BofA SECURITIES

US Utilities & Clean Tech

Year Ahead 2024: Our 24 Themes. Utilities set for a rebound but regulatory risks lurk

Industry Overview

Utilities enter 2024 on a better footing

We entered 2023 cautious on the utilities sector after strong performance in 2022 due to affordability pressures, high profile regulatory proceedings, strained balance sheets, and interest rate driven earnings headwinds. Despite these concerns, we did not envision the magnitude of underperformance related to the Federal Reserves' extraordinary tightening path. Utilities underperformed the S&P 500 -34% in 2023, near the lows of the year with the utilities sector -10% versus increases for the S&P 500. Utilities relative weakness for tech heavy indexes such as the Nasdaq 100 was even more stark -64%. **As we enter 2024, we are more optimistic overall** but there are still clear risks, notably the uncertainty around energy policy in an election year. **See the full report for our list of 24 top themes to monitor.**

Regulatory is again a top theme. Simplification complete?

2022 and 2023 have had outsized adverse regulatory outcomes in a variety of states as affordability and reliability issues have continued to appear. In general we prefer utilities with quieter regulatory calendars but there are few unicorns with attractive valuations and light regulatory exposures – PPL and PCG are two that fit that description. Our top ten themes are: 1) regulatory; 2) interest rate mark-to-market; 3) guidance resets; 4) management turnover; 5) moderating commodities and less customer bill pressure; 6) data centers; 7) election year uncertainty – more than just Inflation Reduction Act [IRA] risk; 8) offshore wind construction and auctions; 9) asset sales and M&A [or the lack thereof]; and 10) balance sheet and equity needs. Business simplifications were a major theme in 2022-2023 but most large-cap utilities have oriented towards 90%+ regulated except NextEra Energy (NEE), Avangrid (AGR), Sempra (SRE), Public Service Enterprise Group (PEG). Small cap utilities such as Algonquin (AQN), MDU Resources (MDU), and Southwest Gas (SWX) are some of the final companies pursuing this approach.

Top picks for 2024? PCG, ETR, & PPL

PG&E Corp (PCG) remains our top utility pick despite the leading outperformance in 2023 as the company still trades at an overly discounted P/E and has a far quieter calendar after the rate case conclusion. Other regulated utilities we prefer include **Entergy Corp (ETR), PPL Corp (PPL), and NiSource (NI).** We upgraded ETR late in 2023 and see an attractive risk/reward setup if the company can navigate the Louisiana regulatory field, primarily the formula rate plan extension. See details here: Upgrade to Buy: Can premium growth drive positive re-rating? Yes, with risk reduction 11/21/23.

Preference for value but who can emerge from the pack?

Over the past two years there has been a fall from grace for many previously premium utilities, notably Eversource Energy (ES) and Ameren (AEE). The question is: who can emerge or solidify themselves as a premium? Again, we see PPL as having the necessary characteristics: strong balance sheet, above-average growth rate, and light regulatory.

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Equity
United States
Utilities & Clean Tech

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

Dariusz Lozny, CFA
Research Analyst
BofAS
dariusz.lozny@bofa.com

Cameron Lochridge
Research Analyst
BofAS
cameron.lochridge@bofa.com

Tanner W. James, CFA
Research Analyst
BofAS
tanner.w.james@bofa.com

Dimple Gosai, CFA
Rsch Analyst & ESG Strategist
BofAS
dimple.gosai@bofa.com

Please see a comprehensive list of acronyms at the end of the report.

Refer to important disclosures on page 51 to 55. Analyst Certification on page 49. Price Objective Basis/Risk on page 48. 12642569

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24 Themes for 2024

Continuing our annual tradition, we discuss the 24 key topics for 2024 to help you navigate the increasingly dynamic utility, power, and clean energy sectors. While we intend for this report to have a longer 'shelf life', the macro backdrop has been evolving and shifting rapidly - along with the outlooks for utility companies. To distill perhaps the biggest conclusion of 2022: utilities are not immune from macro pressures. The industry has steadily marched growth rate guidance upward in the past five years during a period of relatively subdued commodities, interest rates, and inflation but that came crashing down in 2022 for many.

In an attempt to simplify and summarize, we attempt to collapse the twenty-four themes into five overarching categories to monitor:

- Regulatory, Legislative, and Operational Risks: #1, 12, 17, 22, and 24
- Macro: interest rates, election, & more: #2, 7, 11, and 21
- Financial Outlooks, M&A, Costs, and Inflation: #3-4, 6, 9, 10, and 15-16
- Capital Expenditures, Renewables, and Major Projects: #8, 14, 18, 20, and 23
- Commodities & Energy: #5, 13, 19

For reference and comparison, we include links to our 2023 and 2022 year ahead reports.

BofA Global Research Reports

Title: Subtitle	Primary Author	Date Published
US Utilities & Clean Tech: Year Ahead 2023: Risks Outnumber Opportunities in the "Lost Year"	Julien Dumoulin-Smith	05 January 2023
US Utilities & IPPs: Year Ahead 2022: Energy Convergence Continues - Our 22 Themes	Julien Dumoulin-Smith	04 January 2022

1. Rate Cases: The top theme again in 2024

Just like 2023 and 2022, regulatory risk is top of mind. In 2022 there were cautious rate case decisions for WEC Energy (WEC) in Wisconsin and DTE Energy (DTE) in Michigan. In 2023 the most recent and harshest regulatory update came in 4Q23 for Illinois electric and natural gas utilities.

Which cases are our closest focus?

This is far from a comprehensive list and there are many major rate cases expected in 2024 not on the list below:

- **First Energy (FE):** The Ohio rate case is the highest profile rate case for the utility sector in decades given the deferred prosecution agreement that the company entered. This is the rate case that FirstEnergy Corp engaged in bribery activity for what was described as the negative revenue and earnings impact from the "Ohio hole" in the 2024 rate case. Given the magnitude of the rate case, we expect that it will take more than one year to process. Aside from Ohio, FE also has open rate cases in New Jersey and West Virginia as well as infrastructure filings (IIPs) separately.

  Our base case is that there is not an adverse rate case outcome for FirstEnergy's Ohio utilities, but this will be a clear investor focus. We make this assumption because other regulated utilities with similarly low or negative equity balances such as Dayton Power & Light have had hypothetical capital structures approved in their own rate cases recently. The question is whether FE will receive different treatment due to its deferred prosecution agreement and linkage of the nuclear plants to House Bill 6.

FE has ~$2.2Bn goodwill at its Cleveland (CEI) and Toledo (TE) regulated utilities which relates in large part to the divested nuclear plants that were subsequently the topic of House Bill 6 (HB6). Excluding this legacy goodwill, there is negative equity at CEI and ~10% at Toledo for a blended 30-35% equity ratio across the three Ohio subsidiaries. Ascribing 50% equity treatment of goodwill would bring the equity ratio to 45-50%.

Additional background is here: FirstEnergy: Downgrade to Underperform: Next Reset Ahead. Can a New CEO Right the Ship? 23 January 2023

Dominion East Ohio also has a rate case pending for its natural gas utility that it has announced a sale of to Enbridge.

- **Pennsylvania: Pennsylvania is perhaps the most important regulatory state in 2024.** American Water has a sizable rate case pending already and Essential Utilities filed its natural gas rate case on December 29th, requesting +$156Mn with +21% Peoples Natural division and +8% Peoples Gas division average residential rate increases. Other big cases include FirstEnergy's targeted for 1Q24, Essential Utilities Aqua water case, and Exelon's PECO application. For FirstEnergy there have been historical above authorized levels at times due to in part to a low effective tax rate. PA also has a unique way to account for pension returns. Essential Utilities natural gas franchise has had some of the highest earned ROEs in the US due to the repairs tax election. For more on PA earned returns, see our deep dive here: US Utilities & Clean Tech: Pennsylvania ROEs: Returns in the Eye of the Beholder. Analyzing 2022 Levels 14 June 2023.

- **California:** Both Sempra and Edison International have rate cases pending; however, Sempra's cases are more advanced in the process with earlier filing dates. PG&E's rate case outcome was ultimately somewhat cautious but fortunately PG&E had alternative legislative paths to pursue additional capital. PG&E's case was more unique due to its heavy undergrounding focus which is more expensive than other more traditional utility investments. We anticipate these rate cases leading to reasonable outcomes for both SRE and EIX with California increasingly a premium jurisdiction for shareholders, but we do not want to be overly complacent as there are still high customer rates here.

- **Entergy (ETR) Louisiana Formula Rate Plan (FRP) extension:** Entergy has made progress on regulatory in the past year-plus and still has a healthy calendar of activities in 2024. A favorable characteristic of Entergy is the reliance on FRPs and riders; however, Louisiana's FRP is expired and the company is pursuing an extension. There are technical conferences/workshops in January and February ahead of the Louisiana Public Service Commission (PSC) Staff filing expected March 26th. Entergy management has emphasized a desire for negotiated settlements in regulatory proceedings which creates a window for discussion with stakeholders ahead of August 26th hearings. Entergy also has storm hardening/resiliency proceedings (primarily Louisiana and New Orleans) and FRPs in Mississippi (March), New Orleans (April), and Arkansas (July).

Public Service Electric & Gas (PEG): On December 29th Public Service Electric & Gas (PSE&G, PSEG [PEG] subsidiary) filed its first New Jersey rate case with the Board of Public Utilities (BPU) since October 2018 with a large +$25/month average residential rate increase (+12%). This rate case was required to be filed by YE23 due to prior regulatory programs PSE&G is requesting +$462Mn electric and +$364Mn natural gas revenue increases based on $9.3Bn and $8.6Bn rate base, respectively. While a large increase, it has been multiple years since the last rate case and PSE&G screens well on affordability with below-average electric and gas bill share historically at 2.5-3.0%. Additionally, many of the spending programs have been reviewed by the BPU in some form but there has been only partial or no interim rate recovery. Look to the recent Atlantic City Electric (ACE) rate case settlement that provided for ROE of 9.6% (same as PSE&G's current authorized ROE) as reasonable precedent. While the 55.5% equity ratio request will garner outsized focus, we see precedent in the 2021 transmission settlement with the NJ BPU and NJ Division of Rate Counsel which increased the equity ratio +100bp to 55%.

Aside from PSE&G, there are expected to be natural gas rate cases topical for the respective firms.

- **OGE Energy (OGE):** In late December OG&E filed an expansive $332Mn general rate case in Oklahoma, nearly double the size of the request outlined in its prior filing just two years prior (+14% customer bill impact). In its application OG&E requested a 100bp increase in authorized ROE to 10.5% and capital structure of 53.5% equity. We see risk associated with the large request, however there could be headroom for customer bills to rise given OG&E's last two rate cases resulted in customer bill impacts of 0% in 2018/2019 and +2% in 2022. Additionally, lower fuel costs enabled OG&E to reduce customer bills 15% in November. Still, the Public Service Company of Oklahoma (PSO) rate case resolved in November 2023 represents a cautious datapoint with a 9.3% authorized ROE and 52% equity. The ROE declined -10bp and the authorized equity ratio was well below the 54.6% requested. The +$131Mn rate change was less than 45% of the original $294Mn request.

- **CenterPoint Energy (CNP):** After a quieter 2024, CenterPoint has a slew of rate cases for 2024 with the Houston Electric case expected to take center stage. The Minnesota Gas rate case was filed in November 2023 with interim rates in mid-December which is another important application. Minnesota has been a more challenging jurisdiction historically and this +$85Mn request (in 2024 and $52Mn in 2025) is large enough to be a driver. Other activity to watch includes Indiana Electric, Texas Gas +$37Mn, and Texas electric distribution cost recovery +$86Mn (DCRF). We continue to view CNP as a premium utility but acknowledge that the increased regulatory activity could be an overhang.

- **Pinnacle West (PNW):** APS's rate case in Arizona is expected to be one of the first key regulatory data points of 2024, with a recommended opinion and order (ROO) likely in January followed by consideration at an open meeting of the ACC in February. Data points thus far have trended positively with a 9.68% staff rec ROE, up from 8.9%, and revenue requirement increase north of $200m. Historically the ACC has exercised a broad degree of independence and while the ROO is a critical input, the open meeting discussion and any amendments may yet prove material. Support for generation capital spend via the SRB mechanism will also drive expectations for 2026+ with staff pivoting in favor in briefs filed in December. Even with the SRB, we still expect regulatory lag to remain a feature of APS's earnings, likely exacerbated this cycle by the incremental move in interest rates and inflation impacts on O&M that occurred after the closing of the current test year ended Jun. 2022.

- **Avista (AVA):** Avista is filing its second multi-year rate case in Washington in early 2024, which follows what was ultimately a challenging initial multi-year plan. Avista's last MYRP was unfortunately timed as significant inflationary pressure occurred following the case's conclusion, resulting in significant lag that must be corrected before management can reaffirm its long-term 4-6% EPS CAGR target. Previously, Avista has referred to 2025 as their first meaningful opportunity to earn their allowed return. Structurally, AVA identifies 70bp of structural lag from use of a historic test year in Washington, which we expect to persist even following the MYRP outcome.

- **Gas LDCs**: In 2024, we also expect there to be several natural gas LDCs that file rate cases. ONE Gas (OGS) has stated its intention to file regularly across its service territories to adjust its revenue structure to significantly higher O&M, and expects to file a rate case in Kansas in 2024. This proceeding could be notable in that OGS will likely request to increase its equity ratio 300bps to 59%, a level it believes is achievable given Kansas Corporation Commission (KCC) staff testimony in Atmos Energy's recent rate cast supporting such an equity ratio for their Kansas LDC. Additionally, New Jersey Resources (NJR) subsidiary New Jersey Natural Gas (NJNG) plans to file a rate case with the NJ BPU in 2024 as well. NJNG's prior rate case with the BPU concluding in late 2021 resulted in an authorized rate increase of $79Mn, or 48% of the company's initial request. Southwest Gas Holdings (SWX) filed a Nevada rate case in 4Q23 requesting a $70Mn rate increase, and expects to file what could be an even larger rate case in Arizona in the first quarter of 2024.

Below are some additional non rate case/fuel recovery proceedings that merit tracking:

- **Florida Investigation:** The Federal Election Commission (FEC) resolution of an October 27th complaint against NextEra Energy (NEE)/Florida Power & Light (FPL). Every investor conversation regarding NEE includes a discussion of the complaint where we and investors have limited public information. Our base case remains that there is no material impact on NEE from the resolution here, but this is a key risk for a nervous investor base.

- **Virginia SCC appointments and legislative session:** There are two vacant seats on the three-seat State Corporation Commission which have been empty for approximately one year. Members of the legislature have discussed a mid-January target for confirmation.

- **Illinois legislation**: This is likely to prove quite controversial in 2024, or at a minimum, the outlines of renewed discussion of legislation. After the adverse regulatory outcomes for the natural gas and electric utilities, we expect all of the regulated utilities to reduce capital expenditures from their prior expectations. It is unclear if this is a raw cut or just the lack of growth. As a result, there could be headcount reductions. Any legislative effort as a result would likely be lead by non-utility parties, principally competing interests from labor unions and environmental groups around the fate and future of grid investment.

  The confirmation of the majority of Illinois Commerce Commission (ICC) sitting Commissioners could also garner renewed political focus with three of five subject to legislative approval. Many interveners continue to caution that any new bill that would address natural gas utility spending – and the wider debate on decarbonization could yet take longer than just 2024. As a result, drafts rather than a final voted bill could be all that we get this year. To be sure, legislation is not a clear positive or negative – watch how competing interest here advocate. Either way, particularly when coupled with still likely controversial capex approvals for historical gas LDC spend under Rider Qualified Infrastructure Plant (QIP) & new grid spending plans for electrics, Illinois utility regulation is likely to remain a very front and center debate.

2. Interest rate exposure & Fed pivot for below-average balance sheets

The significant pullback in 30Yr Treasury yields from 5%+ in October 2023 to ~4.1% as of early January offers significant relief for utilities and unregulated companies carrying more short-term debt and those with upcoming maturities. Despite the moderation, we still believe that interest rates are a net pressure for companies who provided long-term guidance refreshes when Treasury yields were 3.5-4.0% but to a much lesser degree.

It is important to distinguish between companies that truly benefit from a decline in interest rates with unregulated/parent company borrowings and future needs. Companies that pursued asset sales to address weak credit metrics such as Dominion and FirstEnergy benefit less from the declining rate environment (still net positive).

With respect to refinances, some of the companies with larger pressures include DTE, WEC, NEE, EIX, ES, PNW, BKH, and OGS. See a full breakdown in our October 2023 deep dive: North American Utilities & IPPs: Refinancing pressures quantified: Who has needs, how much, when, & what offsets? 31 October 2023

Exhibit 1: Short Term Borrowings, Cash Positions, and Percent of Enterprise Value
The companies with higher short-term debt exposure benefit more with the moderation of rates

Ticker	Name	Short Term Borrowings	Enterprise Value	Cash	Net %
SPWR	Sunpower Corp	519	1,004	104	41.3%
SWX	Southwest Gas Ho	1,601	9,955	105	15.0%
SR	Spire Inc	1,112	8,338	6	13.3%
TELL	Tellurian Inc	166	902	59	11.9%
EMA	Emera Inc	3,303	34,883	254	8.7%
OGS	One Gas Inc	578	6,570	9	8.7%
OGE	Oge Energy Corp	1,006	11,875	3	8.4%
EVRG	Evergy Inc	2,147	25,051	41	8.4%
AVA	Avista Corp	484	5,700	9	8.3%
HE	Hawaiian Elec	868	2,428	667	8.3%
D	Dominion Energy	6,803	83,901	137	7.9%
UTL	Unitil Corp	124	1,509	6	7.8%
AEP	American Electri	6,712	85,141	407	7.4%
PEG	Pub Serv Enterp	3,775	50,545	57	7.4%
EIX	Edison Intl	5,135	65,835	446	7.1%
CNP	Centerpoint Ener	2,603	36,099	120	6.9%
NI	Nisource Inc	1,797	25,982	56	6.7%
NWN	Northwest Natura	350	3,011	157	6.4%
ED	Cons Edison Inc	3,792	55,257	539	5.9%
BKH	Black Hills Corp	1,061	8,171	594	5.7%
ES	Eversource Energ	2,775	48,016	79	5.6%
WEC	Wec Energy Group	2,532	45,786	46	5.4%
DUK	Duke Energy Corp	8,896	159,770	324	5.4%
H	Hydro One Ltd	2,119	38,987	59	5.3%
EXC	Exelon Corp	4,428	78,379	300	5.3%
DTE	Dte Energy Co	2,299	43,377	36	5.2%
PNM	Pnm Resources	443	8,464	8	5.1%
MDU	Mdu Res Group	359	6,385	32	5.1%
NJR	New Jersey Res	373	7,740	1	4.8%
MSEX	Middlesex Water	74	1,559	3	4.5%
UGI	Ugi Corp	793	12,665	241	4.4%
PCG	Pg&E Corp	4,554	92,947	589	4.3%
NEE	Nextera Energy	9,710	204,755	1,568	4.0%
SRE	Sempra	4,424	82,781	1,149	4.0%
AEE	Ameren Corp	1,410	35,600	8	3.9%
ALA	Altagas Ltd	719	17,362	43	3.9%
LNT	Alliant Energy	1,053	22,255	206	3.8%
SO	Southern Co	7,091	142,753	1,676	3.8%
SJW	Sjw Group	164	3,777	21	3.8%
AGR	Avangrid Inc	993	24,803	75	3.7%
ETR	Entergy Corp	3,193	48,060	1,520	3.5%
MGEE	Mge Energy Inc	125	3,389	11	3.4%
FTS	Fortis Inc	2,743	59,867	765	3.3%
CMS	Cms Energy Corp	1,123	33,375	157	2.9%
PPL	Ppl Corp	1,361	34,855	353	2.9%
POR	Portland General	284	8,518	47	2.8%
WTRG	Essential Utilit	466	17,155	9	2.7%
ARTNA	Artesian Res-A	22	596	6	2.6%
PNW	Pinnacle West	497	18,541	15	2.6%
XEL	Xcel Energy Inc	2,181	61,607	594	2.6%
ALE	Allete Inc	276	5,938	126	2.5%
NWE	Northwestern Ene	148	5,781	5	2.5%
AWK	American Water W	1,465	37,606	628	2.2%

Exhibit 1: Short Term Borrowings, Cash Positions, and Percent of Enterprise Value

The companies with higher short-term debt exposure benefit more with the moderation of rates

Ticker	Name	Short Term Borrowings	Enterprise Value	Cash	Net %
AQN	Algonquin Power	423	14,792	95	2.2%
BEP-U	Brookfield Renew	2,309	63,063	1,034	2.0%
ATO	Atmos Energy	291	24,987	15	1.1%
CWT	Calif Water Srvc	74	4,112	35	1.0%
FE	Firstenergy Corp	499	46,313	118	0.8%
AES	Aes Corp	1,790	41,728	1,765	0.1%
NFE	New Fortress Ene	114	14,084	171	-0.4%
ENLT	Enlight Renewabl	223	4,600	255	-0.7%
GNRC	Generac Holdings	92	8,879	162	-0.8%
NRG	Nrg Energy	146	23,769	401	-1.1%
ENPH	Enphase Energy	96	16,182	290	-1.2%
CEG	Constellation En	1,302	43,816	1,889	-1.3%
NEP	Nextera Energy P	40	19,785	332	-1.5%
CU	Can Utilities-A	113	20,586	418	-1.5%
CWEN	Clearway Energ-C	328	14,938	566	-1.6%
HASI	Hannon Armstrong	51	6,480	156	-1.6%
PLUG	Plug Power Inc	62	2,659	111	-1.8%
NOVA	Sunnova Energy I	218	9,087	468	-2.8%
RUN	Sunrun Inc	196	15,318	644	-2.9%
NEXT	Nextdecade Corp	1	1,608	51	-3.1%
CPX	Capital Power Co	133	8,022	399	-3.3%
LNG	Cheniere Energy	1,457	66,897	3,861	-3.6%
ARRY	Array Technologi	46	3,473	174	-3.7%
OTTR	Otter Tail Corp	13	4,266	189	-4.1%
NXT	Nextracker-Cl A	2	6,510	373	-5.7%
IDA	Idacorp Inc	-	7,406	445	-6.0%
STEM	Stem Inc	18	1,022	97	-7.7%
AY	Atlantica Sustai	17	7,299	595	-7.9%
FLNC	Fluence Energy I	23	3,829	346	-8.4%
FSLR	First Solar Inc	9	16,353	1,493	-9.1%
VST	Vistra Corp	696	26,438	3,170	-9.4%
TPIC	Tpi Composites I	82	822	161	-9.5%
SEDG	Solaredge Techno	19	4,158	551	-12.8%
TA	Transalta Corp	178	7,419	1,231	-14.2%
BE	Bloom Energy C-A	43	3,573	557	-14.4%
VIA	Via Renewables I	-	219	45	-20.6%
MAXN	Maxeon Solar Tec	55	504	208	-30.5%
SMR	Nuscale Power Co	-	650	218	-33.5%
FTCI	Ftc Solar Inc	1	54	44	-80.9%

Source: Bloomberg

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Debt refinancing impact: still there, just more manageable.

