned in this report

BofA Ticker	Bloomberg ticker	Company name	Price	Rating
VST	VST US	Vistra Energy	US\$ 34.86	B-1-7
CEG	CEG US	Constellation Energy	US\$ 123.86	B-2-7

Source: BofA Global Research

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**Price objective basis & risk****Constellation Energy Corp (CEG)**

Our \$125 Price Objective is based on a 10.7% 2026E equity Free Cash Flow yield (FCF yield) on blended basis. The 10.7% FCF yield represents a weighted average of 9.6% (first quartile) for the support FCF and 13.0% (third quartile) for merchant FCF, utilizing energy comparables. We discount to 2026 the benefit of the Illinois Carbon Mitigation



Credit (CMC) in 2028 back to 2025 at a 10% discount rate: this represents \$10/sh of value. We include \$1/Sh to CEG from the publicly disclosed ownership of NetPower (NPWR).

Risks to achievement of the Price Objective and rating are: 1) changes in energy & capacity prices, 2) retail margins, renewals, win rate, & overall market share, 3) operating, capital, and fuel costs, 4) capital allocation decisions including M&A, growth, and share repurchases, 5) nuclear operational performance, incidents, or accidents, 6) legislative, judicial, and regulatory changes, 7) nuclear fuel costs & availability, 8) change in environmental standards for generation assets, 9) management turnover, 10) pension & nuclear decommissioning trust returns, 11) credit rating agency requirements, 12) interest rates, and 13) NetPower ownership.

### **Vistra Energy (VST)**

Our \$44 price objective is based on a 2025E SOTP valuation. For Vistra Vision, we arrive at a 7.7x blended EV/EBITDA. We apply a 9.0x EV/FCF multiple to nuclear (10.5x for Texas), which we believe fairly represents the risk/reward profile of the assets. For Renewables and Storage, we apply a 12.0x EV/FCF multiple given the accelerating nature of the end markets. For Retail, we apply a 7.0x EV/FCF multiple, consistent with peers. For Vistra Tradition, we arrive at a 4.8x blended EV/EBITDA multiple. We apply a 5.5x EV/FCF multiple to Gas Generation (7.5x for Texas) given favorable spark spreads and end market demand dynamics and a 1.5x EV/FCF multiple to Coal Generation (5.5x for Texas) which we believe appropriately captures the limited long-term value of the assets.

Downside risks to our PO are 1) changes to regulatory, political, or legislative standards, 2) wholesale power, natural gas, & capacity prices, 3) competitive & regulatory change to retail businesses, principally in Texas, 4) operational performance, 5) development of new renewables and storage assets, 6) natural disasters, 7) interest rates, 8) nuclear fuel access/cost, and 9) retail market attrition.

### **Analyst Certification**

We, Julien Dumoulin-Smith and Paul Zimbardo, hereby certify that the views each of us has expressed in this research report accurately reflect each of our respective personal views about the subject securities and issuers. We also certify that no part of our respective 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
<b>BUY</b>				
	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
	Cheniere Energy Inc	LNG	LNG US	Julien Dumoulin-Smith
	Clearway Energy	CWENA	CWEN/A US	Julien Dumoulin-Smith
	Clearway Energy	CWEN	CWEN US	Julien Dumoulin-Smith
	CMS Energy	CMS	CMS US	Julien Dumoulin-Smith
	Consolidated Edison	ED	ED 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
	Entergy	ETR	ETR US	Paul Zimbardo
	Exelon	EXC	EXC US	Paul Zimbardo
	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
	Hydro One	YH	H CN	Dariusz Lozny, CFA
	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
	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
	Sempra Energy	SRE	SRE 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
	Xcel Energy Inc	XEL	XEL US	Julien Dumoulin-Smith
<b>NEUTRAL</b>				
	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
	ChargePoint Holdings	CHPT	CHPT US	Alex Vrabel
	Constellation Energy Corp	CEG	CEG US	Paul Zimbardo
	Emera Inc	YEMA	EMA CN	Dariusz Lozny, CFA
	Essential Utilities	WTRG	WTRG US	Julien Dumoulin-Smith
	Evergy, Inc	EVERG	EVERG US	Julien Dumoulin-Smith
	Generac Holdings Inc.	GNRC	GNRC US	Julien Dumoulin-Smith
	Idacorp	IDA	IDA US	Paul Zimbardo
	Maxon Solar Technologies	MAXN	MAXN US	Julien Dumoulin-Smith
	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
	OGE Energy Corp	OGE	OGE US	Julien Dumoulin-Smith
	Ormat Technologies	ORA	ORA US	Julien Dumoulin-Smith
	Pinnacle West	PNW	PNW US	Julien Dumoulin-Smith
	Southern Company	SO	SO US	Julien Dumoulin-Smith
	Southwest Gas Holdings	SWX	SWX US	Julien Dumoulin-Smith
	TransAlta Corp	TAC	TAC US	Dariusz Lozny, CFA
	TransAlta Corporation	YTA	TA CN	Dariusz Lozny, CFA
	WEC Energy Group Inc	WEC	WEC US	Julien Dumoulin-Smith