We present a snapshot of the earnings per share exposure from refinancings as of January 7th, 2024. The tables below show the annual estimated impacts and should be read in aggregate.

Premium Utilities

Exhibit 2: Tax adjusted Total Negative/(Positive) impact from refinancing at current yield

DTE and WEC have near-term refinancing activity

	2024	2025	2026	2027	2028
LNT	0.03	0.02	**0.06**	0.02	0.04
AEE	**0.06**	0.02	0.02	**0.09**	**0.07**
ED	0.01	0.00	0.02	0.02	0.03
CNP	0.02	0.01	**0.06**	0.01	0.02
CMS	0.03	0.02	0.02	0.05	**0.07**
DTE	**0.09**	**0.34**	0.07	0.03	**0.12**
NEE	0.04	**0.06**	0.01	**0.08**	0.03
WEC	**0.12**	**0.05**	0.02	**0.06**	**0.10**
XEL	0.02	0.02	0.02	0.03	0.02
AWK	0.03	0.05	0.10	**0.06**	0.05
WTRG	0.00	0.00	0.00	0.00	0.00
Average	**0.04**	**0.05**	**0.03**	**0.04**	**0.05**

Source: BofA Global Research, Factset

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Exhibit 3: Tax adjusted Total Negative/(Positive) impact from refinancing at current yield - % of Consolidated EPS

Interest rates will have a larger impact on DTE's 2025 outlook than peers

	2024	2025
LNT	**1.1%**	0.5%
AEE	**1.4%**	0.4%
ED	0.2%	0.0%
CNP	**1.1%**	0.5%
CMS	1.0%	0.5%
DTE	**1.4%**	**4.8%**
NEE	**1.2%**	**1.5%**
WEC	**2.4%**	**1.0%**
XEL	0.5%	0.6%
AWK	0.5%	0.8%
WTRG	0.0%	0.0%
Average	**1.0%**	**1.0%**

Source: BofA Global Research, Factset

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Exhibit 4: Tax adjusted HoldCo Negative/(Positive) impact from refinancing at current yield

Similar to the prior exhibits, DTE has near-term exposure

	2024	2025	2026	2027	2028
LNT	0.00	0.00	0.03	0.00	0.00
AEE	**0.04**	0.00	0.02	**0.05**	**0.05**
ED	0.00	0.00	0.00	0.00	0.00
CNP	0.02	0.00	**0.04**	0.00	0.00
CMS	0.01	0.01	0.02	**0.05**	**0.05**
DTE	**0.08**	**0.31**	**0.06**	0.01	0.10
NEE	0.00	**0.04**	0.00	**0.04**	0.00
WEC	**0.07**	0.01	0.02	**0.06**	**0.05**
XEL	0.00	0.02	0.02	0.03	0.01
AWK	0.00	0.00	0.00	0.00	0.00
WTRG	0.00	0.00	0.00	0.00	0.00
Average	**0.02**	**0.03**	**0.02**	**0.02**	**0.02**

Source: BofA Global Research, Factset

BofA GLOBAL RESEARCH

Exhibit 5: Tax adjusted HoldCo Negative/(Positive) impact from refinancing at current yield - % of Consolidated EPS

Holding company debt is the clear focus for DTE and WEC but also CNP/AEE

	2024	2025
LNT	0.0%	0.0%
AEE	**0.9%**	0.0%
ED	0.0%	0.0%
CNP	**1.1%**	0.0%
CMS	0.4%	0.4%
DTE	**1.2%**	**4.3%**
NEE	0.0%	**0.9%**
WEC	**1.5%**	0.1%
XEL	0.0%	0.5%
AWK	0.0%	0.0%
WTRG	0.0%	0.0%
Average	**0.5%**	**0.6%**

Source: BofA Global Research, Factset

BofA GLOBAL RESEARCH

Exhibit 6: Tax adjusted OpCo Negative/(Positive) impact from refinancing at current yield

Alliant's exposure is much more at operating companies thus lower risk

	2024	2025	2026	2027	2028
LNT	**0.03**	0.02	**0.03**	0.02	**0.04**
AEE	0.02	0.02	0.00	**0.03**	0.02
ED	0.01	0.00	0.02	0.02	0.03
CNP	0.00	0.01	0.01	0.01	0.01
CMS	0.02	0.00	0.00	0.00	0.03
DTE	0.01	**0.03**	0.01	0.02	0.01
NEE	**0.04**	0.02	0.01	**0.03**	0.03
WEC	**0.04**	**0.04**	0.00	0.01	**0.05**
XEL	0.02	0.00	0.00	0.00	0.01
AWK	**0.03**	**0.05**	0.10	**0.06**	**0.05**
WTRG	0.00	0.00	0.00	0.00	0.00
Average	**0.02**	**0.02**	**0.02**	**0.02**	**0.03**

Source: BofA Global Research, Factset

BofA GLOBAL RESEARCH

Exhibit 7: Tax adjusted OpCo Negative/(Positive) impact from refinancing at current yield - % of Consolidated EPS

NEE subsidiary refinancings are notable and often not an investor focus

	2024	2025
LNT	**1.1%**	**0.5%**
AEE	0.5%	0.4%
ED	0.2%	0.0%
CNP	0.0%	**0.5%**
CMS	**0.6%**	0.1%
DTE	0.2%	**0.5%**
NEE	**1.2%**	**0.6%**
WEC	**0.9%**	**0.8%**
XEL	0.5%	0.1%
AWK	**0.5%**	**0.8%**
WTRG	0.0%	0.0%
Average	**0.5%**	**0.4%**

Source: BofA Global Research, Factset

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Value Utilities

Note that NiSource (NI) below does not fully reflect that the company finances operations at the holding company with intracompany debt allocations. For Entergy, the cash balance allows the company to repay debt and avoid some of the near-term operating company refinancing exposure.

Exhibit 8: Tax adj Total Negative/(Positive) impact from refi at current yield

Eversource's refinancings are one of the largest

	2024	2025	2026	2027	2028
AEP	**0.05**	**0.07**	**0.07**	0.03	**0.07**
AGR	0.03	0.04	0.03	0.03	0.01
D	0.03	0.05	**0.06**	0.03	0.02
DUK	0.01	0.06	**0.09**	0.04	0.07
EIX	**0.13**	0.06	0.04	0.01	0.04
ES	**0.08**	**0.12**	**0.08**	0.12	0.03
ETR	**0.20**	**0.19**	**0.22**	**0.09**	**0.19**
EVRG	**0.07**	0.05	0.04	**0.08**	0.00
EXC	0.01	0.04	0.03	0.02	0.02
FE	0.02	0.05	**0.07**	**0.05**	**0.06**
SRE	0.02	0.01	0.04	**0.05**	0.04
PPL	0.01	0.01	0.03	0.01	0.04
NI	-0.01	**0.10**	0.00	0.03	0.01
PNW	0.04	**0.20**	0.05	**0.06**	0.00
PCG	0.02	0.02	0.04	**0.06**	0.03
PEG	**0.06**	0.06	**0.06**	0.01	0.02
OGE	0.00	0.01	0.00	0.00	0.03
SO	0.03	0.03	0.04	0.02	0.03
Average	**0.04**	**0.06**	**0.05**	**0.04**	**0.04**

Source: BofA Global Research, Factset

BofA GLOBAL RESEARCH

Exhibit 9: Tax adj Total Negative/(Positive) impact from refi at current yield - % of Consolidated EPS

Pinnacle West and NiSource have 2025 concentrations

	2024	2025
AEP	1.0%	1.2%
AGR	**1.4%**	**1.9%**
D	0.9%	1.4%
DUK	0.1%	0.9%
EIX	**2.7%**	1.1%
ES	**1.9%**	**2.7%**
ETR	**2.8%**	**2.5%**
EVRG	**1.9%**	1.1%
EXC	0.6%	1.4%
FE	0.6%	**1.9%**
SRE	0.3%	0.1%
PPL	0.5%	0.7%
NI	-0.8%	**5.5%**
PNW	0.8%	**4.1%**
PCG	1.3%	1.5%
PEG	**1.6%**	1.4%
OGE	0.0%	0.5%
SO	0.8%	0.8%
Average	**1.0%**	**1.7%**

Source: BofA Global Research, Factset

BofA GLOBAL RESEARCH

Exhibit 10: Tax adj HoldCo Negative/(Positive) impact from refi at current yield

NiSource holding company debt is used to finance the utilities efficiently

	2024	2025	2026	2027	2028
AEP	0.05	0.03	0.00	0.02	0.02
AGR	0.03	0.04	0.00	0.00	0.01
D	0.02	0.02	0.03	0.01	0.01
DUK	0.01	0.05	0.07	0.02	0.03
EIX	0.02	0.01	0.00	0.00	0.02
ES	0.06	0.05	0.06	0.05	0.03
ETR	0.00	0.14	0.07	0.00	0.09
EVRG	0.07	0.00	0.00	0.05	0.00
EXC	0.00	0.01	0.01	0.01	0.00
FE	0.00	0.01	0.05	0.04	0.00
SRE	0.00	-0.01	0.00	0.02	0.03
PPL	0.00	0.00	0.00	0.00	0.00
NI	-0.01	0.10	0.00	0.00	0.01
PNW	0.00	0.15	0.00	0.00	0.00
PCG	0.00	0.00	0.00	0.02	0.01
PEG	0.03	0.04	0.00	0.00	0.00
OGE	0.00	0.00	0.00	0.00	0.00
SO	0.02	0.00	0.03	0.00	0.02
Average	0.02	0.04	0.02	0.01	0.01

Source: BofA Global Research, Factset

BofA GLOBAL RESEARCH

Exhibit 11: Tax adj HoldCo Negative/(Positive) impact from refi at current yield - % of Consolidated EPS

AGR has manageable refinances but a small headwind none the less

	2024	2025
AEP	0.9%	0.5%
AGR	1.4%	1.7%
D	0.6%	0.6%
DUK	0.2%	0.8%
EIX	0.4%	0.3%
ES	1.3%	1.1%
ETR	0.0%	1.8%
EVRG	1.9%	0.0%
EXC	0.0%	0.4%
FE	0.0%	0.6%
SRE	0.0%	-0.1%
PPL	0.0%	0.0%
NI	-0.8%	5.5%
PNW	0.0%	3.0%
PCG	0.0%	0.0%
PEG	0.9%	1.0%
OGE	0.0%	0.0%
SO	0.5%	0.0%
Average	0.4%	1.0%

Source: BofA Global Research, Factset

BofA GLOBAL RESEARCH

Exhibit 12: Tax adj OpCo Negative/(Positive) impact from refi at current yield

Timing of rate cases will be critical to avoiding regulatory lag

	2024	2025	2026	2027	2028
AEP	0.01	0.04	0.07	0.02	0.05
AGR	0.00	0.00	0.03	0.03	0.00
D	0.01	0.03	0.03	0.03	0.01
DUK	-0.01	0.01	0.02	0.02	0.04
EIX	0.11	0.04	0.04	0.01	0.02
ES	0.03	0.07	0.02	0.07	0.00
ETR	0.20	0.05	0.14	0.09	0.10
EVRG	0.00	0.05	0.04	0.03	0.00
EXC	0.01	0.03	0.02	0.01	0.01
FE	0.02	0.04	0.02	0.01	0.06
SRE	0.02	0.01	0.04	0.02	0.01
PPL	0.01	0.01	0.03	0.01	0.04
NI	0.00	0.00	0.00	0.03	0.00
PNW	0.04	0.05	0.05	0.06	0.00
PCG	0.02	0.02	0.04	0.04	0.02
PEG	0.03	0.01	0.06	0.02	0.02
OGE	0.00	0.01	0.00	0.00	0.03
SO	0.01	0.03	0.01	0.02	0.01
Average	0.03	0.03	0.04	0.03	0.02

Source: BofA Global Research, Factset

BofA GLOBAL RESEARCH

Exhibit 13: Tax adj OpCo Negative/(Positive) impact from refi at current yield - % of Consolidated EPS

Duke is well positioned at the operating company level

	2024	2025
AEP	0.1%	0.7%
AGR	0.0%	0.2%
D	0.3%	0.8%
DUK	-0.1%	0.1%
EIX	2.2%	0.9%
ES	0.6%	1.5%
ETR	2.8%	0.7%
EVRG	0.0%	1.1%
EXC	0.6%	1.0%
FE	0.6%	1.3%
SRE	0.3%	0.2%
PPL	0.5%	0.7%
NI	0.0%	0.0%
PNW	0.8%	1.0%
PCG	1.3%	1.5%
PEG	0.7%	0.4%
OGE	0.0%	0.5%
SO	0.2%	0.7%
Average	0.6%	0.7%

Source: BofA Global Research, Factset

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Small and mid-cap (SMID) utilities

Black Hills still has a large refinancing headwind in 2024 although the magnitude has declined.

Exhibit 14: Tax adjusted Total Negative/(Positive) impact from refinancing at current yield
BKH 2024 is the clear focus in the sub-sector

	2024	2025	2026	2027	2028
ALE	0.03	**0.07**	0.03	0.03	0.02
AVA	0.00	0.00	0.00	0.00	0.00
BKH	**0.34**	0.00	**0.07**	**0.13**	0.00
HE	0.00	0.02	0.03	0.01	**0.03**
IDA	0.03	0.00	**0.08**	0.00	0.00
MDU	0.00	0.00	0.00	0.00	0.00
MGEE	0.00	0.00	0.01	0.03	0.00
POR	0.01	0.00	0.00	**0.05**	**0.03**
PNM	0.01	**0.07**	0.02	0.01	**0.03**
Average	**0.05**	**0.02**	**0.03**	**0.03**	**0.01**

Source: BofA Global Research, Factset

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Exhibit 15: Tax adjusted Total Negative/(Positive) impact from refinancing at current yield - % of Consolidated EPS
Decent positioning for many utilities

	2024	2025
ALE	0.6%	**1.8%**
AVA	0.2%	0.0%
BKH	**8.7%**	0.0%
HE	0.1%	**0.7%**
IDA	0.6%	0.0%
MDU	0.0%	0.0%
MGEE	0.0%	0.0%
POR	0.5%	0.0%
PNM	0.3%	**2.5%**
Average	**1.2%**	**0.6%**

Source: BofA Global Research, Factset

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Exhibit 16: Tax adjusted HoldCo Negative/(Positive) impact from refinancing at current yield
Again BKH 2024 as well as 2026-2027 represent headwinds

	2024	2025	2026	2027	2028
ALE	0.02	**0.07**	0.03	0.03	0.01
AVA	0.00	0.00	0.00	0.00	0.00
BKH	**0.34**	0.00	**0.07**	**0.13**	0.00
HE	0.00	0.00	0.00	0.00	0.02
IDA	0.00	0.00	0.00	0.00	0.00
MDU	0.00	0.00	0.00	0.00	0.00
MGEE	0.00	0.00	0.00	0.00	0.00
POR	0.01	0.00	0.00	**0.05**	**0.03**
PNM	0.01	0.00	0.01	0.00	0.00
Average	**0.04**	**0.01**	**0.01**	**0.02**	**0.01**

Source: BofA Global Research, Factset

BofA GLOBAL RESEARCH

Exhibit 17: Tax adjusted HoldCo Negative/(Positive) impact from refinancing at current yield - % of Consolidated EPS
Aside from BKH, ALE 2025 should be monitored

	2024	2025
ALE	0.5%	**1.8%**
AVA	0.2%	0.0%
BKH	**8.7%**	0.0%
HE	0.0%	0.2%
IDA	0.0%	0.0%
MDU	0.0%	0.0%
MGEE	0.0%	0.0%
POR	0.5%	0.0%
PNM	0.5%	0.0%
Average	**1.1%**	**0.2%**

Source: BofA Global Research, Factset

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Exhibit 18: Tax adjusted OpCo Negative/(Positive) impact from refinancing at current yield
The utility operating profile is less important for most. IDA 2026 is important

	2024	2025	2026	2027	2028
ALE	0.01	0.00	0.00	0.00	0.00
AVA	0.00	0.00	0.00	0.00	0.00
BKH	0.00	0.00	0.00	0.00	0.00
HE	0.00	0.01	**0.03**	0.01	0.01
IDA	**0.03**	0.00	**0.08**	0.00	0.00
MDU	0.00	0.00	0.00	0.00	0.00
MGEE	0.00	0.00	0.01	**0.03**	0.00
POR	0.00	0.00	0.00	0.00	0.00
PNM	**-0.01**	**0.07**	0.01	0.01	**0.03**
Average	**0.00**	**0.01**	**0.01**	**0.01**	**0.00**

Source: BofA Global Research, Factset

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Exhibit 19: Tax adjusted OpCo Negative/(Positive) impact from refinancing at current yield - % of Consolidated EPS
Frequent rate case filing should prevent regulatory lag. PNM forward test yr.

	2024	2025
ALE	0.2%	0.0%
AVA	0.0%	0.0%
BKH	0.0%	0.0%
HE	0.1%	**0.5%**
IDA	**0.6%**	0.0%
MDU	0.0%	0.0%
MGEE	0.0%	0.0%
POR	0.0%	0.0%
PNM	**-0.2%**	**2.5%**
Average	**0.1%**	**0.3%**

Source: BofA Global Research, Factset

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Gas Utilities

Like BKH referenced above, OneGas (OGS) has large refinancings in 2024 but the magnitude has declined. For OGS, the reliance on short-term debt is a unique characteristic – in this case adverse with high revolver rates.

BofA Global Research Reports

Title: Subtitle	Primary Author	Date Published
ONE Gas, Inc.: Second cut is the deepest. FY24 -7% YoY with long-term dilution risk too	Julien Dumoulin-Smith	30 November 2023
ONE Gas, Inc.: Refinancing Headwind Renders Long-Term EPS CAGR Even More Back-Loaded	Julien Dumoulin-Smith	25 October 2023

Exhibit 20: Tax adjusted Total Negative/(Positive) impact from refinancing at current yield

SWX is unique with some potential interest rate savings at periods

	2024	2025	2026	2027	2028
ATO	0.00	0.00	0.00	**0.07**	-0.01
NJR	0.03	0.01	0.02	0.01	0.02
SWX	0.04	0.00	**-0.02**	**-0.01**	**0.07**
SR	0.05	0.01	**0.17**	**0.02**	0.01
OGS	**0.39**	0.00	0.00	0.00	0.00
UGI	0.00	0.00	0.03	0.00	**-0.07**
Average	**0.08**	**0.00**	**0.03**	**0.01**	**0.00**

Source: BofA Global Research, Factset

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Exhibit 21: Tax adjusted Total Negative/(Positive) impact from refinancing at current yield - % of Consolidated EPS

OSG has the largest exposure but a large margin

	2024	2025
ATO	0.0%	0.0%
NJR	1.1%	**0.4%**
SWX	1.7%	0.0%
SR	1.1%	**0.3%**
OGS	**9.7%**	0.0%
UGI	0.0%	0.1%
Average	**2.3%**	**0.1%**

Source: BofA Global Research, Factset

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Exhibit 22: Tax adjusted HoldCo Negative/(Positive) impact from refinancing at current yield

ATO has a clean holding company profile until 2027

	2024	2025	2026	2027	2028
ATO	**0.00**	**0.00**	**0.00**	**0.07**	**-0.01**
NJR	0.02	0.00	0.02	0.01	0.01
SWX	0.04	0.00	0.00	0.00	0.00
SR	0.05	0.00	**0.17**	0.02	0.00
OGS	**0.39**	0.00	0.00	0.00	0.00
UGI	0.00	0.00	0.00	0.00	0.00
Average	**0.08**	**0.00**	**0.03**	**0.02**	**0.00**

Source: BofA Global Research, Factset

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Exhibit 23: Tax adjusted HoldCo Negative/(Positive) impact from refinancing at current yield - % of Consolidated EPS

Spire is another company to monitor for rates exposure

	2024	2025
ATO	0.0%	0.0%
NJR	0.6%	0.0%
SWX	1.7%	0.0%
SR	**1.1%**	0.0%
OGS	**9.7%**	0.0%
UGI	0.0%	0.0%
Average	**2.2%**	**0.0%**

Source: BofA Global Research, Factset

BofA GLOBAL RESEARCH

Exhibit 24: Tax adjusted OpCo Negative/(Positive) impact from refinancing at current yield

Operating profile has less exposure for natural gas utilities than electric

	2024	2025	2026	2027	2028
ATO	0.00	0.00	0.00	0.00	0.00
NJR	**0.01**	0.01	0.00	0.00	0.01
SWX	0.00	0.00	**-0.02**	**-0.01**	**0.07**
SR	0.00	**0.01**	0.00	0.00	0.01
OGS	0.00	0.00	0.00	0.00	0.00
UGI	0.00	0.00	**0.03**	0.00	**-0.07**
Average	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Source: BofA Global Research, Factset

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Exhibit 25: Tax adjusted OpCo Negative/(Positive) impact from refinancing at current yield - % of Consolidated EPS

UGI AmeriGas subsidiary is not included in below analysis

	2024	2025
ATO	0.0%	0.0%
NJR	**0.4%**	**0.4%**
SWX	0.0%	0.0%
SR	0.0%	**0.3%**
OGS	0.0%	0.0%
UGI	0.0%	**0.1%**
Average	**0.1%**	**0.1%**

Source: BofA Global Research, Factset

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3. Who's next? More business resets to come

Are we going to see EPS CAGR reductions or rebaselines? Probably more rebase.

Evergy (EVRG) was the latest company to recalibrate and reset its EPS growth target lower to 4-6% from 6-8% with 3Q23 results but we see more companies facing pressures. The full –2pp cut was not necessarily the norm among many we had perceived going into 3Q. Dominion (D) and Algonquin (AGR) have long pending EPS growth rate resets set to be finished in 2024 with Dominion sooner rather than later. Illinois exposed companies Exelon (EXC) and Ameren (AEE).

BofA Global Research Reports

Title: Subtitle	Primary Author	Date Published
Ameren Corporation: Downgrade to Neutral: Lower capital coming post Illinois decision	Julien Dumoulin-Smith	04 January 2024
WEC Energy Group Inc: Downgrade to Underperform: Clouds to low-vol, dependable growth story	Julien Dumoulin-Smith	04 January 2024
Exelon: Illinois Holiday Grinch Before Christmas: Downgrade to Neutral after Rate Case	Paul Zimbardo	15 December 2023

While the earnings growth profiles of many challenged companies have materially improved off the lows, many investors we speak to view the companies that were not reflecting the mark-to-market on interest rates and stock prices more cautiously. These companies that had less transparency could have more structural discounts.

Others awaiting updates into 4Q are likely to take the more modest pathway to reduction via simply resetting lower the baseline for growth. OGS is likely the best recent example to once more roll-forward current year guidance meaningfully below Street expectations (on what should have been otherwise well known/telegraphed interest rate refinancing headwinds). We maintain our Underperform on OGS considering the ongoing challenges to meet even this renewed EPS CAGR. The moderation in interest rates from the mark-to-market levels now positions the company for a better backdrop. In our conversations, many dedicated utility investors, particularly long only investors, have shown less interest in these companies view more as 'macro plays' rather than traditional rate base growth focused vehicles.

Here the key variables to watch once again are: (1) rate base growth [i.e. net income growth in theory] vs EPS growth; (2) refinancing and parent debt issuances; (3) equity needs; and (4) unregulated operations which can be tailwinds or headwinds.

Demand: Back-End Weighted Prospects

Among the key dynamics into '24 remains the question around how to stabilize EPS CAGRs across the utility sector: we suspect much of the integrity in the outlook remains tied to ongoing industrial growth and overall load growth across the utility sector (see theme #6 for more on load growth). As we review 3Q results, we see much of this tied to '26+, enabling 5-year outlooks to remain intact while acknowledging the near-year pressures of 2024 and 2025 resulting principally from elevated interest rates.

Where has consensus already moved?

In the Exhibits below we show the largest EPS and EBITDA revisions from October 2023 through early 2024. The more positive changes are concentrated at the unregulated companies, particularly the IPPs.

Exhibit 26: 2024 EPS or EBITDA Changes 9/30/23 to 1/3/2024

Smaller cap utilities and power companies have had more positive updates

Company	9/30/2023	1/3/2024	% Change
Mdu Res Group	$1.37	$1.54	11.9%
Otter Tail Corp	$4.10	$4.55	10.9%
Capital Power Co	$3.519	$3.813	8.4%
Vistra Corp	$4,206	$4,407	4.8%
Constellation En	$3,981	$4,140	4.0%
Nrg Energy	$3,232	$3,355	3.8%
Hannon Armstrong	$2.30	$2.39	3.8%
Sjw Group	$2.71	$2.76	2.2%
Nextera Energy	$3.33	$3.40	2.1%
Nisource Inc	$1.67	$1.71	2.0%
Can Utilities-A	$2.31	$2.36	1.9%
Altagas Ltd	$2.10	$2.13	1.6%
Hawaiian Elec	$2.18	$2.21	1.1%
Atmos Energy	$6.47	$6.54	1.1%
Idacorp Inc	$5.41	$5.46	1.0%
Cons Edison Inc	$5.24	$5.29	1.0%
New Jersey Res	$2.76	$2.78	0.9%
Aes Corp	$1.88	$1.90	0.9%
Calif Water Srvc	$2.19	$2.21	0.7%
Southwest Gas Ho	$3.07	$3.09	0.6%
Centerpoint Ener	$1.62	$1.63	0.6%
Portland General	$3.04	$3.05	0.5%
Black Hills Corp	$3.85	$3.87	0.5%
Cheniere Energy	$3.77	$3.79	0.4%
Unitil Corp	$2.92	$2.93	0.4%
American Water W	$5.14	$5.16	0.3%
Pg&E Corp	$1.35	$1.35	0.2%
Sempra	$4.79	$4.80	0.2%
Pnm Resources	$2.78	$2.78	-0.2%
Wec Energy Group	$4.92	$4.91	-0.2%
Dte Energy Co	$6.67	$6.65	-0.3%
Southern Co	$4.03	$4.01	-0.4%
Northwest Natura	$2.77	$2.76	-0.5%
Xcel Energy Inc	$3.60	$3.58	-0.5%
Cms Energy Corp	$3.36	$3.34	-0.5%
Edison Intl	$5.14	$5.11	-0.6%
Emera Inc	$3.32	$3.29	-0.8%
Essential Utilit	$2.01	$2.00	-0.8%
Eversource Energ	$4.64	$4.59	-1.2%
Northwestern Ene	$3.58	$3.54	-1.3%
Firstenergy Corp	$2.69	$2.65	-1.5%
Pinnacle West	$4.98	$4.89	-1.9%
Avista Corp	$2.47	$2.42	-2.1%
Ameren Corp	$4.69	$4.59	-2.1%
Evergy Inc	$3.92	$3.84	-2.1%
New Fortress Ene	$2,075	$2,021	-2.6%
Exelon Corp	$2.51	$2.43	-3.0%
Algonquin Power	$0.57	$0.55	-3.5%
Avangrid Inc	$2.36	$2.25	-4.6%
Cheniere Energy	$6,646	$6,338	-4.6%
Ugi Corp	$3.06	$2.86	-6.6%
Dominion Energy	$3.37	$3.14	-6.7%
One Gas Inc	$4.30	$3.87	-10.0%
Clearway Energ-C	$1.48	$1.32	-10.6%
Middlesex Water	$2.66	$2.36	-11.5%
Transalta Corp	$0.63	$0.50	-19.5%
Atlantica Sustai	$0.69	$0.38	-44.0%

Source: Bloomberg

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Exhibit 27: 2025 EPS or EBITDA Changes 9/30/23 to 1/3/2024

The top slots are all power companies followed by LNG and clean energy

Company	9/30/2023	1/3/2024	% Change
Vistra Corp	$4,123	$4,367	5.9%
Nrg Energy	$3,109	$3,279	5.4%
Cheniere Energy	$6,494	$6,837	5.3%
Constellation En	$3,919	$4,105	4.7%
Cheniere Energy	$4.07	$4.26	4.7%
Hannon Armstrong	$2.39	$2.50	4.4%
Southwest Gas Ho	$3.49	$3.64	4.4%
Otter Tail Corp	$3.68	$3.82	3.7%
Hawaiian Elec	$2.25	$2.29	1.8%
Sjw Group	$2.91	$2.95	1.7%
Idacorp Inc	$5.77	$5.85	1.4%
Atmos Energy	$6.92	$6.99	1.0%
Cons Edison Inc	$5.53	$5.59	1.0%
Hydro One Ltd	$2.01	$2.03	0.9%
Nisource Inc	$1.82	$1.83	0.9%
Can Utilities-A	$2.38	$2.40	0.8%
Pub Serv Enterp	$4.06	$4.08	0.6%
Pnm Resources	$2.92	$2.94	0.6%
Centerpoint Ener	$1.73	$1.74	0.6%
Fortis Inc	$3.33	$3.35	0.5%
Avista Corp	$2.58	$2.59	0.4%
Dte Energy Co	$7.15	$7.18	0.4%
Southern Co	$4.31	$4.33	0.3%
American Water W	$5.59	$5.61	0.3%
Black Hills Corp	$4.10	$4.11	0.3%
Entergy Corp	$7.71	$7.73	0.2%
Ppl Corp	$1.82	$1.81	-0.2%
American Electri	$5.98	$5.96	-0.2%
Calif Water Srvc	$2.33	$2.32	-0.3%
Wec Energy Group	$5.26	$5.24	-0.3%
New Jersey Res	$2.95	$2.94	-0.3%
Firstenergy Corp	$2.88	$2.87	-0.4%
Edison Intl	$5.62	$5.60	-0.4%
Nextera Energy	$3.68	$3.66	-0.4%
Northwest Natura	$3.00	$2.98	-0.6%
Ugi Corp	$2.94	$2.92	-0.6%
Pinnacle West	$5.16	$5.12	-0.7%
Portland General	$3.23	$3.20	-1.0%
Aes Corp	$2.09	$2.06	-1.3%
Allete Inc	$4.36	$4.30	-1.4%
Northwestern Ene	$3.76	$3.70	-1.6%
Altagas Ltd	$2.33	$2.29	-1.6%
Essential Utilit	$2.17	$2.14	-1.7%
Spire Inc	$4.63	$4.55	-1.7%
Emera Inc	$3.47	$3.41	-1.8%
Ameren Corp	$5.02	$4.91	-2.1%
Eversource Energ	$4.94	$4.83	-2.1%
Dominion Energy	$3.56	$3.45	-2.9%
Exelon Corp	$2.72	$2.64	-3.0%
Evergy Inc	$4.17	$4.03	-3.4%
Capital Power Co	$3.921	$3.786	-3.4%
Avangrid Inc	$2.53	$2.41	-4.8%
Clearway Energ-C	$1.61	$1.51	-6.0%
Algonquin Power	$0.58	$0.53	-8.7%
One Gas Inc	$4.58	$4.12	-10.0%
New Fortress Ene	$2,387	$2,040	-14.6%
Middlesex Water	$3.01	$2.48	-17.6%
Transalta Corp	$0.41	$0.29	-28.6%
Atlantica Sustai	$0.78	$0.48	-38.7%

Source: Bloomberg

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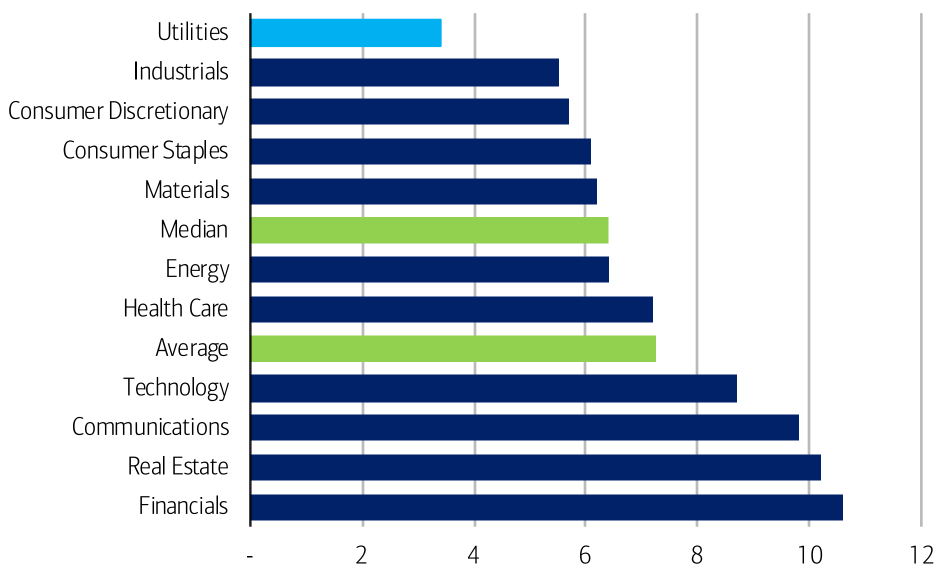
4. Management turnover is more of a risk vs opportunity

The utilities sector has had significant and outsized turnover in recent years, notably 2022, and this will likely continue in 2024 given the recent trend. Per Bloomberg, out of the S&P 500 companies, utilities have the lowest average CEO tenure at 3.4 years versus the 6.5-year S&P 500 median. Our review of the broader utilities universe shows a similar three/four year median/average. The duration for CFOs is even shorter with a two-year median. On average, CEO and CFO tenure each declined by approximately six-to-twelve months over the past year. See our full analysis here: US Utilities & IPPs: Entering 2024 with new utility leaders at the helm. Will a new year bring turnover? 02 January 2024.

Comparing the shortest and longest CEO/CFO tenures

The management teams with the least experience in their specific roles are CenterPoint, NRG Energy, UGI Corp, Talen Energy, American Electric Power, Hannon Armstrong, and Algonquin Power & Utilities – each of which has a new CEO and CFO within the last eighteen months. In contrast there are 16 management teams with a combined decade of experience, led by Middlesex Water and Consolidated Edison. Within this category, Spire Inc and California Water Services had turnover in 2023. Among electric utilities, we will be watching for updates on succession planning for CEOs with over ten years' experience, primarily Duke Energy and AES Corp. We also watch PNM Resources has the longest tenured electric CEO at 14 years, but there is a pending merger. Finally, watch COO position appointments too such as at ES, where AEP's Chodak was recently named. COO appointments been leading indicators consistently of late on transitions in 2023.

Exhibit 28: Average S&P 500 Company Sector CEO Tenure
3.4 year average Utility CEO tenure is well below the 7.3 year average and 6.4 years for Energy CEOs



Source: Bloomberg

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Note that the data below reflects when an executive assumes the role so an internal transfer into a CEO or CFO position 'resets' the clock on tenure. Note that Hydro One announced January 2, 2024 that it will have a CFO transition effective June 30th which is not reflected in the table below.

Exhibit 29: Utility, Power, YieldCo, and LNG Company CEO and CFO Tenure in Position
There is a wide range of experience levels across management teams

Company	Ticker	CEO Tenure	CFO Tenure	Combined	CEO Start	CFO Start	New CEO	New CFO
Centerpoint Energy	CNP US Equity	0.0	0.7	0.7	1/5/2024	5/5/2023	New CEO	New CFO
NRG Energy	NRG US Equity	0.1	0.6	0.7	11/20/2023	6/1/2023	New CEO	New CFO
UGI Corp	UGI US Equity	0.1	0.7	0.8	12/11/2023	4/11/2023	New CEO	New CFO
Talen Energy Cor	TLNE US Equity	0.7	0.5	1.2	4/11/2023	7/10/2023	New CEO	New CFO
American Electric P.	AEP US Equity	1.0	0.3	1.3	1/1/2023	10/2/2023	New CEO	New CFO
Hannon Armstrong	HASI US Equity	0.9	0.9	1.7	3/1/2023	3/1/2023	New CEO	New CFO
Algonquin Power	AQN US Equity	0.4	1.4	1.8	8/10/2023	8/31/2022	New CEO	New CFO
Avangrid Inc	AGR US Equity	1.6	0.2	1.8	5/29/2022	11/1/2023		New CFO
Exelon Corp	EXC US Equity	1.0	1.2	2.2	12/31/2022	10/17/2022	New CEO	New CFO
Hawaiian Elec	HE US Equity	2.0	0.3	2.3	1/1/2022	10/1/2023		New CFO
Entergy Corp	ETR US Equity	1.2	1.2	2.4	11/1/2022	11/1/2022	New CEO	New CFO
One Gas Inc	OGS US Equity	2.5	0.0	2.6	6/28/2021	1/1/2024		New CFO
Nisource Inc	NI US Equity	1.9	0.8	2.7	2/14/2022	3/14/2023		New CFO
Southwest Gas Ho.	SWX US Equity	1.7	1.2	2.9	5/6/2022	11/1/2022		New CFO
Vistra Corp	VST US Equity	1.4	1.4	2.9	8/1/2022	8/1/2022	New CEO	New CFO
Southern Company	SO US Equity	0.6	2.4	3.0	5/24/2023	9/1/2021	New CEO	
American Water W.	AWK US Equity	1.9	1.6	3.6	2/2/2022	5/16/2022		
PG&E Corp	PCG US Equity	3.0	0.7	3.7	1/4/2021	5/4/2023		New CFO
Nextera Energy	NEE US Equity	1.9	1.9	3.7	3/1/2022	3/1/2022		
Nextera Energy P.	NEP US Equity	1.9	1.9	3.7	3/1/2022	3/1/2022		
Northwestern Ene.	NWE US Equity	1.0	2.9	3.9	1/1/2023	2/5/2021	New CEO	
Capital Power Co.	CPX CN Equity	0.7	3.4	4.1	5/8/2023	7/30/2020	New CEO	
FirstEnergy Corp	FE US Equity	0.6	3.6	4.2	6/1/2023	5/24/2020	New CEO	
Eversource Energy	ES US Equity	2.7	1.7	4.4	5/5/2021	5/4/2022		
Dominion Energy	D US Equity	3.3	1.1	4.4	10/1/2020	11/24/2022		New CFO
Constellation En.	CEG US Equity	2.3	2.3	4.5	10/1/2021	10/1/2021		
Can Utilities-A	CU CN Equity	2.5	2.3	4.8	7/1/2021	10/1/2021		
Avista Corp	AVA US Equity	4.3	0.7	4.9	10/1/2019	5/11/2023		New CFO
DTE Energy Co	DTE US Equity	4.5	0.5	5.0	7/1/2019	7/22/2023		New CFO
Altagas Ltd	ALA CN Equity	0.5	4.6	5.1	7/1/2023	6/10/2019	New CEO	
Idacorp Inc	IDA US Equity	3.6	1.9	5.5	6/1/2020	3/1/2022		
Allete Inc	ALE US Equity	3.9	1.6	5.5	2/3/2020	6/17/2022		
WEC Energy Group	WEC US Equity	1.9	3.6	5.5	2/1/2022	6/1/2020		
Hydro One Ltd*	H CN Equity	0.9	4.7	5.6	2/1/2023	5/9/2019	New CEO	
Sempra	SRE US Equity	5.7	0.0	5.7	5/1/2018	1/1/2024		New CFO
Black Hills Corp	BKH US Equity	5.0	0.8	5.8	1/1/2019	4/1/2023		New CFO
Pinnacle West	PNW US Equity	4.2	1.6	5.8	11/15/2019	5/16/2022		
Evergy Inc	EVRG US Equity	3.0	2.9	5.9	1/4/2021	2/22/2021		
Ameren Corp	AEE US Equity	2.0	4.1	6.1	1/1/2022	12/2/2019		
Xcel Energy Inc	XEL US Equity	2.4	3.8	6.2	8/19/2021	3/31/2020		
MDU Res Group	MDU US Equity	0.0	6.3	6.3	1/6/2024	9/30/2017	New CEO	
New Jersey Res	NJR US Equity	4.3	2.0	6.3	10/1/2019	1/1/2022		
Unitil Corp	UTL US Equity	5.7	0.7	6.4	4/25/2018	5/1/2023		New CFO
Portland General	POR US Equity	6.0	0.5	6.5	1/1/2018	6/30/2023		New CFO
Alliant Energy	LNT US Equity	0.0	7.1	7.1	1/1/2024	12/1/2016	New CEO	
Transalta Corp	TA CN Equity	2.8	4.6	7.4	4/1/2021	5/17/2019		
SJW Group	SJW US Equity	6.2	2.0	8.1	11/6/2017	1/26/2022		
PPL Corp	PPL US Equity	3.6	4.5	8.1	6/1/2020	7/1/2019		
Fortis Inc	FTS US Equity	3.0	5.6	8.6	1/1/2021	6/1/2018		
Otter Tail Corp	OTTR US Equity	8.7	0.0	8.8	4/13/2015	1/1/2024		New CFO
Clearway Energ-C	CWEN US Equity	7.7	1.4	9.1	5/6/2016	8/3/2022		New CFO
Pub Serv Enterp.	PEG US Equity	1.4	8.3	9.6	9/1/2022	10/8/2015	New CEO	
CMS Energy Corp	CMS US Equity	3.1	6.7	9.8	12/1/2020	5/1/2017		
MGE Energy Inc	MGEE US Equity	6.9	3.4	10.2	3/1/2017	9/1/2020		
Spire Inc	SR US Equity	0.3	10.3	10.5	10/1/2023	10/1/2013	New CEO	
Northwest Natural	NWN US Equity	5.3	5.3	10.5	10/1/2018	10/1/2018		
Calif Water Srvc	CWT US Equity	10.4	0.6	10.9	9/1/2013	6/7/2023		New CFO
Cheniere Energy	LNG US Equity	7.7	3.4	11.1	5/12/2016	8/1/2020		
Atmos Energy	ATO US Equity	4.3	6.9	11.2	10/1/2019	2/1/2017		
OGE Energy Corp	OGE US Equity	8.6	3.0	11.6	6/1/2015	1/1/2021		
Duke Energy Corp	DUK US Equity	10.6	1.4	12.0	6/1/2013	9/1/2022		New CFO
Emera Inc	EMA CN Equity	5.8	7.9	13.6	3/29/2018	3/1/2016		
Essential Utilities	WTRG US Equity	8.5	5.3	13.8	7/1/2015	10/1/2018		
AES Corp	AES US Equity	12.3	2.2	14.5	9/30/2011	10/15/2021		

Exhibit 29: Utility, Power, YieldCo, and LNG Company CEO and CFO Tenure in Position
There is a wide range of experience levels across management teams

Company	Ticker	CEO Tenure	CFO Tenure	Combined	CEO Start	CFO Start	New CEO	New CFO
Edison Intl	EIX US Equity	7.3	7.3	14.6	9/30/2016	10/1/2016		
PNM Resources	PNM US Equity	13.9	1.6	15.5	3/1/2010	5/21/2022		
Atlantica Sustai.	AY US Equity	7.6	8.0	15.6	6/3/2016	1/11/2016		
Cons Edison Inc	ED US Equity	3.0	18.4	21.4	12/29/2020	9/1/2005		
Middlesex Water	MSEX US Equity	18.0	28.0	46.1	1/1/2006	1/1/1996		
Average		**3.8**	**3.3**	**7.2**				
Median		**2.8**	**1.9**	**5.7**				

Note: Color formatting for combined tenure indicates either highest (green) or lowest tenure (red) details. Color formatting under CEO and CFO start date columns indicates either new CEO or CFO recruitment in 2023 (yellow) or starting in 2024 (gold). * Hydo One CFO transition is scheduled for June 30, 2024
Source: Company Filings, Bloomberg, & BofA Global Research

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5. Bill Pressures: Gas to the Rescue?

If there is a silver lining enabling much of the latest acceleration in spend, it is the consistent march lower in natural gas prices, helping reduce power prices on the margin. **Look for further resets on utility-bills to create further headroom in rates.** We have seen this start to manifest with many double-digit fuel component decreases in 2H23, offsetting some rate cases in particularly. Calendar 2023 natural gas forward were $5/mmbtu or greater from July 2022 through mid-December 2022, the time period when some utilities start to procure for the forward calendar delivery year. In January-June 2023 calendar 2023 natural gas averaged ~$3/mmbtu while calendar 2024 gas was ~$3.50/mmbtu for July 2023 through November 2023. The crash down in calendar 2024 natural gas prices in recent weeks (even with the recovery from $2.55 to $2.90) presents the latest benefit for customers.

In the converse, lower utility bills will be a headwind for residential solar companies as we progress through 2024. At a minimum, the reduction in the energy component should help significantly mitigate expected rate increases and create a more difficult sell for residential solar companies. In California as a critical market, Pacific Gas & Electric (PG&E) rates are set to increase 13-15% to start 2024 before a moderation from the energy component. Into 2025 rates will increase 1-2% before a scheduled decline of -3%. This will be a difficult narrative, despite the improving macro backdrop of lower interest rates reducing the upfront costs.