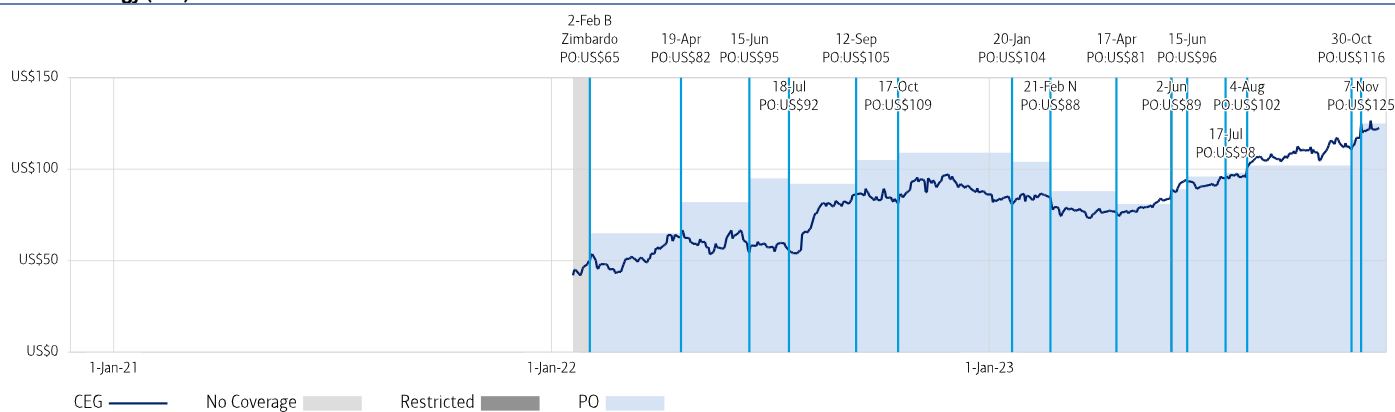
## North America - Utilities and Alt Energy Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
<b>UNDERPERFORM</b>	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
	Eversource Energy	ES	ES US	Paul Zimbardo
	FirstEnergy	FE	FE US	Julien Dumoulin-Smith
	Fortis	YFTS	FTS CN	Dariusz Lozny, CFA
	Fortis Inc	FTS	FTS US	Dariusz Lozny, CFA
	FREYR Battery	FREY	FREY US	Julien Dumoulin-Smith
	FTC Solar	FTCI	FTCI 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
	ONE Gas, Inc.	OGS	OGS US	Julien Dumoulin-Smith
	SolarEdge Technologies	SEDG	SEDG US	Julien Dumoulin-Smith
	Spire	SR	SR US	Julien Dumoulin-Smith
	Stem, Inc.	STEM	STEM US	Julien Dumoulin-Smith
	SunPower Corp.	SPWR	SPWR US	Julien Dumoulin-Smith
	UGI Corp.	UGI	UGI US	Julien Dumoulin-Smith
<b>RSTR</b>	NRG Energy	NRG	NRG US	Julien Dumoulin-Smith
<b>RVW</b>	Tellurian Inc	TELL	TELL US	Julien Dumoulin-Smith

## Disclosures

## Important Disclosures

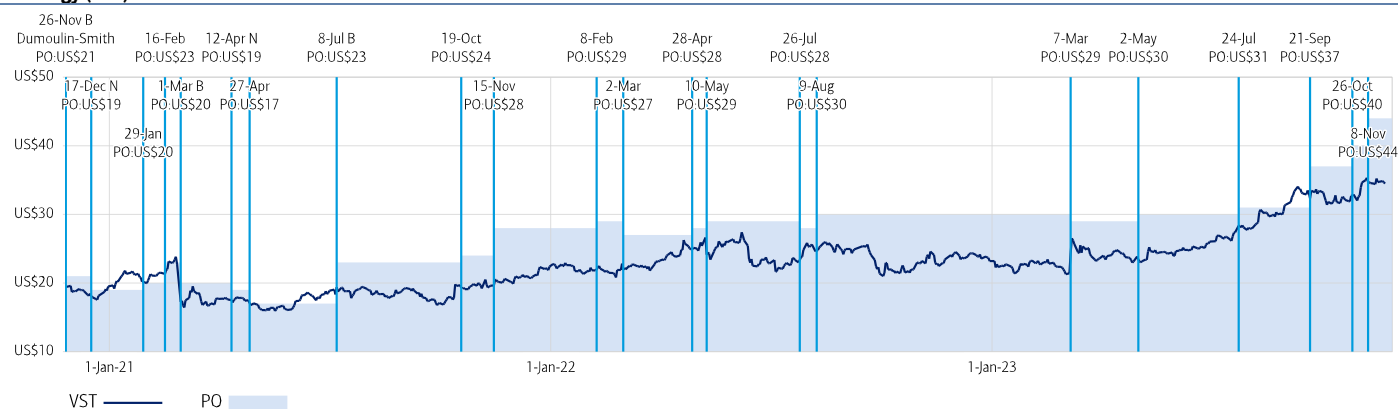
## Constellation Energy (CEG) Price Chart



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.

## Vistra Energy (VST) 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 Sep 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships <sup>R1</sup>	Count	Percent
Buy	80	51.28%	Buy	51	63.75%
Hold	42	26.92%	Hold	32	76.19%
Sell	34	21.79%	Sell	22	64.71%

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

Coverage Universe	Count	Percent	Inv. Banking Relationships <sup>R1</sup>	Count	Percent
Buy	1869	53.48%	Buy	1046	55.97%
Hold	828	23.69%	Hold	461	55.68%
Sell	798	22.83%	Sell	370	46.37%

<sup>R1</sup> 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.

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Buy	≥ 10%	≤ 70%
Neutral	≥ 0%	≤ 30%
Underperform	N/A	≥ 20%

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