Exhibit 30: Calendar 2023, 2024, 2025, and 2026 US Natural Gas Forwards ($/mmbtu)
Declining natural gas represents a tailwind for customer bills, helping ease regulatory pressures. Lower commodities hurt residential solar

Source: Bloomberg

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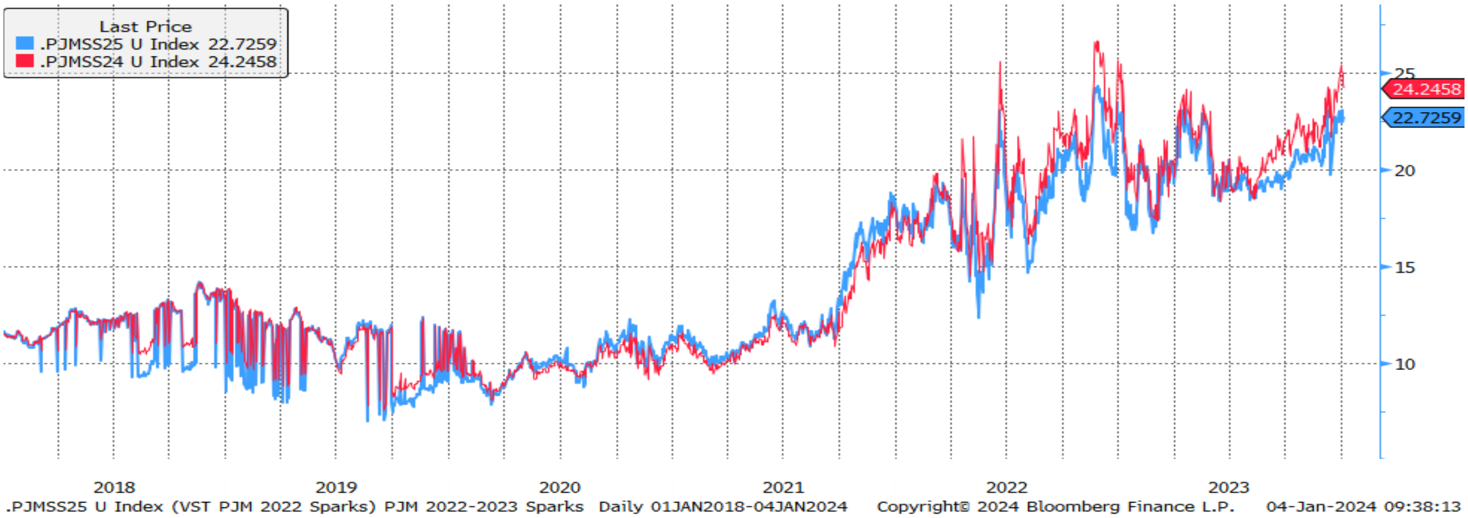
The accelerating backdrop for ratebase could benefit one more time from a drop in gas thru the coming 2-3 year period as legacy contracts priced thru the last few years roll-off. On balance, this is probably the most under-appreciated backdrop yet for 2024 rate cases across the US.

The core question is the disconnect in part between gas prices and power in several markets as tightness has resulted in market heat rate expansion across many geographies. We expect this bifurcation between gas prices and power to prove protracted as clear scarcity dynamics will only further evidence themselves in power prices –PJM & elsewhere. See full charts below.

Exhibit 31: PJM 2024 and 2025 Spark Spreads – Natural Gas plant profitability continuing to show strength $/MWh

Natural gas plant profitability has more than doubled from 2018-2020 levels



Source: Company Filings, Bloomberg, & BofA Global Research

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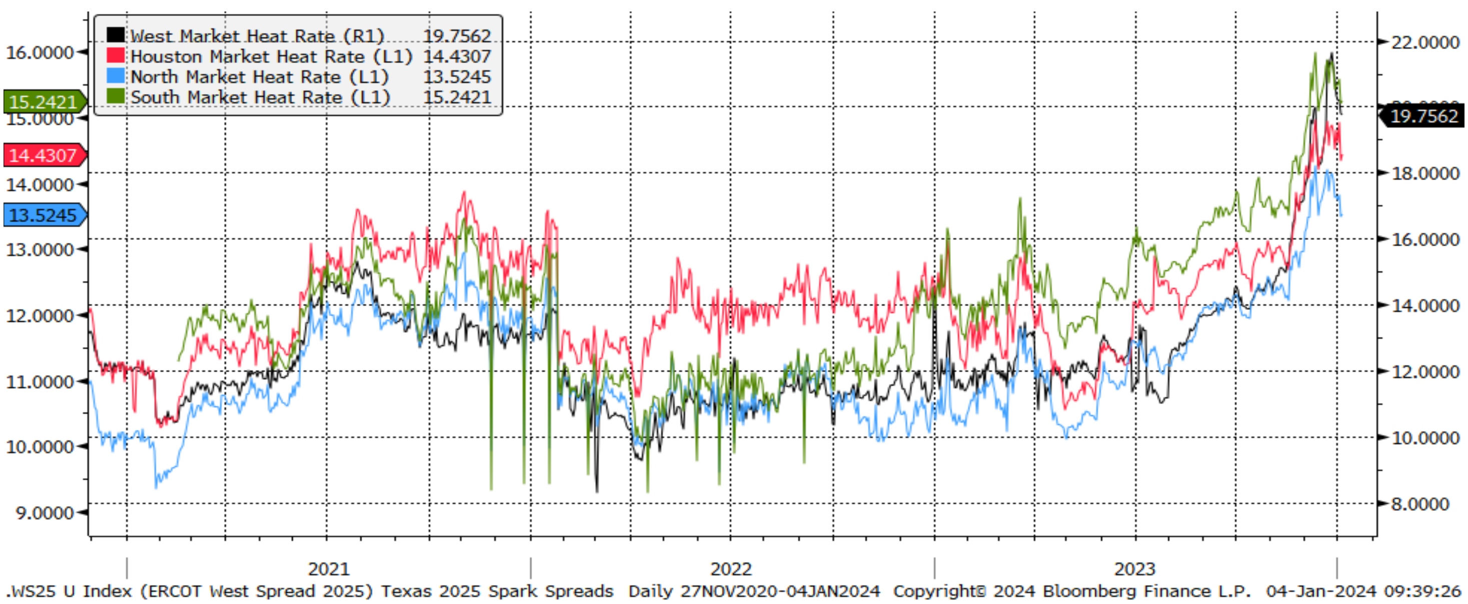
Exhibit 32: 2025 Texas Market Heat Rates by Region

The market heat rates have all surged in 2023 and increased merchant power plant profitability as a result. Heat rates are higher in Texas due to reforms that enable greater scarcity pricing thru implementation of new reserve market: principal driver in '23 of this step-function higher and likely to remain into the future.



Source: Company Filings, Bloomberg, & BofA Global Research

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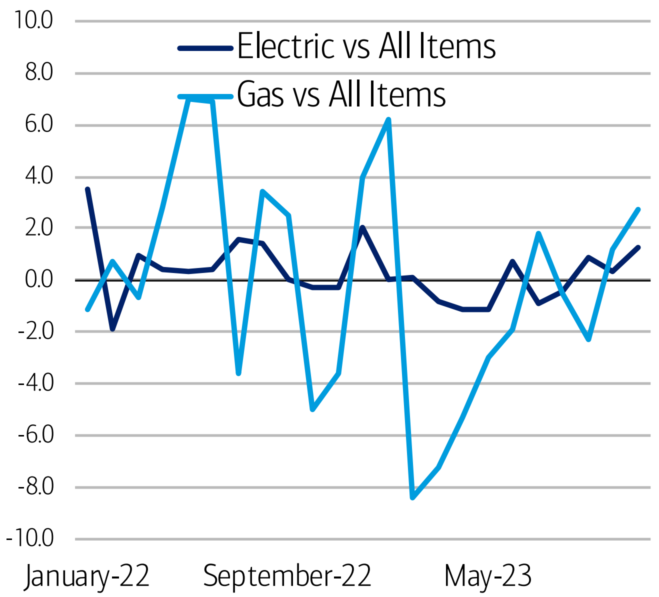
The accelerating backdrop for ratebase could benefit one more time from a drop in gas through the coming two-three year period as legacy contracts priced thru the last few years roll-off. On balance, this is probably the most under-appreciated backdrop yet for 2024 rate cases across the US.

Exhibit 33: Electric and Gas CPI vs All Items January 2022-Current

Natural gas has been far more volatile than electric



Source: Bureau of Labor Statistics. * CPI: Consumer Price Index

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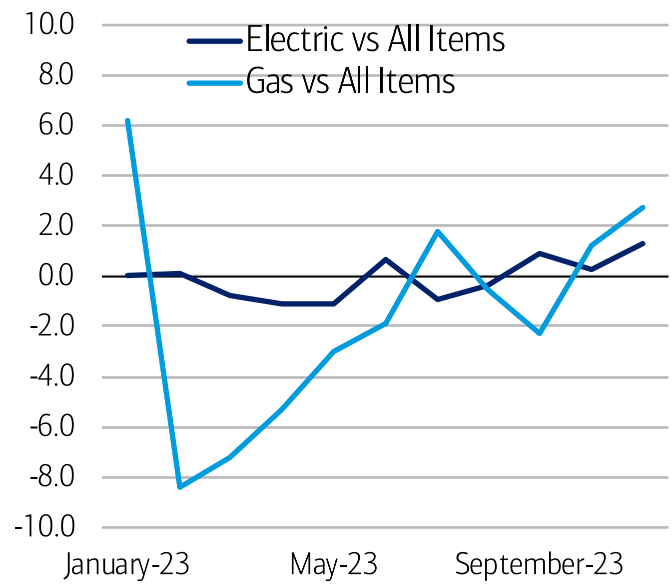
Exhibit 34: Electric and Gas CPI vs All Items January 2023-Current

Electricity has contributed to inflation in recent months



Source: Bureau of Labor Statistics. * CPI: Consumer Price Index

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6. Data Centers take 'Center Stage': Primetime for a New Paradigm

In December, PJM Interconnection's annual preliminary electric load forecast update indicated a pivot to positive electric load growth, with the Mid-Atlantic grid expected to grow at a 1.6% CAGR over 15 years versus the prior 0.8% forecast. This acceleration from virtually no load growth ex-Dominion largely reflects higher usage associated with electrification and increasing commercial load growth from data centers and bitcoin/crypto-related customers. Other regions also show indications of a nascent data center build narrative supporting growth. Several SMID-cap utilities in midwestern and southwestern service territories with lower power costs and abundant land, including Black Hills (BKH) and OGE among others, have championed in-migration of data center and other large commercial customers as significant support to their long-term load growth projections.

Data center growth is viewed by most investors as an unmitigated positive for regulated utilities but the nuances are growing. Generally speaking, data center load is lower on the spectrum of importance for a regulated utility, given that margin on sales is typically pretty low and these assets in particular do not support in-migration or heightened economic activity in the same way that large manufacturing facilities with similar margin profiles do. Further, stakeholders are increasingly pushing back on new data centers due to concerns around subsidization, environmental impact, and the associated need for incremental transmission capacity where constraints may already exist. For investors, we see growing debate over how much value to ascribe to data center related demand given their de minimis margin.

BofA Global Research Reports

Title: Subtitle	Primary Author	Date Published
US Utilities & Clean Tech: ERCOT: A tale of moderating demand and material solar delays	Julien Dumoulin-Smith	19 December 2023
US Utilities & IPPs: Load Growth in PJM: Is it real? Yes, but overwhelmingly data centers	Julien Dumoulin-Smith	11 December 2023

Industrial Demand: Margins vs MWs – Proving out an ability to own the gen

A core emerging debate in the sector is just 'how much' is industrial sector growth worth to Utilities? Given the muted ancillary load growth from traditional manufacturing load growth from data-driven growth, we perceive a 'pure' industrial expansion is likely limited in terms of real value add to the utilities in direct margin.

Rather the core question for many utilities will be just how much of this industrial demand will be 'ownable' either via bilateral contracts or otherwise enabled in further rate base generation.

Even in this scenario – a tension appears clear – are ratepayers subsidizing the new data-driven class of customers? Minimal or modest margin contributions will be a key question to ask in tariff construction as this segment grows. Watch for this tension to breakout more explicitly, particularly as challenged reserve margins drive higher capacity/reliability values nationally.

7. IRA repeal risk an election year trades

We keep this critical theme relatively short because it is far reaching yet nuanced. Aside from the probability of a change in administration, there are many layers to the union to peel of possible impacts. Beyond select highly impacted names, it remains to be seen how much this potential uncertainty will be an overhang for the broader regulated utilities coverage universe. For example, tax transferability is a critical element of several regulated utilities financing plans. This can be offset or financed in other ways but it represents an uncertainty. A second example is that some utility generation plans are intertwined and dependent on large load from electric vehicle, battery, and other clean technology manufacturing subsidies. There are many more examples that could unfold throughout 2024 and are important to understand, even if not actionable in January 2024.

Former President Trump has stated that on the first day of his administration if re-elected he would repeal the "Green New Deal atrocities" or the "Green New Hoax". Digging beneath the headlines, Trump's energy policy is titled "America Must Have the #1 Lowest Cost Energy and Electricity on Earth" with relevant elements including:

- **Positive pipelines and transmission:** Accelerated approval of natural gas pipelines, focused on the Northeast US, as well as an overall goal to reduce regulatory approvals for energy developments.

- **Negative wind:** Stop "insane wind subsidies" and described wind as "the most expensive energy there is". We believe that offshore wind in particular is the most at risk as it has amongst the largest subsidies. Developers such as Eversource have expressed the importance of receiving incremental 10pp bonus investment tax credits (ITCs) in the future which would be a risk in a new administration.

- **Positive nuclear:** Favorable nuclear view overall and retaining the existing nuclear fleet. A desire to support new small modular reactors (SMR) as well as domestic nuclear fuel supply chain, specifically mining uranium.

Trump has made notably fewer comments regarding solar energy although has frequently made critical statements of the reliance on the US reliance on the Chinese supply chain which is critical for solar.

To the extent that the various Biden administration agencies do not complete work on carbon emissions (actual emission limitations and disclosures), hydrogen, electric vehicle, and other policy objectives, there is a risk that a Republican administration can stop or overturn many elements.

For 2024, we are specifically focused on completion of subsidy programs, particularly those enabled via Department of Energy (DOE). Watch for real progress on preliminary awards in early 2024, likely an outsized pace relative to paucity of datapoints in 2023. We perceive conditional loan approvals need to be established prior to the end of calendar year 2024.

Related we see rules as necessary to be promulgated by IRS for IRA by July in order to avoid review under Congressional Review Act under a potentially new administration in 2025.

IRA promised more ratebase generation but has yet to deliver.
What is notable to us is just how short-changed utilities have been in 'winning' a greater share of renewable RFPs. Perhaps it's still too preliminary, but we have yet to see ownership opportunities appear fruitful more than year after IRA passage. This was slated nominally to improve the competitive positioning of ratebase ownership when comparing the levelized cost of energy (LCOE) of Purchased Power Agreements (PPAs) from third parties against ratebase. Watch ahead still, but the early datapoints do not suggest '24 is the pivotal year.

Who to watch on this front?

SO: We had thought Georgia Power would see a sharp swing towards owned opportunities. In contrast, our latest feedback suggests that solar could remain a more independently invested asset class thru third-party contracts.

PNW: Generation opportunities have remained front and center in recent weeks.

Renewable procurement delays – could push Utilities to win?
Given the quantity of renewable project delays – for a whole variety of reasons – we see merits to concerns raised by regulators over the credibility of independent project developers. Regulators have focused with growing concern on delays in capacity in-service (principally renewables but other asset classes as well). We perceive a window for regulated utilities to re-enter the equation to leverage their execution credibility to enable greater ratebase ownership.

It has been said more than once, further delays accrue to the benefit of incumbents, rather than third-party competition.

Bottom line, we ask ourselves who is really in a good place to own generation? Being able to transpose industrial sales into rate base generation growth is not a given. We look for greater 'line of sight' on those who are able to truly garner line of sight on this growth opportunity in 2024. A multitude of requests for proposal RFPs are pending issuance.

8. Offshore Wind: Large-Project Morass Pivots to Construction Mode

We have been cautious on offshore wind-oriented equities Eversource, Avangrid, and Dominion Energy for a variety of reasons but 2024 will be a key construction year. Avangrid has substantially completed its Vineyard Wind project with first electricity delivered in early January 2024 after modest delays. Eversource's smaller Southfork wind project has faced longer delays but generally has been able to surpass the low bar in terms of timeline and capex without providing cost guidance for the specific project.

While Avangrid's large project has been intact, the focus will shift to construction for Eversource's large two projects, Revolution and Sunrise – assuming it is not cancelled, and Dominion's ~$10Bn project. Dominion's $10Bn Coastal Virginia Offshore Wind (CVOW) is the largest utility project to our knowledge, now that Georgia Power's Vogtle Unit 3 is online and Unit 4 is approaching the end of its extended construction cycle.

Dominion was targeting commencing onshore/offshore construction in late 2023/early 2024. The construction efforts will be critical tests for both Eversource and Dominion. Dominion guided to a $69Mn pre-tax charge in November 2023 (4Q23 earnings) for its offshore wind project which has been described as on budget. Separately, the offshore wind vessel construction Charybdis last had a late 2024/early 2025 completion date target and did not face any additional total project cost overruns from the $625Mn level with 3Q23. There is a margin of safety on the boat delivery time to support Dominion's construction timeline and we are not overly worried here; however, the original delays were a major factor in Orsted cancelling its New Jersey projects, so this is not a risk to ignore.

Waiting for the sales: details will matter

As of January 7th, neither Dominion nor Eversource has announced the monetization of their offshore wind assets as part of the respective business and strategic reviews. Dominion guided to a decision on a noncontrolling stake sale by YE23 or early 2024. Eversource has delayed its process and the last communication was that a transaction announcement by December 31st, 2023 "would be ideal".

Beyond just the pricing, we will be closely watching for terms and risk sharing on both. The successful sale of ~50% of CVOW will be important for Dominion in preventing a further tightening of the credit metric downgrade requirements higher based on our rating agency conversations.

We see Vineyard wind as notable considering the project just reached COD. This project was always well ahead of peers and avoided much of the most sizable inflation crunch that peer projects were caught in.

Table 1: Offshore Projects underway today: US-wide status report

See multiples projects with challenges; Empire Wind 2, Southcast, and park City wind all saw contracts terminated.

Project Name	Lease Number	Lessee / Parent Company	Capacity	Owner / Developer	Offtaker	Status / Public comment	Project Location	Estimated COD
Block Island Wind Farm	State lease	Deepwater Wind New England LLC / Orsted North America Inc.	30	Orsted	na	Operational	RI	2016
Garden State Offshore Energy	OCS-A 0482	GSOE LLC / Orsted North America Inc. & PSEG	1,000	Orsted; PSEG	na	SAP Approved	DE	na
Coastal Virginia Offshore Wind - Commercial	OCS-A 0483	Virginia Electric and Power Company	2,640	Dominion	Dominion	Environmental Review and Permitting Complete	VA	2026
Revolution Wind	OCS-A 0486	Revolution Wind LLC / Orsted North America Inc. & Eversource	704	Orsted; Eversource	Eversource, UIL	Environmental Review and Permitting Complete	MA, RI	2024
Sunrise Wind	OCS-A 0487	Sunrise Wind LLC / Orsted North America Inc. & Eversource	924	Orsted; Eversource	New York Utilities	BOEM FEIS	MA, RI	2025
Maryland Offshore Wind	OCS-A 0490	US Wind Inc	1,100	US Wind	EXC	BOEM DEIS / Nov 20, 2023	MD	2024/2026
Coastal Virginia Offshore Wind - Pilot	OCS-A 0497	Virginia Department of Energy	12	**Exhibit 35: Offshore Wind Project Details** Empire wind 2, SouthCoast wind, Park City wind terminated off taker contract recently	Dominion	Operational since fall 2020	VA	2020
Ocean Wind 1	OCS-A 0498	Ocean Wind LLC / Orsted North America Inc. & PSEG	1,100	Orsted	PSEG, JCP&L, ACE, Rockland Electric Coop	Orsted Ceased Development	NJ	2025
Atlantic Shores Offshore Wind Project 1	OCS-A 0499	Atlantic Shores Offshore Wind Projects 1 & 2 LLCs / Shell New Energies US LLC & EDF Renewables North America	1,500	Shell; EDF	PSEG, JCP&L, ACE, Rockland Electric Coop	BOEM DEIS	NJ	2027
Atlantic Shores Offshore Wind Project 2	OCS-A 0499	Atlantic Shores Offshore Wind Projects 1 & 2 LLCs / Shell		Shell; EDF	na	BOEM DEIS	NJ	na

Table 1: Offshore Projects underway today: US-wide status report
See multiples projects with challenges; Empire Wind 2, Southcast, and park City wind all saw contracts terminated.

Project Name	Lease Number	Lessee / Parent Company	Capacity	Owner / Developer	Offtaker	Status / Public comment	Project Location	Estimated COD
Bay State Wind	OCS-A 0500	New Energies US LLC & EDF Renewables North America Bay State Wind LLC / Orsted North America Inc. & Eversource	2,000	Orsted	na	COP Submitted	MA	2028
Vineyard Wind 1	OCS-A 0501	Vineyard Wind 1 LLC / Avangrid Renewables LLC & Copenhagen Infrastructure Partners	800	AGR; CIP	NG, ES, Unitil	Environmental Review and Permitting Complete	MA	2024
Kitty Hawk	OCS-A 0508	Avangrid Renewables LLC	2,500	AGR	na	BOEM NOI	NC	2027
Empire Wind 1 and Empire Wind 2	**OCS-A 0512**	**Empire Offshore Wind LLC / Equinor Wind US & BP**	**2,076**	**Equinor; BP**	**terminated off take agreement with New York state from Empire Wind 2 farm**	**Environmental Review and Permitting Complete**	**NY**	**2026/2027**
South Fork Wind Farm	OCS-A 0517	South Fork Wind LLC / Orsted North America Inc. & Eversource	132	Orsted; Eversource	Long Island Power Authority	Environmental Review and Permitting Complete	MA, RI	2023/2024
Skipjack Wind 1	OCS-A 0519	Skipjack Offshore Energy LLC / Orsted North America Inc.	966	Orsted	EXC	COP Submitted	DE	2026
Beacon Wind	OCS-A 0520	Beacon Wind LLC / Equinor Wind US & BP	1,230	Equinor; BP	New York Utilities	BOEM NOI	MA	2028
SouthCoast Wind	**OCS-A 0521**	**SouthCoast Wind Energy LLC / Ocean Winds & Shell**	**1,204**	**Ocean Winds; Shell**	**terminated off take agreement with NG, ES, Unitil**	**BOEM DEIS**	**MA**	**2025**
Vineyard Northeast	OCS-A 0522	Vineyard Northeast LLC	1,607	CIP	na	SAP Approved	MA	na
Ocean Wind 2	OCS-A 0532	Orsted North America Inc	1,148	Orsted	PSEG, JCP&L, ACE, Rockland Electric Coop	Orsted Ceased Development	NJ	2029
New England Wind (Phase 1: Park City Wind; Phase 2: Commonwealth Wind)	**OCS-A 0534**	**Park City Wind LLC**	**2,032**	**AGR**	**Cancelled offtaker contract for Park City Wind**	**BOEM DEIS**	**MA**	**na**
Bluepoint Wind	OCS-A 0537	Bluepoint Wind LLC	1,700	EDPR; Engie; GIP	na	Provisional Auction Winner	NY, NJ	2028
Attentive Energy One	OCS-A 0538	Attentive Energy LLC	1,404	Total Energies; Rise Light & Power; Corio Generation	na	Provisional Auction Winner	NY, NJ	2029
Community Offshore Wind	OCS-A 0539	Community Offshore Wind LLC	1,314	RWE; NG	na	Provisional Auction Winner	NY, NJ	2030
Atlantic Offshore Wind	OCS-A 0541	Atlantic Shores Offshore Wind Bight LLC	1,510	Shell; EDF	na	Provisional Auction Winner	NY, NJ	2027
Leading Light Wind (Invenergy Wind)	OCS-A 0542	Invenergy Wind Offshore LLC	2,400	Invenergy and EnergyRe	na	Provisional Auction Winner	NY, NJ	2031+
Excelsior Wind (Vineyard Mid-Atlantic, LLC)	OCS-A 0544	Vineyard Mid-Atlantic LLC	1,314	CIP	na	Provisional Auction Winner	NY, NJ	2030
TotalEnergies Carolina Long Bay, LLC	OCS-A 0545	TotalEnergies Renewables USA LLC	1,000	Total Energies	na	Provisional Auction Winner	NC	2030
Cinergy Corp	OCS-A 0546	Duke Energy Renewables Wind LLC	670	DUK	na	Provisional Auction Winner	NC	na
Atlantic Shores North	OCS-A 0549	Atlantic Shores Offshore Wind, LLC	na	Shell; EDF	na			

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Source: BOEM, BofA Global Research

9. Asset Sales and Consolidation? Not as clear…

There have been two clear trends in recent years around asset sales: divestment of non-utility assets and divestment of Gas LDC assets/smaller entities that are investable by financial sponsors (vs strategics). There was a flurry of simplification and asset sales in 2021-2022 but that trend has largely concluded. There are still some simplifications pending such as Algonquin but we believe most management teams are comfortable with their businesses mixes.

We do not see any meaningful divestment of non-utility assets remaining. The sector has largely 'cleaned itself up' in a meaningful way in recent years as there is a smaller opportunity set today.

Yes, we have the announced spin-offs from both MDU and SWX coming this year, but both do not necessarily involve (meaningful) equity raises. This is simply part of the 'cleaning up' process but doesn't resolve underlying balance sheet considerations.

Who to watch in 2024?

- **Algonquin Power & Utilities (AQN)**: Algonquin replaced its CEO and announced a strategic review of its renewables business in 2H23 with indications of interest targeted for 1Q24. Due to the specific facts of AQN's portfolio which relies on renewable energy certificates (RECs) and financial hedges rather than long-term PPAs, we do not see as many readthroughs to the sector broadly from a potential transaction. A sale will pressure the payout ratio again, despite AQN's dividend cut.

- **PG&E:** Pacific Generation (PacGen) **regulated** sale remains a key item to ensure they execute on their proposed de-leveraging. While regulated assets in a structure that purportedly stand-alone from fire risk and acutely needed given the power capacity shortages in the state makes the sell down of non-nuclear assets a particularly appealing pathway. Recall PG&E is pursuing this strategy principally in reaction to not having a more 'utility-like' current to raise traditional equity.

  In a similar vein, watch PG&E evaluate asset sales beyond PacGen anew. What this set of assets is, remains opaque to us and the Street. This appears to be a key avenue to watch

- **Offshore wind remains the niche space to watch.** Dominion's proposed selldown of a stake in its offshore wind biz appears particularly tilted in response to growing concerns from rating agencies (to raise the downgrade threshold) rather than necessarily indicating a dis-satisfaction with the asset class. Yes, development risks pervade in this asset class, but it's not clear just what 'buy-in' multiple any prospective investors would receive when firm cost caps already exist under its agreement with the Virginia State Corporation Commission (SCC).

- **ES' selldown in offshore remains in motion too.** This could take several directions still – but key to any of these avenues remains the fate of offshore wind repricing in New York in January-February 2024. Given the disclosed bids already from the repricing process *and* the sunk costs already into these projects, we expect that bids will be below the rebid disclosures but the question is how much *lower* in order to ensure projects move forward. This is a difficult backdrop and we are curious to see how tightly New York (among other New England state) pursue procurement anew at these elevated prices.

More transmission asset sales though possible.

If there's been any single trend in Utility M&A, it's been the decision to sell-down smaller subsidiaries (such as AEP's JVs across myriad markets nationally) or a stake in existing larger transmission assets. The muted regulatory risk of operating and investing in transmission assets coupled with the ability to get ready approvals and in theory sizable prospective growth makes this an appealing asset class. We see the stake sell-downs by FirstEnergy as a model to be replicated elsewhere for those in defense.

In terms of asset stakes, we still see DUK among others as evaluating a sell-down beyond 20% in its subsidiaries rather than raising equity, as the company has done in the past. On balance, we see this as less of a strategic priority considering the tax ramifications of selling more than 20%.

But what about large scale? There is always a surprise

- **Allete:** We flag December '23 media reports that noted the company was evaluating strategic alternatives. We see this as aligning with the dramatically higher organic development prospects that have materialized for the company inclusive of a ~1/3rd stake in a $3.3Bn transmission project from Montana. Bottom line, this high growth company would have materially higher equity needs into the future driving the renewed strategic thinking. We see this as a consistent driver of evaluating strategic alternatives.

- **PNM-AGR:** 2024 began with a 'bang' as Avangrid *terminated* the merger which was announced in October 2020 during the depths of covid. If and how PNM pursues strategic alternatives remains to be seen but the company has emphasized that it is shareholder friendly and sees merits to consolidation/scale. PNM is unique as one of the few small pure-play cap electric only companies along with Portland General Electric (POR). Related PNM recently sold its jointly co-invested transmission joint venture with AEP. Expect further smaller ventures to be sold down as bite-sized entities by utilities across the sector.

Dominion needs to secure regulatory approval for its pending divestiture of the natural gas local distribution companies (LDCs) to Enbridge (ENB – Not Covered). Here Dominion and Enbridge have not offered any compensation to ratepayers in their original applications. For Dominion-Enbridge we will be watching Ohio in particular given the request for request for an accelerated regulatory approval and the historical pension income reported at this subsidiary. See background here: PowerPoints: D Latest + M&A 09 November 2023

2023 had two nuclear acquisitions announced after years with zero activity. Constellation Energy (CEG) has consistently stated that a priority is consolidation of the merchant nuclear sector and there are only a handful of unregulated units not owned by CEG or VST. These belong to Dominion, Talen Energy, NextEra Energy, and PEG Power.

10. Will Balance Sheets be Defended? We think so.

It is hard to underscore enough how challenged the utility sector balance sheets are on a June TTM basis relative to targets. Cautiously, we note only 9 out of 29 Utility corporates rated by S&P are meeting their minimum metrics as of the EEI conference in November. Even large-cap companies such as NEE remain well below their prescribed thresholds; they are not isolated however. While we appreciate fuel recoveries are a non-trivial factor that should continue to abate, we are not necessarily convinced. Many investors we speak to have become somewhat complacent here due to declining interest rates and natural gas prices as positive factors; however, there are still clear equity needs.

A Big Equity Year Ahead: How Quickly Will it Come?

Corresponding to the large discrepancy in balance sheet metrics, we perceive a particularly robust year of equity needs. We had calculated going into the EEI conference needs totaling in the mid-teens $ Bns, albeit with some big uncertainties on asset sales contemplated above and beyond this level. At EEI, Moody's estimated that sector equity needs might amount to ~$25Bn: this includes Dominion's announced $10Bn+ asset sales as a critical aspect that reduces comparability.

The improvement in equity prices off the lows should make companies more comfortable to issue equity, or at least less resistant. We saw some equity come in 4Q23 after third quarter earnings and we would anticipate a more normalized cadence in

2024. Some companies opted to let their balance sheet and credit metrics erode in 2023 (ie Eversource) and others will see pressures in 2024 (ie Exelon) so there is never one true ‘theme’ on credit metrics. What is clear is that companies have fewer levers to pull via asset sales and non-core divestitures to help offset a steady deterioration of credit metrics across the utilities landscape. Pressure could be particularly acute on SMID-cap names with significant capital investment programs ahead of them such as Portland General (POR) and PNM Resources (PNM), which each forecast double-digit rate base CAGR through mid-decade but could require incremental equity beyond that implied in their capital planning forecasts.

Below we include table on historical and our estimated equity issuance details for our covered utility universe. We also highlight historical equity issuance as a % respective historical market cap and cumulative ’23-’25 equity issuance as a percentage of current market cap.

The companies with the most exposure are ES, AEE, XEL, NEE, PNW, NI, AEP, ETR, POR, PNM, BKH SR, and OGS in the Gas segment.

Exhibit 36: Utility Equity Issuance – Historical and Estimated

Aggregate basis: more issuance from premium names and more issuance in outer years for electric names; notables are ES, AEE, XEL, NEE, PNW, NI, AEP, ETR, POR, PNM, BKH, OGS, SWX NEE, ES, AEE, XEL, AEP, NI, PNW, D, ETR, POR, SR, OGS

Ticker	2016A	2017A	2018A	2019A	2020A	2021A	2022A	2023E	2024E	2025E	Cumulative '23-'25 Equity % of current Market Cap
LNT	$27	$150	$197	$390	$247	$28	$25	**$250**	**$197**	**$125**	**4.3%**
AEE	($9)	($11)	$60	$68	$476	$308	$333	**$400**	**$600**	**$600**	**8.2%**
AGR	$0	$0	$0	$0	$0	$3,998	($1)	$0	$500	$0	3.8%
CMS	$72	$83	$41	$12	$253	$250	$69	**$508**	$20	$350	5.1%
CNP	$0	$0	$3,584	$0	$1,395	$0	$0	$0	$0	$0	0.0%
DTE	$654	$0	$0	$2,288	$2	$0	$1,300	$100	$100	$100	1.3%
ES	$0	$0	$0	$852	$929	$0	$197	**$520**	**$1,270**	**$520**	**10.7%**
NEE	$537	$603	$718	$1,494	$0	$14	$1,460	**$2,000**	**$2,000**	**$2,500**	**5.1%**
WEC	$0	$0	$0	$0	$0	$0	$0	$0	$125	$475	2.2%
XEL	$0	$0	$230	$458	$727	$366	$322	$150	**$500**	**$1,218**	**5.3%**
Total Premium	**$1,281**	**$825**	**$4,830**	**$5,563**	**$4,029**	**$4,964**	**$3,705**	**$3,928**	**$5,312**	**$5,888**	**4.8%**
% of Market Cap	**0.7%**	**0.4%**	**2.0%**	**1.8%**	**1.2%**	**1.2%**	**1.0%**	**1.2%**	**1.7%**	**1.9%**	
AEP	$34	$12	$74	$65	$155	$601	$827	**$950**	**$600**	**$700**	**5.1%**
ED	$702	$343	$705	$825	$640	$775	$0	**($1,000)**	$50	$100	-2.6%
D	$3,124	$1,320	$2,465	$6,966	$159	$934	$1,866	$97	$168	$1,000	3.1%
DUK	$731	$0	$1,838	$2,346	$2,745	$5	$9	$0	$0	$250	0.3%
EIX	$294	$462	$0	$2,391	$912	$2,009	$13	$100	$100	$250	1.6%
ETR	$33	$81	$603	$735	$43	$207	$885	**$160**	**$160**	**$700**	**4.6%**
EVRG	$2	$0	$0	$0	$0	$113	$0	$0	$0	$0	0.0%
EXC	$0	$1,150	$0	$0	$0	$0	$0	$142	$142	$342	1.7%
FE	$0	$0	$2,466	$0	$0	$1,000	$0	$100	$100	$100	1.4%
NI	$23	$337	$1,728	$244	$211	$1,140	$154	$0	**$862**	**$300**	**9.6%**
OGE	$0	($0)	($0)	($10)	($7)	($3)	($1)	$0	$0	$0	0.0%
PCG	$822	$395	$200	$85	$8,886	$0	$0	$0	$0	$0	0.0%
PNW	$0	$0	$0	$1	$0	$0	$0	$25	**$500**	**$375**	**10.7%**
PPL	$144	$453	$698	$1,167	$34	$9	$0	$0	$0	$0	0.0%
PEG	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
SRE	$51	$47	$4,530	$1,830	$902	$5	$4	$100	$100	$100	0.6%
SO **(previously)**	$3,758	$1,043	$1,090	$844	$74	$73	$1,510	$0	$200	$400	0.8%
Total Value	**$9,719**	**$5,643**	**$16,396**	**$17,489**	**$14,754**	**$6,866**	**$5,266**	**$674**	**$2,982**	**$4,617**	**1.5%**
% of Market Cap	**2.3%**	**1.3%**	**3.7%**	**3.2%**	**2.9%**	**1.2%**	**0.9%**	**0.1%**	**0.5%**	**0.8%**	
ALE	$31	$86	$20	$2	$18	$70	$240	$20	$70	$195	8.0%
AVA	$67	$56	$1	$65	$72	$90	$138	$120	$60	$60	8.6%
BKH	$122	$4	$301	$101	$99	$119	$90	**$160**	**$165**	**$95**	**11.2%**
HE	$13	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
IDA	$0	$0	$0	$0	$0	$0	$0	$0	**$225**	**$149**	**7.5%**
MDU	$0	$0	($0)	$107	$3	$88	($0)	$44	$44	$44	3.3%
MGEE	$0	$0	$0	$0	$80	$0	$0	$0	$0	$0	0.0%
NWE	$0	$55	$47	$1	($1)	$197	$278	$1	$1	$1	0.1%
PNM	$0	$0	$0	$0	$283	$0	$0	**$200**	**$100**	**$100**	**11.9%**
POR	$0	$0	$0	$0	$0	$0	$0	**$499**	**$229**	**$306**	**23.2%**
Total SMID	**$233**	**$202**	**$369**	**$276**	**$554**	**$564**	**$745**	**$1,044**	**$894**	**$949**	**8.4%**
% of Market Cap	**0.7%**	**0.6%**	**1.0%**	**0.6%**	**1.5%**	**1.3%**	**1.8%**	**3.0%**	**2.6%**	**2.8%**	
Total Electric	**$11,232**	**$6,669**	**$21,595**	**$23,327**	**$19,337**	**$12,394**	**$9,717**	**$5,646**	**$9,188**	**$11,454**	**2.9%**
% of Market Cap	**1.8%**	**1.0%**	**3.0%**	**2.6%**	**2.2%**	**1.2%**	**1.0%**	**0.6%**	**1.0%**	**1.3%**	
ATO	$99	$99	$395	$694	$624	$607	$777	$15	$0	$0	0.1%
SR	$137	$147	$155	$262	$41	$1	$52	$42	**$535**	**$25**	**18.0%**
NJR	$16	$17	$59	$74	$231	$15	$15	$18	$18	$18	1.2%
OGS	$4	$4	$5	$5	$19	$27	$134	**$237**	**$271**	**($4)**	**14.2%**
SWX	$0	$41	$354	$158	$139	$214	$462	**$254**	$50	$50	7.8%
UGI	$14	$11	$35	$17	$2	$232	$19	$0	$0	$0	0.0%
Total Gas	**$270**	**$320**	**$1,003**	**$1,210**	**$1,057**	**$1,095**	**$1,458**	**$566**	**$875**	**$89**	**3.9%**
% of Market Cap	**0.9%**	**1.0%**	**2.8%**	**3.0%**	**3.1%**	**2.8%**	**3.6%**	**1.5%**	**2.3%**	**0.2%**	
Total Utilities	**$11,502**	**$6,988**	**$22,598**	**$24,537**	**$20,394**	**$13,489**	**$11,175**	**$6,212**	**$10,062**	**$11,543**	**2.9%**
% of Market Cap	**1.7%**	**1.0%**	**3.0%**	**2.6%**	**2.2%**	**1.3%**	**1.1%**	**0.7%**	**1.1%**	**1.2%**	

Source: Company Filings, Bloomberg, & BofA Global Research

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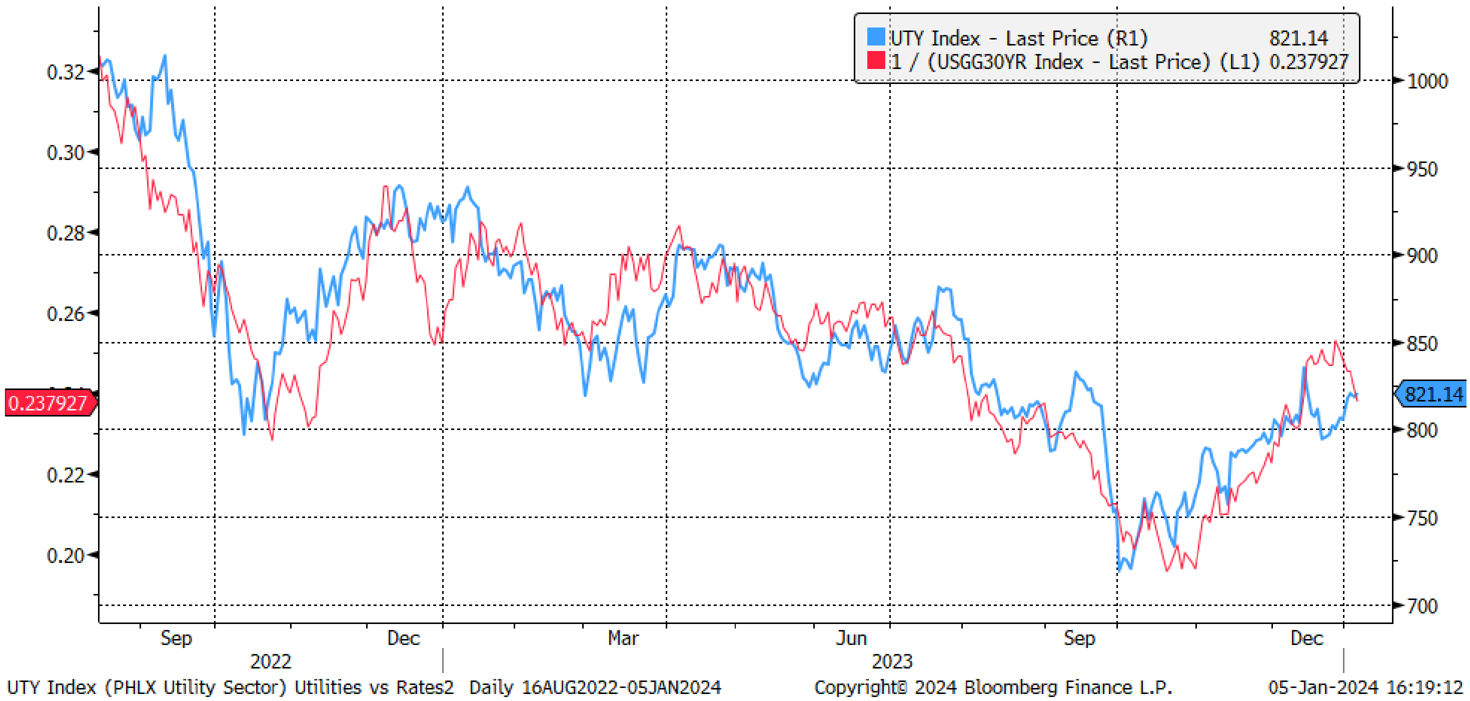
11. Relative valuation & Treasury correlation: will it hold?

We place valuation as theme #11 to keep out of the 'top ten' but the macro-outlook is a critical variable – perhaps the most important for the sectors outlook. While we focus most on the relative views between covered companies, the macro will swing utilities hard positively one direction or the other.

Throughout 2023, utilities and clean energy have been highly correlated with long-term US Treasury rates. There was an 0.82 r^2 correlation between utilities and the 30Yr US Treasury yield January 1, 2023 through December 10, 2023. The correlation weakened after the adverse Illinois electric rate case outcomes December 14th pulling the full year correlation down slightly to 0.79 in just two weeks.

Exhibit 37: Utilities have traded with exceptional consistency against 30-yr treasuries in recent years:
We're not convinced there's a lot of untapped value with rates lower of late



Source: Company Filings, Bloomberg, & BofA Global Research

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While admittedly simplistic, we are closely watching long-term US Treasury yields vs utility yields. From 2008 through 1H2022, utility dividend yields were well above the 10Yr US Treasury rate. In late 2023 the delta surged but has normalized to what is the 'new normal'. In order for utilities to attract significantly new capital inflows, we believe that the Treasury rate will need to normalize down towards utilities – which should correspondingly normalize up in tandem. Utilities do look more attractive valued with the sector unfavorably decoupling in mid-December after the adverse Illinois electric regulatory updates, we see a better backdrop but still hesitate to call utilities relatively attractive. This is even more true with the sector's late December/early January outperformance in the face of rising interest rates.

Exhibit 38: Div Yields tell a different, more cautious story for utilities: negative spread is likely a consistent headwind into 2024

We see reason for a relative discount to historical norm for utilities given the lack of apparent desirability to retail constituencies without a competitive div yield vs conventional treasuries

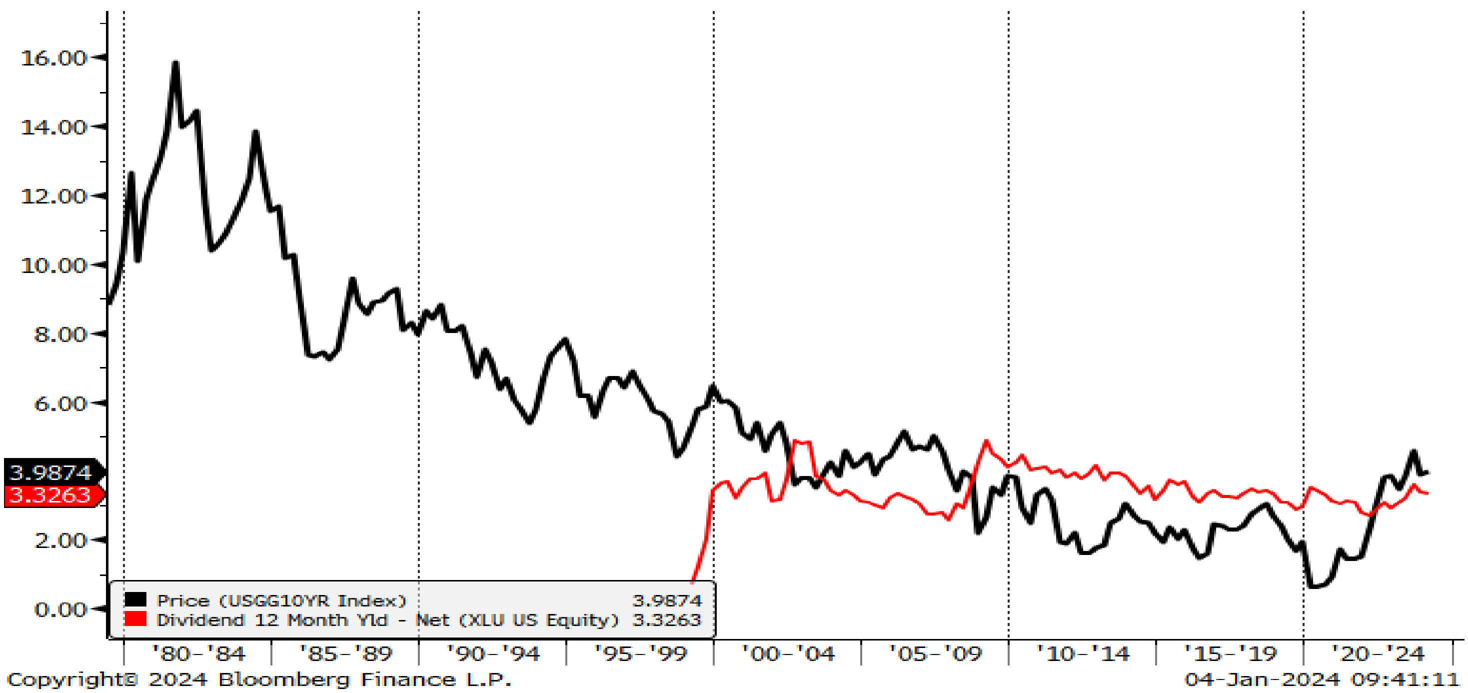
Source: Bloomberg

BofA GLOBAL RESEARCH

For much of 2023, US utility dividend yields were lower than US Treasury yields which made it challenging for the sector to appeal to a broad class of investors who traditionally bought utilities for income and safety.

Exhibit 39: US Treasury Yields (Black) vs Utility Yields (Red)

The current period is the most like the mid-2000s



Source: Bloomberg

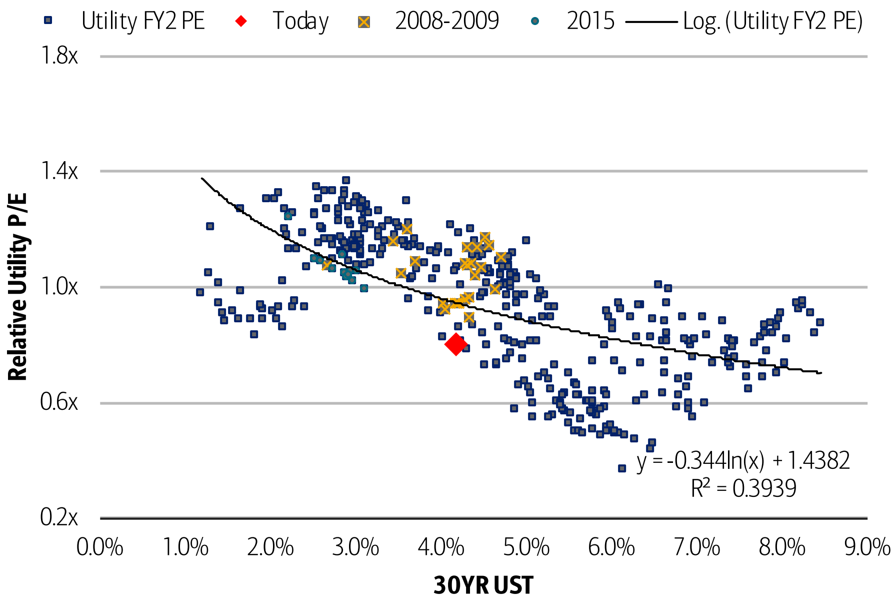
BofA GLOBAL RESEARCH

What do scatter plot relationships reveal?

Below we refresh our latest scatter plot relationships of the Utility sector. Utilities' 2023 underperformance coincided with a move higher in yields. As a result, Utilities begin the new year priced attractively relative to yields, a rare setup in recent history with the exception of the COVID period.

Exhibit 40: Utilities vs 30-yr UST relative valuation

Utilities screening as relatively cheap based on today's relative PE and yields



Source: BofA Global Research, Bloomberg

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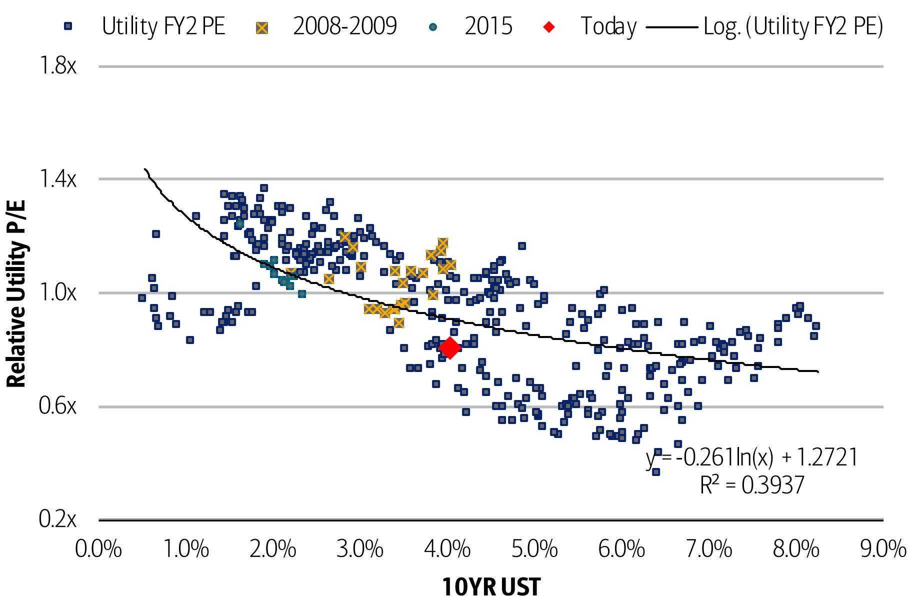
Exhibit 41: Utilities vs 10-yr UST relative valuation

10-year yields similar conclusion, Utilities looking inexpensive



Source: BofA Global Research, Bloomberg

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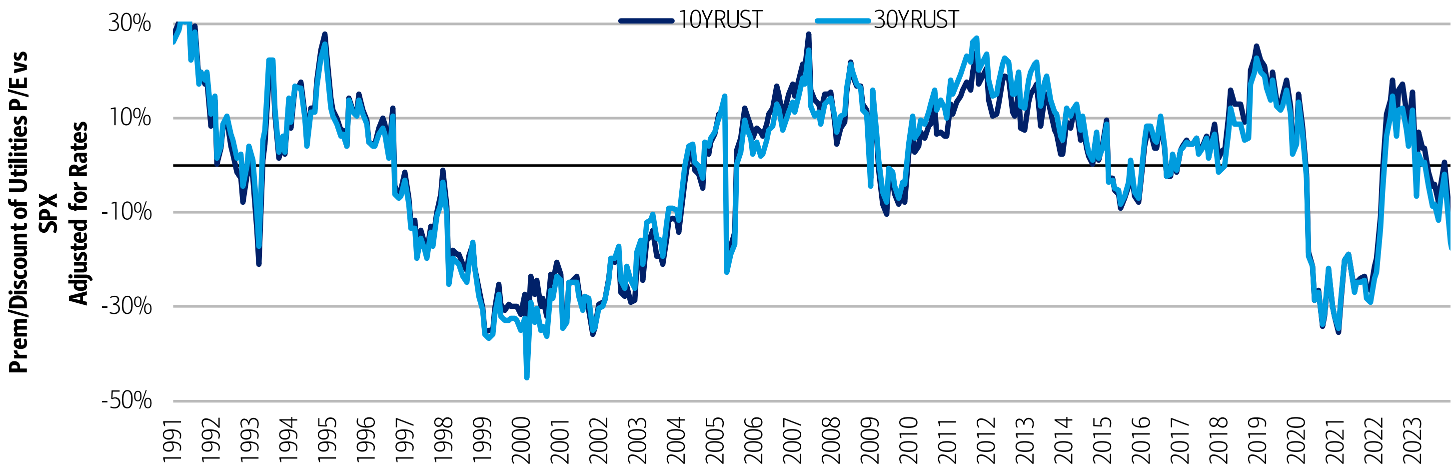
The time series below illustrates the degree to which today's valuation is a relatively rare setup of late. Though worth noting that durn the 1990s and early 2000s when rates were around today's levels, the relative discount persisted.

Exhibit 42: Time series of relative utility values (UTY Index vs S&P500) – Deviations from Norm show *sector looking cheap again after rates move lower*
Other than Covid period Utilities look cheapest since mid 2000s



Source: BofA Global Research, Bloomberg

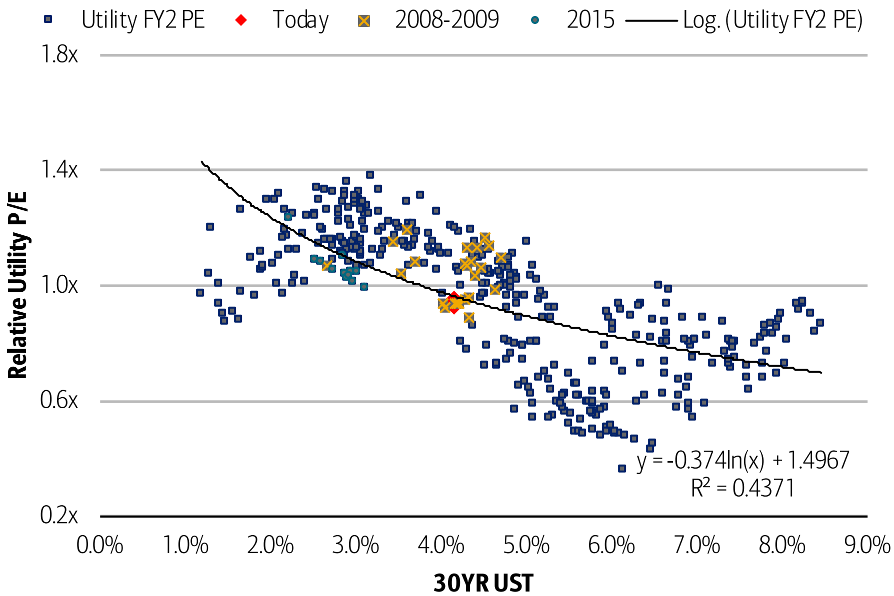
BofA GLOBAL RESEARCH

<u>Equal weighted comparison tells a different story</u>

An alternative view is provided by normalizing the relative PE in our scatter plot to the *equal-weighted* S&P 500 index (SPW Index in Bloomberg). Doing so adjusts for the impact of a small number of stocks that performed disproportionately well in 2023 and have outsize representation in the cap-weighted S&P 500.

The scatter plots clearly illustrate that once the impacts of large-cap outperformers are normalized from the index by using equal weighting, Utilities as a sector look much closer to fairly valued relative to the 30-year and 10-year UST.

Exhibit 43: Utilities vs 30-yr UST relative valuation
Valuation looks more balanced relative to equal-weighted S&P



Source: BofA Global Research, Bloomberg

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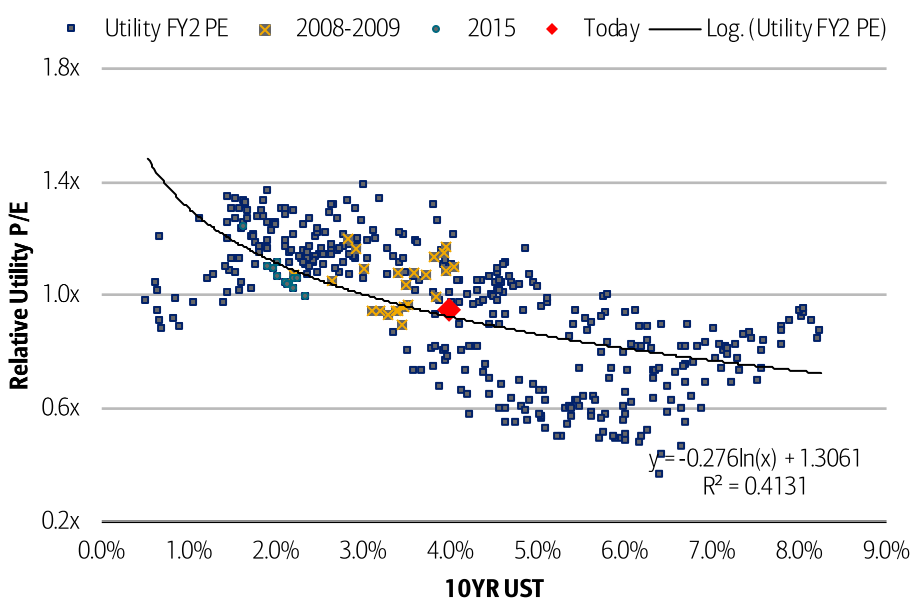
Exhibit 44: Utilities vs 10-yr UST relative valuation
Valuation looks more balanced relative to equal-weighted S&P



Source: BofA Global Research, Bloomberg

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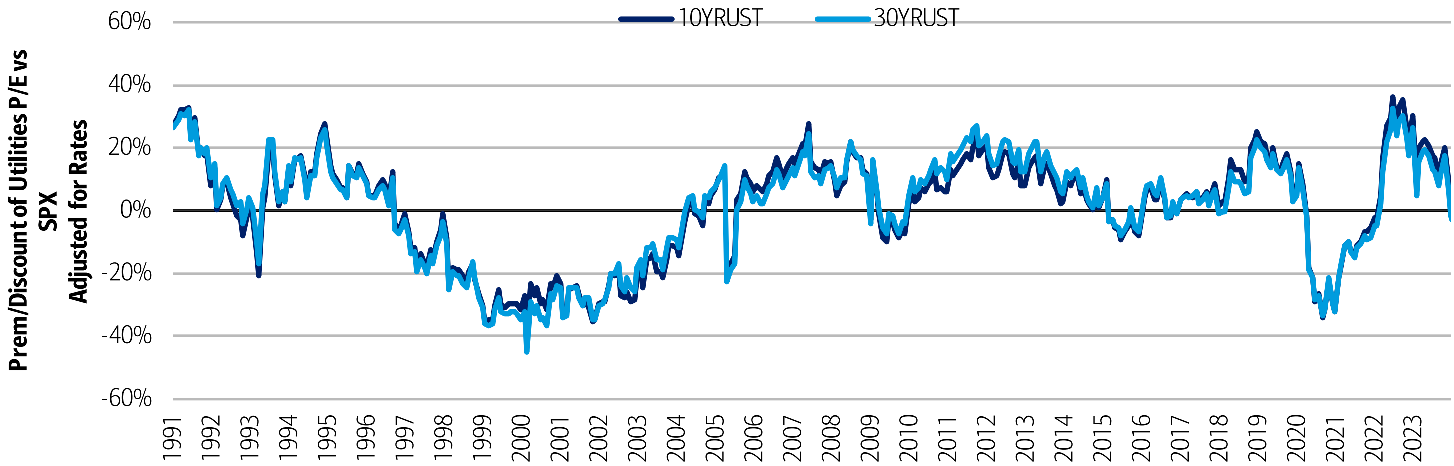
Directionally the time series of the relative value relationship tracks that of the cap-weighted index in Ex 16, while illustrating that given current inputs Utilities screen much closer to fairly valued.

Exhibit 45: Time series of relative utility values: Utilizing equal weighted SPX shows that the sector is actually back to its historical 'norms' on valuation…
Unlike cap-weighted, Utilities look fairly valued, and prior periods have seen discounts for protracted periods



Source: BofA Global Research, Bloomberg

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12. Fire Risk Returns: Sector-Wide Implications in Focus

It is easy to ignore the problem that is not front and center but management teams and EEI view addressing wildfire financial risk as a top sector priority. Neither regulators nor most companies have taken wildfire threats seriously enough with a few exceptions (California, the West coast, and some other forward-looking utilities) after the last few seasons across the wider US - not just California. We see ongoing fire liability as a very real and pervasive issue. We see stability for Hawaiian Electric (HE) shares of late given the lack of a maturity in 2024 as adding to a backdrop of renewed complacency among investors. We see this issue as absolutely among the top debates to watch nationally, with EEI taking up the mantle on how to address this issue more holistically. While seemingly unlikely to result in a national wildfire insurance program (akin to how the nuclear industry is insured thru the Price Anderson Act), we see a concerted effort on enabling education and consistency in policies across states. Having regulatory buy-into *both* planning practices as well as clearly defined event action plans is at the core of what needs to still be accomplished.

More than anything we see planning as at the core of much of the litigation across the country already. Establishing and executing effectively against wildfire plans remains at the core of much of what is to come. Expect wildfire planning to feature more prominently across a wider range of geographies (no longer limited to the West coast) following the events in Hawaii (HE) and Colorado (XEL). We could well see more meaningful policies adopted across a wider scope of the West and even Southeast as fire risks are assessed thru the scope of FEMA risk levels.

States to watch in 2025 include others across the West like Montana where inverse condemnation statutes apply. We stress low population density have made this less of an obvious angle, but nonetheless merits ongoing attention. Montana's legislative session is 2025 so 2024 will be the important time to build stakeholder support and educate parties on the topic without the urgency of a timed session.

Bottom line, we stress that having (or not) an inverse condemnation statute like California has clearly not mitigated investor fears around operating thru a large fire event. We have seen courts in Oregon rule against Pacificorp even prior to wildfire findings being released, accentuating the risk of jury trials for the sector.

While a wider scope of the US remains exposed than many investors appreciate, we are still principally focused on the slew of smaller market-cap stocks across the West.

13. IPPs: Is EPS guidance a gift or a curse?

Constellation Energy (CEG) is planning to roll-out a new set of disclosures, anchored by EPS and an EPS growth trajectory. Traditionally independent power producers (IPPs) like Constellation, NRG Energy, Vistra, and Talen (dating back to PPL Supply) have focused more on EBITDA and free cash flow. We still see EPS as a relevant metric we could see growing focus around: admittedly even NRG's guidance is a novel free cash flow per share target, a step towards looking at EPS.

IPPs have finite lived power plants (particularly nuclear with explicit licenses) due to regulatory reasons so there are not perpetual cash flows from the power plants. CEG, NRG, and VST each have significant retail electricity businesses that in theory have perpetual lives. As a result, power companies are capital return vehicles rather than growth entities and we believe the appropriate way to value the companies is on cash flow available for distribution to shareholders rather than accounting earnings. In contrast, regulated utilities have significantly longer lives (if not perpetual lives) and reinvest more than all of the operating cash flow in the businesses.

CEG trades at 18x 2024-2025 Consensus P/E versus 10x for VST and 6-7x NRG. Our CEG estimates are notably higher than Consensus which brings 2025 EPS down to 13.5x. While very different business models, investor conversations have directly contrasted CEG's forward P/E against regulated utilities and been increasingly viewing CEG as more expensive on the traditional P/E metrics. The other critical variable will be Constellation's EPS CAGR. We currently forecast ~15% which is significantly enhanced by share repurchases, a core element and advantage of an EPS CAGR vs EBITDA. Buy side conversations point to a 10%+ EPS CAGR at a minimum with anything single digits likely viewed as disappointing relative to expectations.

Exhibit 46: IPP P/E Multiples on Consensus and BofA EPS Forecasts
Constellation has the highest P/E out of the public IPPs and NRG has the lowest

P/Es	'23 BofA	'23 Cons	'24 BofA	'24 Cons	'25 BofA	'25 Cons
AES Corp	10.9x	11.0x	9.5x	10.0x	8.5x	9.2x
Constellation Energy	18.9x	19.2x	16.2x	18.1x	13.5x	18.1x
NRG Energy	8.5x	8.9x	7.1x	7.3x	6.8x	6.5x
Vistra	13.1x	10.4x	11.1x	10.0x	10.8x	10.3x

Source: Company Filings, Bloomberg, & BofA Global Research

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See background on CEG: Another quarter, another beat, another raise. Strong execution is rewarded 07 November 2023

We see a pivot towards EPS and a focus on EPS growth metric as fitting with a sector that is increasingly focused on articulating a growth narrative around a sector with rebounding organic core sales of KWhs. Historically growth in EPS has been a difficult subject for many investors to find comfort in considering the declining core asset base of incumbent thermal assets. IPPs find it difficult to guide beyond the current calendar year and introducing a CAGR adds more uncertainty due to share price for buyback assumptions. By contrast, with scarcity front and center, and a much-delayed cycle of new investment we see a structurally improving backdrop across most markets for capacity/resiliency prices, only enhancing the prospects for IPPs to reset their existing arrangements as hedges roll off. We maintain estimates broadly above Street estimates across future periods.

14. Bitcoin mining: Don't call it a comeback pre-halving

The price of Bitcoin has surged to over $40,000 from in the $15,000-19,000 range at the end of 2022. For example, Marathon Digital (MARA – Not Covered) appreciated nearly +600% in 2023 to have a $5Bn+ market cap. This is below the $7Bn+ peak but is a substantial improvement from sub-$500Mn this point in 2022. This has significantly increased the profitability of merchant bitcoin miners who have reported breakeven equivalent costs in a wide range of ~$8,000-$18,000 per bitcoin with a concentration $10,000-$15,000. We have continually followed public and private bitcoin mining companies who are very large consumers of electricity. Most utility investors view these load sources and the associated earnings more speculatively, but these can contribute real earnings and cash flow, even if the sustainability and appropriate valuation is less certain.

Non-bitcoin data centers that emerging of late are different in that their load is notably firmer. This creates even greater strain on the grid and in turn investment opportunities for incumbent utilities.

Who has direct and indirect leverage to the thesis? Small cap utilities, TX regulateds, and power companies

Regulated utilities PNM, OGE, BKH, and IDA have each discussed or filed about interest from cryptocurrency mining companies. OGE and PNM specifically have indicated more material contributions and OGE is set to see more significant earnings contributions. Oklahoma Gas & Electric (OG&E) has an Economic Development Incentive Credit (EDIC) rider for competitive non-residential load with 1,000/kW minimum. The EDIC represents a credit to base rates of 35% in the first year, 25% in the second year, 15% in the third year, and no credit in the third year. As a result, for OG&E even with no incremental bitcoin mining volume, it should see growth as the effective rate paid steps up.

Texas bitcoin miners tend to be interruptible and curtail operations during peak hours to resell power to the grid or alternative reduce negative mining margins. As a result, bitcoin mining is not a contributor to peak load. Still, the around-the-clock demand will be a driver for additional infrastructure needs for the regulated utilities: Sempra (Oncor subsidiary), CenterPoint (Houston Electric), American Electric Power, Entergy, Xcel Energy, and PNM Resources.

To date the IPPs have participated less with bitcoin mining companies but Vistra and Constellation have both engaged with bitcoin miners. For Constellation it worked with Compute North before it filed for bankruptcy. Vistra has had more extensive partnerships with bitcoin miners at its retail and generation segments.

Halving comes in April – will it impact profitability?

The next bicoin halving is expected in April 2024 which will reduce the block reward to 3.125 BTC from 6.25 BTC, theoretically reducing mining revenue by -50%, assuming no change in bitcoin pricing.

Exhibit 47: Bitcoin Pricing
Bitcoin prices have surged in 2023

Source: Bloomberg

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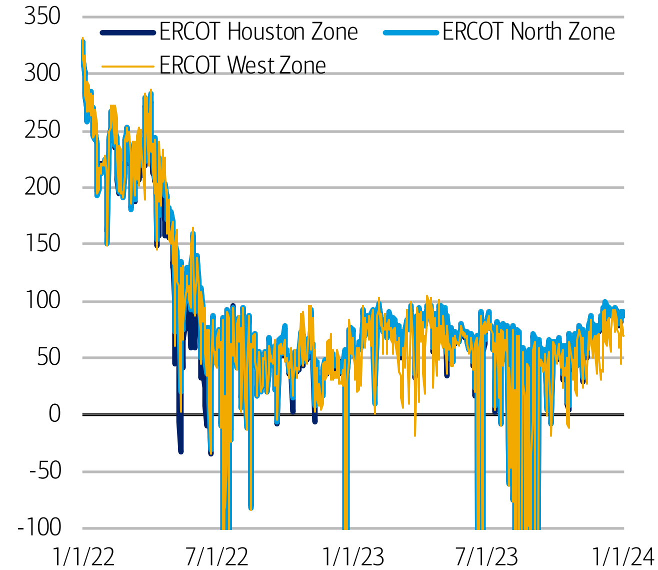
Exhibit 48: Bitcoin Mining Spread ($/MWh)
Merchant mining spreads are up from the lows but have compressed significantly from 2021-2022



Source: Bloomberg

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BofA Global Research Reports

Title: Subtitle	Primary Author	Date Published
US Utilities & IPPs: Crypto Mining & Power/Utilities: Evaluating The Prospects Ahead	Paul Zimbardo	28 September 2022
US Utilities & IPPs: Top 10 Takeaways From Our Crypto Mining Conference: The Industry Is Here To Stay	Julien Dumoulin-Smith	30 March 2022
US Electric Utilities & IPPs: PowerZone: Crypto Mining Conference Preview – What You Need to Know	Julien Dumoulin-Smith	25 March 2022
US Electric Utilities & IPPs: PowerZone: Intersection of Power & Crypto Mining Is In Irving Texas	Julien Dumoulin-Smith	21 March 2022
US Electric Utilities & IPPs: Mining Back in Vogue: Understanding the Evolving Crypto/Bitcoin Opportunity Set	Julien Dumoulin-Smith	04 October 2021

15. Labor: Strikes, compensation, and more

In 2023 union negotiations and strikes were high profile and frequent, led by the autoworkers and Hollywood parties but utilities have been fairly immune not just in 2023. Exelon and CenterPoint had strikes in 2023 and there are periodic union renegotiations across the sector. PowerPoints: Exelon New Jersey Strike 09 November 2023. The combination of low unemployment and increasing competition for skilled labor from adjacent sectors could lead to more inflationary dynamics.

> We will closely watch disclosed headcount for YoY changes. Utilities had layoffs in 2023 including FirstEnergy and Xcel Energy.

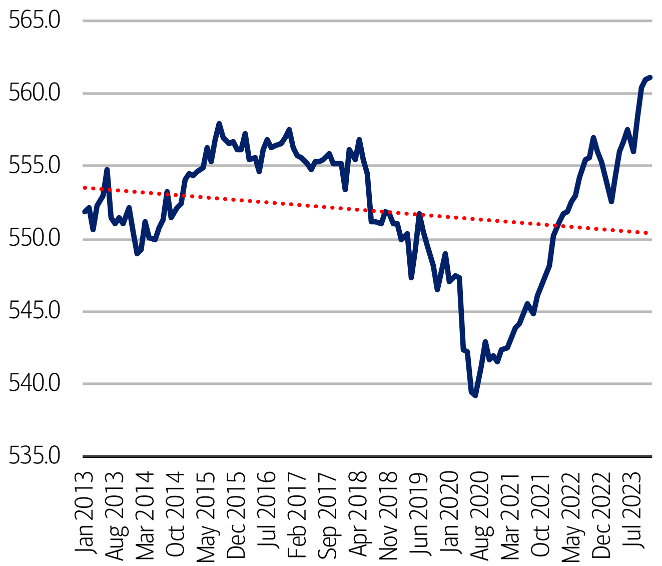
Utility labor availability has eased slightly YoY with 1.5% sector unemployment as of November 2023 per the Bureau of Labor Statistics (BLS), up from 1.2% in November 2022. Overall US utility jobs increased +1% in 2023 through November preliminary data with 561k employees. Utility sector employment has grown more robustly after troughing in mid-2020 at ~540k workers. There was +4% growth over this period versus +2% for the 2013-2023 period cumulatively.

Union participation continues to trend lower

In 2022, 19.6% of utility employees were members of a unions, essentially flat to 2021 but a steady decline from 23% in 2017 and 24.7% in 2012.

Exhibit 49: Utility Sector employment (thousands)

Utility sector employment has significantly grown from 2020



Source: Bureau of Labor Statistics

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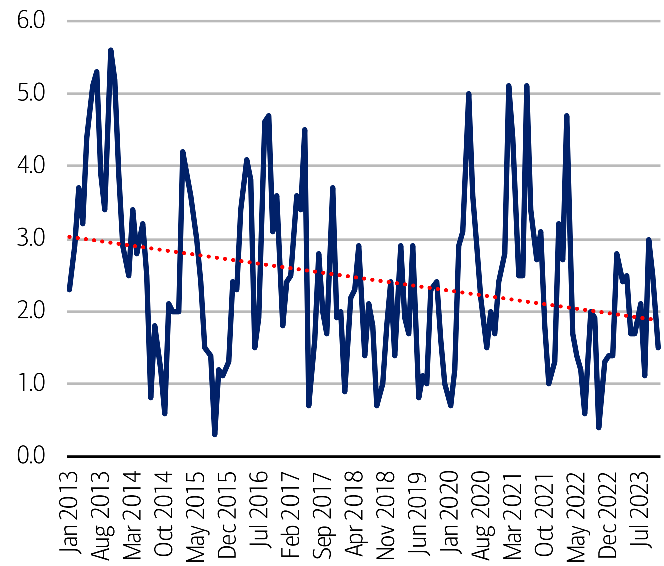
Exhibit 50: Utility Sector unemployment percentage

Utility unemployment remains quite low with a tight labor market



Source: Bureau of Labor Statistics

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Weak equity performance for utilities and clean energy equities broadly could be an important variable in employee dissatisfaction and unrest. Companies the most overweight their own stock in the company's 401k plans per Reuters include NextEra (46% in company stock), Southern Company (38%), Atmos Energy (28%), WEC Energy (23%), and Eversource Energy (23%). Companies favorably without company equity ownership in the 401k plans included CMS Energy (CMS), NRG Energy (NRG), PPL Corp (PPL), and American Water Works (AWK).

16. Artificial Intelligence (AI) is not trivial: this is a sizable cost-cutting avenue

Yes, AI is a theme for the 'sleepy' regulated utilities as well. Most investors focus on the potential for enhanced demand from AI data centers (see theme #6) but few are focused on the other clear use cases.

Utilities have utilized some artificial intelligence into their operations but have been slow movers here to date. We see numerous avenues for both enhanced and meaningfully cheaper operations leveraging technology to monitor their equipment. Visual inspections of poles, equipment and preventative maintenance could significantly change in the intermediate term. The more difficult the interest rate environment, we actually anticipate the *faster* the ramp into AI-enabled solutions to reduce truck rolls, man-hours and overall resource allocation.

For instance, visual pole inspection has been a focus of ours in recent days, having engaged with the Utility AI start-up Noteworthy AI. Their solution passively monitors distribution poles as utility trucks drive by, examining quality and vegetation cover. There are over 150 million distribution poles in the US with an average 40-50 year age. Traditional visual inspections are labor intensive and costly with two person crews inspecting 10-20% of the inventory annually. Importantly, inspections are typically 100% operating and maintenance costs but packages such as Noteworthy AI's can shift some costs to capital (and eligible for a return) while reducing costs overall. Vehicle mounted cameras can be adopted to a wide range of utility vehicles (trucks to passenger vehicles) that capitalize on otherwise 'wasted' travel time between jobs. Noteworthy AI estimates that it can inspect a distribution pole for less than $50, 75% cheaper on a per pole basis than the traditional labor and fuel heavy approach today.

Other related angles include monitoring technology in stationary applications to watch for pre-emptive maintenance opportunities alongside drone-enabled technology for other sites. *The nature of maintenance should meaningfully change on a 3-year view across the entire infrastructure sector. Higher interest rates, rather than stalling progress in this sector is actually encouraging changing through a reinvigorated need to find cost savings.*

Some may be skeptical that utilities will lean into technology but the companies have actually adopted a suite of technologies to reduce operating costs. Perhaps the best example is for right-of-way inspections and monitoring where utilities have shifted from visual inspections to helicopters to drones.

What do we expect in 2024? Evolutionary and revolutionary
Look for more companies to start AI pilots on inspections and with call centers, two operating cost heavy areas. Expect anything customer facing to be slower to gain adoption with small tests and likely regulatory oversight on customer information.

Some utilities we speak to are already utilizing AI for drafting documents, including regulatory, with time savings but there is still a need for heavy manual review and involvement. While net time savings and allowing corporate employees to spend time on more value-add work, we think this aspect will be more evolutionary.

17. Gas LDC Policy: Decarbonization (back) in full focus

The debate into the duration of natural gas local distribution companies (LDCs) has ebbed and flowed over the years but has generally been quieter in 2022-2023 after elevated outage events and energy security concerns. We believe this debate could pick up again following regulatory action in Illinois and Maryland (for Exelon and others) about how to properly pursue a transition towards electrification. It is clear from the multiple industry analyzes that electrification is expensive and the emission reduction benefits are unclear, depending on the regional generation feedstock. Yes, we know this has been out there for some time, but an expedited focus on new legislation in Illinois could very well set the stages for a dynamic debate on just how much and how to invest in the sector.

What could happen in Illinois? Should gas get a premium ROE for more risk?
We could see some form of legislation passed that both re-enables gas capital investment in the near-term while providing even more proscriptive language around eventual phase down of gas interconnects in the Chicago area. Expectations among investors remain low on specifics, but we expect the level of legislative focus in 2024 on this to surprise to the upside. Given Gov Pritzker's outspoken views on enabling climate legislation, exactly how this meshes up with ardent views from labor will be a critical focus.

Other states in focus include New York, New Jersey, Massachusetts, Maryland (plus Washington D.C.), and California to name a handful to watch in 2024.

Cannibalization of combo utilities is the novel angle to watch
Specifically we look for Public Service Electric & Gas (PSE&G / PEG) in New Jersey to lead the discussion among investors on integrating heat pumps into electric utility offerings. While others will pilot this effort PEG with its combination electric and gas customer base can champion this electrification narrative and show a net shareholder benefit. Watch for how this is received by stakeholders and expect significant pushback from standalone natural gas interests in the state regarding the subsidization. Maine has also had success with heat pump adoption but we have not heard the local utilities make

meaningful efforts to capitalize an earnings angle. While still early days on this theme, it is one that could gain traction.

18. Gas Build Back in Vogue: Yes, the Next Wave is Here.

Yes, we believe the US is poised to see Natural Gas generation capacity in a renewed manner, at a pace unrivaled in recent years. This is in response to a clear and sharp rise in the value of resiliency across the US. **We perceive north of 10GWs of gas gen to get bid in 2024 for development, with a truly diverse footprint of development opportunities.**

The focal area for new gas gen is likely to be centered in Texas, where the state passed Proposition 7 (Prop 7) in November 2023, enabling funding for new gas generation subsidized loans and outright credits for generators able to come online swiftly enough. We perceive the state could yet act to either add further funding behind Prop 7 or expand the program further in 2025. On balance, meaningful demand growth has been met with minimal new firm capacity in recent years barring battery storage.

Other states with numerous new gas plants include Indiana, Missouri, Kansas, Georgia, and North Carolina. Watch those states carefully on approvals given the acutely higher costs of developing gas gen in today's environment. Inflation has been steep and we could yet see pushback as regulators appreciate what this 'new norm' costs. We see peakers at $900/kW+ with some stretching into the mid-$1000/kW range (NiSource). Dominion has pursued new natural gas generation in Virginia which is the subject of debate in its Integrated Resource Plan (IRP) regulatory review pending but we do not expect the company to change its plan away from natural gas regardless. What companies could do is pursue natural gas power plant purchases or short-term PPAs to the extent there is excess generation but there is simply no way to meet the reliability needs without leaning more on gas in the short-term.

We stress this is all *not* ignoring the wider backdrop around permitting new gas. We do not anticipate this will be easy – nor the corresponding infrastructure. It's difficult to pinpoint what the specific issues will be, but ensuring community and PSC buy-in early in the process will be critical for all of these projects. The sizable pushback seen in Montana earlier this year with NWE's Yellowstone peaker is a notable indicator on newfound challenges for permitting gas laterals. Ultimately the project is likely to be completed, but not without delays.

See our earlier note on Gas Generation economics and trends.

19. PJM: A True Quagmire Prices Again at a Low Print

Amidst a sharp rally in capacity/resiliency prices nationally we expect the zombie-esque low prices of the PJM market to persist. Our latest discussions with stakeholders continue to affirm that any eventual capacity auction run in 2024 will prove to be modest, particularly given the

What variables would we focus on? 1) Bid cap changes: this remains among the most substantive reforms contemplated given sharp caps put on bidding practices for most plants. Without modification as discussed earlier this, this appears likely to result in meaningfully compressed price formation below <$100/MW-day. 2) Capacity qualification: increasing the equivalent forced outage rate demand (EFORd) adjustment downward to eligible capacity could result in less qualifying capacity participating in the auction.

See our earlier rehash from the long-awaited, but ultimately rather mundane set of reforms put forward by PJM in October: yes, there's a lot of changes, but it's not clear this really will shift the narrative towards a meaningfully 'better' pricing outlook. We acknowledge the PJM outlook remains robust with its reserve margin but between low prices slated to push meaningful capacity out of the market and forthcoming EPA rules for coal in ~2028 for coal ash water compliance ('ELGs') we could see a rapid drop in margins over a relatively compressed period. Yes, the auction is designed to respond to this and it should over the next couple auctions but many investors had been eyeing potential reforms ahead of the multi-fold retirement scenario.

We expect PJM to garner growing interest in both repowering assets that are retired, finding stop-gap measures to 'retain' capacity thru the forthcoming lows and otherwise exporting excess capacity via transmission interties to adjacent regions. We see storage as an eventual clear opportunity to leverage a litany of retired assets, but muted pricing should delay this clear development opportunity for some time.

PJM's latest demand forecast is consistent with a likely wave of further revisions to capacity across 2024: rather this is just the latest affirmation of sharp revisions.

US Utilities & IPPs: Load Growth in PJM: Is it real? Yes, but overwhelmingly data centers

Exhibit 51: Reserve Margin trends in PJM BRA
PJM reserve margins historically have been 20%+. PJM forecasts a decay with coal retirements

BRA Results	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Reserve Margin %	20.2%	22.9%	23.9%	22.0%	21.1%	21.6%	21.7%
Reserve Margin including FRR %	19.8%	22.4%	23.3%	21.5%	19.9%	20.3%	20.4%

Source: PJM, BofA Global Research

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20. Equipment Logjam is Back: Watch Equipment Delays & Prices anew

We see supply chain issues presenting themselves anew in the Utility and Power generation sector. We note renewable developer discussions in recent months have pointed to a growing pressure point on the availability of a variety of electrical equipment for both distribution and transmission. Specifics of late have focused on the mundane such as voltage breakers among other key pieces of equipment.

Price inflation has yet to return – but it sure seems like it could. Inflation has been a key headwind in the sector already, but we see the scarcity backdrop as potentially reigniting concerns on higher cost electrical equipment anew into 2024.

We anticipate a focus on re-stocking inventory to ensure adequate needs into the future could yet only accentuate this inventory shortage.

In the near term, we are seeing this pressure point manifest itself in delays for projects. Renewable developers are firmly already focused on 2026, and those without requisite equipment even for 2025 face potential execution challenges ahead given the 18-month timeline to obtain these voltage breakers.

While discussions into '24 have proven modest on extent of further inflation to capex budgets, we continue to see an overall upward bias to spending. We appreciate many utilities often manage capex budgets around affordability considerations – rather than linearly reflecting the overall higher cost of individual projects across to their overall spend. The inflation is blunted in utility spend by simply doing fewer projects.

21. Industry PR Issue Around Interconnect a Challenge

If there is a related problem tied to electrical equipment, it's the inability to meet the expedited timelines of new interconnects across the industry. While protracted interconnection for residential solar has been a long documented sore spot for utilities, the inability to rapidly connect new loads: whether they are data centers, manufacturers, new housing communities or otherwise has created a novel source of industry reputational risk. While this theme featured itself in our 2023 edition of this document, we see this concern as remaining front and center, nationally. If anything, the accelerating pace of development for data-driven load could yet drive a further breaking point with its major new customer class. On balance, watch for how this gets captured in rate cases and otherwise.

For instance, PG&E's ability to advocate for legislation that enables more timely cash recovery of new distribution interconnects was a welcome a development in California, where protracted delays have driven a new front of consternation with local utilities. Watch for implementation in '24.

As is the case with PG&E, see the industry as simply under-estimating demand growth from a wealth of different end-markets in recent years. Thru COVID-era restructuring of organizations and shifting of labor responsibilities elsewhere, utilities appear to have simply been caught off-guard at the pace of new build as well as their expectations for *timely* new connection (measured in a few months for most, not years).

Will interconnection issues remain a bottleneck for renewables? Likely yes but signs of easing.

The regulated utilities argue that a ROFR is vital to delivering more transmission on a timely basis to support additional renewables development and a more reliable/resilient grid. Transmission has a multi-year planning horizon with more complex, larger projects taking a decade to be successfully completed. In this regard, some agencies of the Federal government having a desire to promote transmission are counter to the Administration's desire to develop transmission for decarbonization efforts.

We still see the relative quantum of transmission development relative to contemplated renewables as fundamentally challenged for some time. Recent project developments in MISO and PJM indicate some success in breaking the delays. Still awaiting more meaningful developments across several other geographies – ERCOT (sizable 'highway'-like efforts out of May legislation), SPP, CAISO and more. On balance, interconnection for both new demand and supply remains an acute challenge for utilities. Getting traction on a regional basis across RTOs and States has proved slow – but we're finally seeing some success, at last. Look for another round of awards in PJM in 2024, with discussion of American Electric Power's massive 765 kv lines even on the horizon once more.

22. Pension: Moving from mark-to-market to valuation

After another year of outsized volatility, expect more investor attention on pension assets and liabilities for companies. The phenomenon of pension mark-to-markets is much better understood by investors today versus in 2022 when the issue started to emerge as a material drag. The attention is turning to how to value pension income and pension expense. What is non-cash pension income worth if the underlying pension plan is underfunded and a liability? Is it a liability? Or is it neutral since some (or all) of the obligation can sit with customers? Or is it simply an asset because there are earnings?

The rally in all equity classes has led to a very favorable pension market to market relative to 9/30/23. For example, we estimate that FirstEnergy (FE) had +$0.07 positive pension MtM on 12/31/23 versus negative -$0.10 as of the end of October. We had embedded -$0.05 headwind in our estimate but this could now be +$0.07 for a full +$0.12 swing vs BofA (more like +$0.07 for consensus). This was almost entirely driven by forecast asset performance better than the expected return on assets with the discount rate/underfunding elements neutral.

Exhibit 52: FirstEnergy 2023 Pension Analysis

FE round-tripped 2023 pension from a large MtM negative to a positive. Still, this is a shareholder liability

FirstEnergy (FE) Analysis	Guidance	1Q22A	FY22 E	FY23 E
Pension Income				
YE22 Pension Assets	9,020	9,020	9,020	6,693
Expected Return	180	677	657	535
YE23 Pension Assets - Expected	9,200	9,697	9,677	7,228
Actual Return	(523)	(523)	(1,723)	1,163
YE23 Pension Assets - Actual	8,497	8,497	7,297	7,856
YE23 Pension Assets - Expected vs Actual	**704**	**1,200**	**2,380**	**(628)**
Expected Return FY23	8.00%	8.00%	8.00%	8.00%
Lower Pension Income (Pre-Tax)	56	96	190	(50)

Exhibit 52: FirstEnergy 2023 Pension Analysis

FE round-tripped 2023 pension from a large MtM negative to a positive. Still, this is a shareholder liability

FirstEnergy (FE) Analysis	Guidance	1Q22A	FY22 E	FY23 E
Lower Pension Income (Post-Tax)	**44**	**75**	**149**	**(39)**
EPS	**0.08**	**0.13**	**0.26**	**(0.07)**
Pension Expense - Underfunding				
YE22 Pension Obligation	11,479	11,479	11,479	8,828
Change in Discount Rate	(1,118)	(1,118)	(3,386)	(10)
YE23 Pension Obligation	10,361	10,361	8,093	8,818
Service & Interest Costs (Pre-Tax)	(37)	(37)	(96)	(0)
Service & Interest Costs (Post-Tax)	**(29)**	**(29)**	**(75)**	**(0)**
EPS	**(0.05)**	**(0.05)**	**(0.13)**	**(0.00)**
Pension Expense - Costs				
Higher Service & Interest Costs (Pre-Tax)	57	57	153	1
Higher Service & Interest Costs (Post-Tax)	**44**	**44**	**119**	**1**
EPS	**0.08**	**0.08**	**0.21**	**0.00**
Total Post Tax Expense	**60**	**90**	**193**	**(39)**
	57.1			
BofA NEGATIVE EPS	**$0.10**	**$0.16**	**$0.34**	**-$0.07**

Source: Company Filings, Bloomberg, & BofA Global Research

BofA GLOBAL RESEARCH

While more pension income is positive for companies on its face, it is critical to look below the surface. If a company has pension income but an under funded pension or balanced pension, there is in theory no shareholder value.

The best example here is FE which has a significantly underfunded pension but material non-cash pension income. Applying a utility P/E to pension non-cash earnings implies a value of ~$400Mn asset ($25Mn pension income/credit for FY23 at 15-17x). In contrast, FE's pension was a $1.7Bn net **liability** at 12/31/22. FE's pension funding status has improved after the earlier contribution but the core discrepancy holds of a pension net liability generating pension income.

See our separate analysis on Dominion's pension where the company's disclosures show an implied 4-5x P/E using the company's reported financials. Dominion Energy: Raining on the Dominion Holiday Parade: Why we are still Underperform after rally 29 November 2023

23. Customer satisfaction down again: can it improve?

Overall residential electric and natural gas customer service metrics **declined** per J.D. Power surveys, a continuation of a challenging trend for electric and gas utilities. There were a few pockets of small improvement YoY such as CenterPoint (CNP) and Allete (ALE), they were outnumbered. Some of the largest electric declines in 2023 data included PPL Corp (PPL), MDU Resources (MDU), and DTE Energy (DTE). Among natural gas utilities, Sempra (SRE), NorthWestern Energy (NWE), and Xcel Energy (XEL) had the most significant deterioration. In contrast to electric, PPL had the largest increase in satisfaction among all companies for natural gas, although it is a small component of PPL's overall operations.

The state with the highest average outage activity in 2023 was Maine, continuing an unfavorable trend. Other states with elevated outage activity in 2023 were Michigan, Arkansas, Oklahoma, Kentucky, and Louisiana. Within this grouping, Oklahoma and Arkansas had the most unfavorable increase YoY while Florida had the most positive improvement due to the lack of major hurricane activity.

We attribute the overall declines in customer satisfaction to continued high bills as the deterioration was fairly broad based rather than concentrated for utilities with lower reliability. J.D. Power specifically observed a sharp decline in the price satisfaction component as the largest driver.

The companies we will be watching closely are PPL (Kentucky) and DTE (Michigan) for improved reliability to protect a key vulnerability in our positive calls: continued below average reliability can lead to adverse regulatory and political outcomes.

With the backdrop of declining fuel prices (see theme #5), it will be important to see customer satisfaction improve for 2024.

24. Transmission competition to increase? At a minimum, focus on spend is back at last.

Transmission competition is an evergreen theme but there are signs of it being more 'real' in 2024 than in prior years. There are pros and cons to competition for transmission that are still hotly debated by incumbent utilities and third-party independent developers. Transmission investments have been one of the biggest thematics for incumbent regulated utilities across the US but there have been some setbacks recently. Specifically related to right of first refusal (ROFR) efforts that would provide incumbent utilities with the first opportunities to build projects rather than being subject to competition. The Illinois ROFR transmission bill was vetoed by Governor Pritzker and was not able to generate enough support to advance. Iowa and Texas courts have ruled against ROFR bills for different reasons. The US Supreme Court recently decided to not grant cert in the Texas Fifth Circuit case ruling that Texas' ROFR was unconstitutional in a proceeding that showed Federal government opposition. ROFRs have been very topical and controversial across the US but particularly the Midwest. We do not expect a meaningful shift towards competitive frameworks from incumbent awards, but this is an important area to monitor nationally.

FERC rulemaking pits utilities vs DOJ/FTC

Large incumbent utilities recently wrote a letter to the Federal Energy Regulatory Commission (FERC) advocating for a ROFR: "The final rule should also require implementation of the proposed right of first refusal provisions to facilitate timely development of needed transmission infrastructure." The letter was signed by utilities including Ameren (AEE), Consolidated Edison (ED), Edison International (EIX), Exelon Corp (EXC), ITC Holdings (Fortis [FTS] subsidiary), Pacific Gas & Electric (PCG), Public Service Electric and Gas (PEG), and Xcel Energy (XEL). The filing is in FERC's proposed rulemaking on transmission planning and cost allocation (RM21-17). FERC's April 2022 proposed rules included the ROFR which was opposed by the Department of Justice and Federal Trade Commission that supported more competition.

What else to watch? Two big FERC complaints

FERC transmission complaints to watch include (1) Industrial Energy Consumers of America and others vs MISO filed in July 2022 related to competition [EL22-78]; and (2) Ohio Consumers' Counsel against PJM related to supplemental projects [EL23-105].

Which companies have exposure to competitive transmission?

The Right of First Refusal (ROFR) is most relevant for Midwest transmission developers including Ameren (AEE), Xcel Energy (XEL), Fortis (FTS), and Allete (ALE) but it is a broader topic. In Texas the ability to develop transmission is important for Sempra (SRE) and Centerpoint (CNP) primarily but there are other regional utilities with exposure. Finally in PJM there has been a trend towards more competition with the latest data center ally solicitation as part of the broader regional transmission expansion plan (RTEP). Large transmission developers in PJM include Exelon (EXC), Dominion (D), PSEG (PEG), American Electric Power (AEP), and FirstEnergy (FE). In contrast, New York has leaning fairly heavily on a competitive model so we do not foresee the same degree of uncertainty. We see competitive opportunities in Canada as well with a specific focus on Ontario among regions that have and could yet drive material spend across our coverage.

Many of these PJM companies have been successful in competitive processes, notably EXC, D, PEG, and FE recently. Competition is not inherently negative for utilities but does lead to less visibility. Entergy in MISO just won the three largest competitive awards in the MISO Transmission Expansion Plan 23 (MTEP 23) with $3.1Bn awarded out of the $9Bn total. See details here: US Utilities & IPPs: PowerPoints: PNM NM, FE-Icahn, ETR SERI & MISO Transmission, and HE Capex 12 December 2023

Who benefits from more transmission? NextEra – expect this to be clear in '24

NextEra Energy (NEE) has participated in many competitive processes including PJM recently, securing one of the largest awards. Transmission is an immaterial earnings contributor for consolidated NEE today but is forecasted to grow faster than the rest of the business at double-digits EPS, off a low base. We expect this to be a non-trivial element of NEE's June 2024 Analyst Day, emphasizing success and prospective opportunities. While relative to the size of NEE, likely still modest, but for any other market cap, success and prospects would stand out as well as scope of geography contemplated.

US Utilities & Clean Tech: Transmission ROFR: Legal and political uncertainty on competition grows in 2024 18 December 2023

List of Acronyms:

AD/CVD: Antidumping and Countervailing Duty
ADIT: Accumulated Deferred Income Taxes
AFUDC: Allowance for Funds Used During Construction
AGA: American Gas Association
ALJ: Administrative Law Judge
AMI: Advanced Metering Infrastructure
AMR: Automated Meter Reading
A-SMACC: Association of Solar Manufacturers Against Chinese Circumvention
ATC: Around The Clock
Bcf: Billion cubic feet
BLS: Bureau of Labor Statistics
BoD: Board of Directors
BPU: Board of Public Utilities
BTC: Bitcoin
BTU: British thermal unit
CAGR: Compound Annual Growth Rate
CAISO: California independent system operator
Capex: Capital Expenditures
CCGT: Combined Cycle Gas Turbine
CCS: Carbon Capture and Sequestration
CDD: Cooling Degree Days
CF: Capacity Factor
CFO: Cash Flows from Operations
CO2: Carbon Dioxide
CPI: Consumer price index
CT: Combustion Turbine
CWIP: Construction Work in Progress
DCF: Discounted Cash Flow
DCRF: Distribution Cost Recovery Filing
Disc: Discount
DOC: Department of Commerce
DOE: Department of Energy
DOJ: Department of Justice
DPA: Deferred Prosecution Agreement
DPU: Department of Public Utilities
DR: Demand Response
DRIP: Dividend Reinvestment Plan
DSM: Demand Side Management
Dx: Distribution
EDC: Electric Distribution Company
EDIT: Excessive Deferred Income Taxes
EE: Energy Efficiency
EEI: Edison Electric Institute
EIA: Energy Information Administration
EPA: Environmental Protection Agency
EPC: Engineering Procurement and Construction (EPC
EPS: Earnings per Share
ERCOT: Electric Reliability Council of Texas

ESG: Environmental, Social, and Governance
EV: Electric Vehicle
FCF: Free Cash Flow
FEC: Federal Election Commission
FEMA: Federal Emergency Management Agency
FERC: Federal Energy Regulatory Commission
FFO: Funds from Operations
FRP: Formula rate plan
FTC: Federal Trade Commission
GAAP: Generally Accepted Accounting Principles
GHG: Greenhouse Gases
GRC: General Rate Case
GW: Gigawatt
GWh: Gigawatt-hour
Gx: Generation
HB: House Bill
HDD: Heating Degree Days
HoldCo: Holding Company
HVDC: High voltage direct current
ICAP: Installed Capacity
ICC: Illinois Commerce Commission
IIJA: Infrastructure Investment & Jobs Act
IRA: Inflation Reduction Act
IMM: Independent Market Monitor
IOU: Investor Owned Utility
IPP: Independent Power Producer
IRA: Inflation Reduction Act
IRP: Integrated Resource Plan
ISO-NE: Independent System Operator-New England
ITC: Investment Tax Credit
Kv: Kilovolt
kWh: Kilowatt-hour
LCOE: Levelized cost of energy
LDC: Local Distribution Company - Natural Gas
LNG: Liquefied Natural Gas
LPG: Compressed Natural Gas
LT: Long Term
M&A: Merger and acquisition
MISO: Midwest Independent System Operator
Mmbtu: Million British Thermal Units
MtM: Mark-to-Market
MW: Megawatt
MWh: Megawatt-Hour
NERC: North American Electric Reliability Council
NOAA: National Oceanic and Atmospheric Administration
NOL: Net Operating Loss
NOx: Nitrous oxide
NUG: Non-Utility Generation
NYISO: New York independent system operator
Nymex: New York Mercantile Exchange
O&M: Operating & Maintenance
OPEB: Other Post Employment Benefits
PBO: Projected Benefit Obligation
PD: Proposed decision
PJM: PJM Interconnection, LLC (mid-Atlantic grid)
PPA: Power Purchase Agreement
PRC: Public Regulatory Commission
Prem: Premium
PSC: Public Service Commission
PTC: Production Tax Credit
PUCO: Public Utilities Commission of Ohio
PURPA: Public Utilities Regulatory Policy Act of 1978
QF: Qualifying Facility
Rate base: Net depreciated invested capital by a regulated utility (adjusted property, plant, and equipment)
RDR: Rider or tracker
REC: Renewable Energy Credit
RFP: Request for Proposal
RMR: Reliability Must Run
RNG: Renewable Natural Gas
ROE: Return on Equity
ROFO: Right of first offer
ROFR: Right of first refusal

ROO: Recommended opinion and order
RPS: Renewable Portfolio Standard
RTO: Regional Transmission Organization
S&P: Standard & Poor's
SB: Senate Bill
SCC: State Corporation Commission
SCOTUS: Supreme Court of the United States
SERI: System Energy Resources, Inc.
SOE: State Owned Enterprises
SOTP: Sum-of-the-Parts
SPP: Southwest Power Pool
ST: Short Term
Staff: Public regulatory body advisory team
T&D: Transmission & Distribution
TCJA: Tax Cuts and Jobs Act
TCRF: Transmission Cost Recovery Filing
TOU: Time of Use
TransCo: Transmission Company
TTM: Trailing Twelve Months
Tx: Transmission
UST: US Treasury
XLU: Utilities Select Sector SPDR Fund Index
WOTUS: Waters of the United States
YE: Year End
ZEC: Zero emission credit

Exhibit 1: Primary stocks mentioned in this report
Prices and ratings for primary stocks mentioned in this report

BofA Ticker	Bloomberg ticker	Company name	Price	Rating
PCG	PCG US	PG&E Corp.	US$ 17.89	B-1-7
PPL	PPL US	PPL Corp.	US$ 27.75	B-1-7
ETR	ETR US	Entergy Corp.	US$ 103.94	B-1-7
NI	NI US	NiSource Inc	US$ 27.04	A-1-7

Source: BofA Global Research

BofA GLOBAL RESEARCH

Price objective basis & risk

Entergy (ETR)

Our $110 price objective is based on a 2026 sum-of-the-parts analysis. The 2026E electric utilities 13.6x average P/E is grossed-up +5%, to reflect capital appreciation across the sector. We apply -1x discounts to Mississippi, New Orleans, and SERI to reflect elevated regulatory uncertainty. We value Louisiana at a -2x discount due to an even more challenging regulatory climate with elevated volatility versus jurisdictions. Texas has a +2x premium applied for premium growth potential. We net out 50% of the parent HoldCo long-term debt and apply a P/E multiple to 50% of the interest expense.

Positive and negative risks to achievement of our Price Objective are: (1) regulatory, political, and legislative changes, (2) natural or nuclear disasters including hurricanes, (3) ability to deploy capital expenditures consistent with guidance, (4) earned rates of returns at the jurisdictions, (5) interest rates fluctuations, (6) equity issuances relative to management's forecast and access to capital markets, (7) pension and nuclear decommissioning fund performance (8) nuclear accidents, and (9) management turnover.

NiSource Inc (NI)

The NiSource $29 PO is based on a 2025 sum of the parts valuation. We value each gas and electric utility separately using 2025 forward P/E multiples that are marked-to-market to the latest peer utility multiples of 13.9x for gas and 14.4x for electric. Consistent across our coverage universe, the base electric & gas peer P/E multiples are grossed up by +5% to reflect capital appreciation across the sector. We utilize a +1x premium for NIPSCO Gas/Electric due to generally constructive regulatory outcomes. We subtract the value of excess holding company debt at the parent not supporting the utility subsidiaries.

Upside and downside risks to our Price Objective are changes in 1) regulatory, political, and legislative outcomes, 2) ability to execute on capital expenditure plan, 3) inflation, operating expense, and interest rates as they influence earned rates of return, 4) customer count and load growth, 5) commodities, 6) natural disasters, 7) pension plan returns, 8) equity and asset sale needs.

PG&E Corporation (PCG)

Our PO of $19 reflects an in-line P/E versus the respective electric (16.1x) and gas (16.0x) peer P/E groups with both grossed-up by 5% to reflect capital appreciation across the sector) based on 2025E. The acute wildfire risk is incorporated separately via a scenario probability weighted at 100% assuming PCG hits the cap in 3-year increments. Lastly, we net out 50% weighting of HoldCo debt and add back 50% weighting of interest expense to derive our Price Objective.

Risks to achievement to estimates and Price Objective are: 1) Wildfire and other natural disasters/catastrophic events, 2) regulatory outcomes, 3) interest rates, 4) equity needs, 5) earned returns and operating costs, 6) Fire Victim Trust monetizations, 7) ability to deploy capital, 8) asset sales, 9) management changes, and 10) environmental, social, & governance [ESG] profile.

PPL Corporation (PPL)

Our $32 price objective is based on a sum of the parts methodology applying respective premium/discounts to the 2025E peer group multiple of 16.0x. Electric peer P/E multiple is grossed up by 5% to reflect capital appreciation across the sector, a consistent methodology across our coverage universe. We value all of the utility subsidiaries at +0.5x premium to the sector to reflect the lack of regulatory activity, above-average credit metrics, transmission earnings mix, and reasonable jurisdictions.

Risks to the achievement of our Price Objective are: 1) Integration of Rhode Island assets, 2) regulatory/political/legislative changes, 3) capital markets, 4) ability to earn at or above the regulatory allowed return on equity, 5) cost control, 6) capital expenditures forecasts and execution, 7) natural disasters/weather, 8) equity issuance/repurchase plans, 9) corporate taxes, 10) pension returns, and 11) litigation.

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
BUY				
	Alliant Energy Corporation	LNT	LNT 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
	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
	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
	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
	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
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
	Ameren Corporation	AEE	AEE US	Julien Dumoulin-Smith
	Ameresco	AMRC	AMRC US	Julien Dumoulin-Smith
	American Electric Power	AEP	AEP US	Julien Dumoulin-Smith
	Bloom Energy	BE	BE US	Julien Dumoulin-Smith
	ChargePoint Holdings	CHPT	CHPT US	Cameron Lochridge
	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	EVRG	EVRG US	Julien Dumoulin-Smith
	Exelon	EXC	EXC US	Paul Zimbardo
	Generac Holdings Inc.	GNRC	GNRC US	Julien Dumoulin-Smith
	Idacorp	IDA	IDA US	Paul Zimbardo
	Maxeon 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

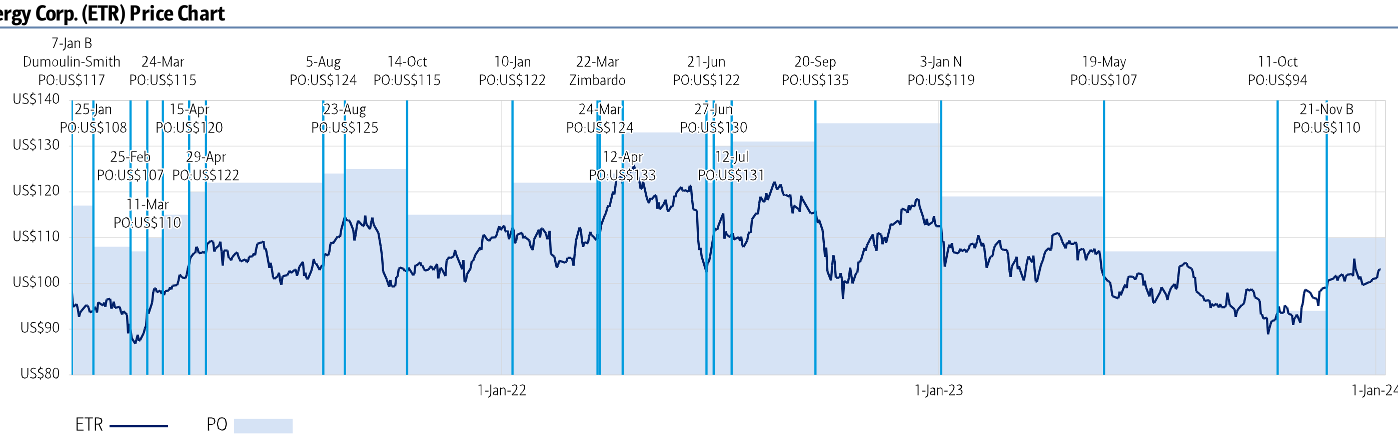
North America - Utilities and Alt Energy Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
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
	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
	WEC Energy Group Inc	WEC	WEC US	Julien Dumoulin-Smith

Disclosures

Important Disclosures

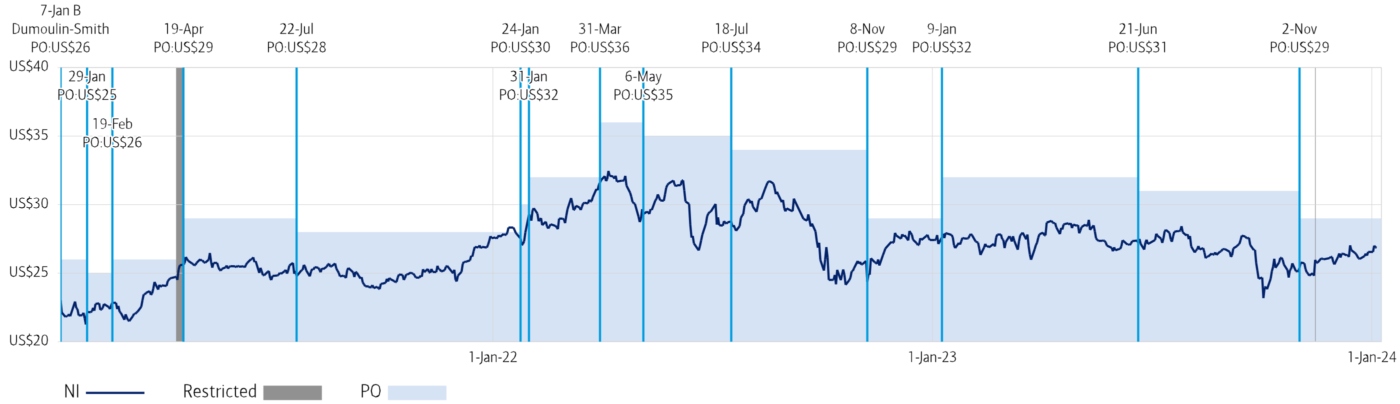
Entergy Corp. (ETR) Price Chart



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.

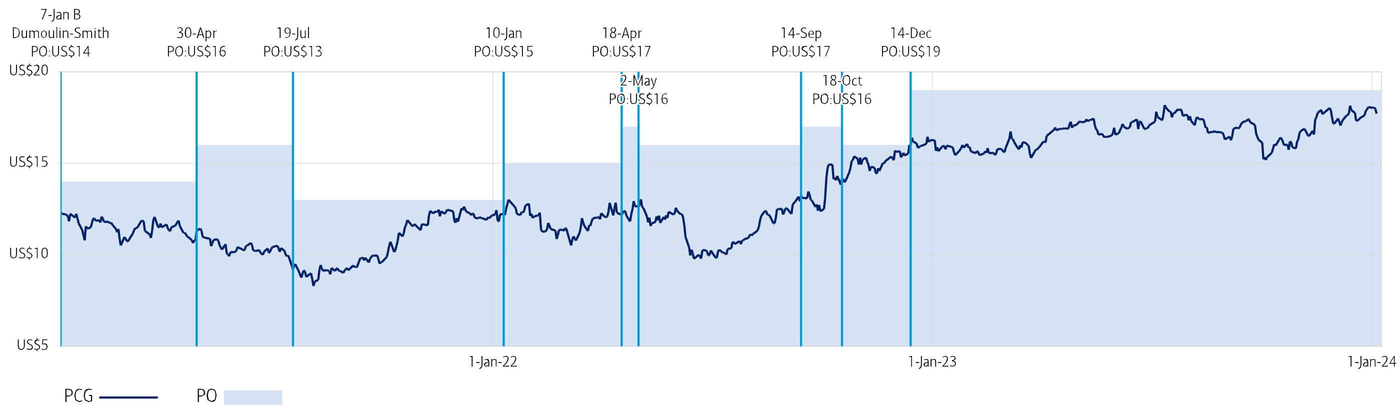
NiSource Inc (NI) Price Chart



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.

PG&E Corp. (PCG) Price Chart



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

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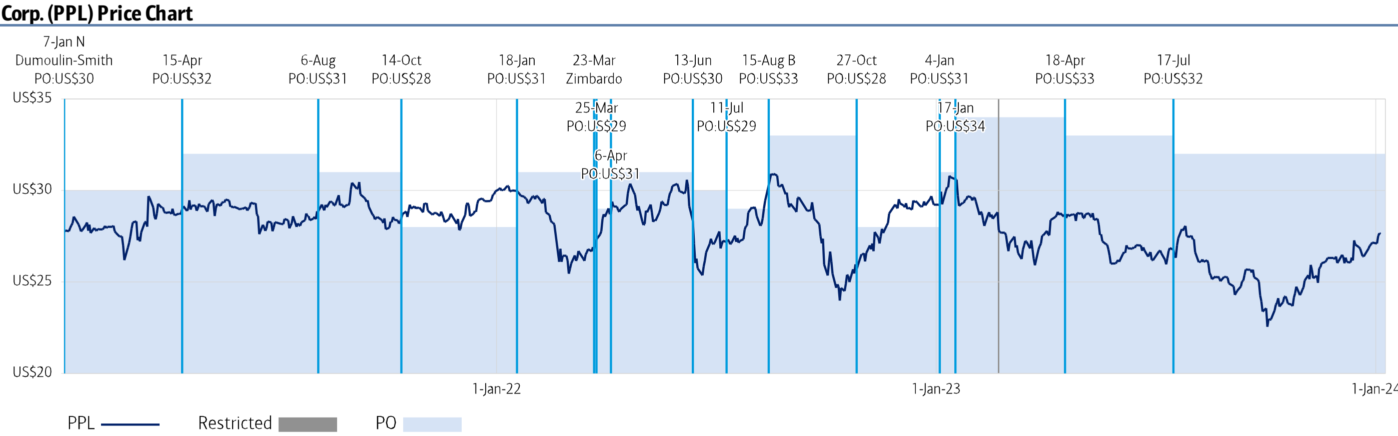
PPL Corp. (PPL) Price Chart



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: Energy Group (as of 31 Dec 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships [R1]	Count	Percent
Buy	83	61.48%	Buy	64	77.11%
Hold	28	20.74%	Hold	21	75.00%
Sell	24	17.78%	Sell	18	75.00%

Equity Investment Rating Distribution: Utilities Group (as of 31 Dec 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships [R1]	Count	Percent
Buy	72	46.45%	Buy	52	72.22%
Hold	45	29.03%	Hold	32	71.11%
Sell	38	24.52%	Sell	21	55.26%

Equity Investment Rating Distribution: Global Group (as of 31 Dec 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships [R1]	Count	Percent
Buy	1895	53.62%	Buy	1083	57.15%
Hold	832	23.54%	Hold	454	54.57%
Sell	807	22.84%	Sell	383	47.46%

[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.

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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.

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