

Exhibit 1: Consolidated Income Statement

Consolidated Income Statement						
<i>(\$ millions)</i>	2019A	2020A	2021A	2022E	2023E	2024E
Revenues	6,845	6,680	7,329	7,534	7,710	7,892
Cost of Goods Sold	(2,833)	(2,508)	(3,070)	(3,070)	(3,070)	(3,070)
O&M	(1,411)	(1,383)	(1,581)	(1,606)	(1,622)	(1,639)
Taxes Other than Income	(333)	(359)	(389)	(395)	(399)	(403)
EBITDA	\$2,268	\$2,430	\$2,289	\$2,462	\$2,619	\$2,780
D&A	(992)	(1,048)	(1,114)	(1,165)	(1,169)	(1,164)
EBIT	\$1,276	\$1,382	\$1,175	\$1,297	\$1,449	\$1,616
Interest	(523)	(563)	(503)	(536)	(598)	(670)
Other Income	89	73	159	97	97	97
EBT	\$842	\$892	\$831	\$859	\$948	\$1,043
Taxes	(156)	(144)	(102)	(66)	(71)	(77)
Non controlling Interests						
Net Income GAAP	686	748	729	794	878	966
Net Income (Operating)	708	764	768	832	920	1,006
EPS (Operating)	\$2.49	\$2.67	\$2.65	\$2.87	\$3.17	\$3.47

Source: Company reports, MSUSA estimates

Exhibit 2: Consolidated Cash Flow Statement

Consolidated Cash Flow Statement						
<i>(\$ millions)</i>	2019A	2020A	2021A	2022E	2023E	2024E
Net Income	708	764	768	832	920	1,006
Depreciation	992	1,048	1,114	1,165	1,169	1,164
Deferred Taxes	150	170	249	252	255	255
CapEx	(2,104)	(2,317)	(2,076)	(2,645)	(3,345)	(3,045)
Net Cash Generation	(254)	(335)	55	(395)	(1,001)	(620)

Source: Company reports, MSUSA estimates

Exhibit 3: Consolidated Balance Sheet

Consolidated Balance Sheet						
<i>(\$ millions)</i>	2019A	2020A	2021A	2022E	2023E	2024E
Cash & Equivalents	129	150	437	310	711	779
Short Term Debt	1,220	1,506	382	382	382	382
Current Portion Long Term Debt	0	0	0	0	0	0
Long Term Debt	11,951	11,951	12,092	12,410	14,386	15,687
Total Debt	\$13,171	\$13,457	\$12,474	\$12,792	\$14,768	\$16,069
Preferred Stock	0	0	0	0	0	0
Total Debt & Preferred	\$13,171	\$13,457	\$12,474	\$12,792	\$14,768	\$16,069
Shareholder's Equity	5,018	5,019	6,407	6,718	7,080	7,487
Total Capitalization	\$18,189	\$18,476	\$18,881	\$19,510	\$21,848	\$23,556

Source: Company reports, MSUSA estimates

Shahriar Pourreza, CFAshahriar.pourreza@guggenheimpartners.com
212 518 5862**Constantine Lednev**constantine.lednev@guggenheimpartners.com
212 651 0847**James Kennedy**james.kennedy@guggenheimpartners.com
212 823 6741**Jamieson Ward, CFA**jamieson.ward@guggenheimpartners.com
212 518 9661**Guggenheim Utilities Research Team**

GSUtilities@guggenheimpartners.com

Ticker	Price	Rating
ALE	61.00	Neutral
DUK	109.88	Buy
ED	100.85	Neutral
NEE	89.90	Buy
OGE	41.85	Buy
PCG	12.89	Buy
POR	52.15	Buy
PPL	29.85	Buy

The Guggenheim Daily Transmission: NEE NDR, CA, Michigan, Hydrogen, ED, PCG, OGE, DUK, VA, Wind, POR, Power/PJM, ERCOT, RGGI/PA, Climate, ALE, Nuclear, RI/PPL

For details on our Guggenheim-hosted client Utility events including: our OGS NDR; EEI Conference meetings; and other events, scroll down...

NEE NDR: Top IRA Idea - Runway Set for Takeoff; Fundamentals On NEER, FPL Start Spring-loading Growth; Raising TP to \$108 (see our note [HERE](#))

Forward Power Curves, Genco MtM, and Weekly Commentary (see our note [HERE](#))

CA – CA fighting multiple fires with continued drought conditions; hurricane weather to bring wind and wet weather

Michigan – MI governor issues statement on loan application to bring Palisades nuclear plant out of decommissioning

Hydrogen – New hydrogen technology unveiled using direct charge from solar energy

ED – CECONY comments on rising gas costs this summer; customers to see bills increase by up to 30%

ED – CECONY replies with rate case settlement status update, negotiations continue through September 30, 2022

PCG – ALJ sets hearing dates for September 21,23 in the PG&E 2023 GRC

OGE – AARP comments on unopposed settlement for OG&E 2022 rate case

DUK – Duke Energy Florida once again granted permission to construct ~749MW of new solar

VA – Democrats and Youngkin continue to spar over energy and environmental policy

Wind – GE-Siemens suit results in injunction against further Haliade-X sales

POR – PGE conducts PSPSs across footprint over the weekend, begins restorations

DUK – Duke teams up with Ford for EV grid balancing pilot program

Power/PJM – PE firm Earthrise acquires 2 gas plants from ArcLight

ERCOT – Brazos bankruptcy plan could be approved on 9/13

RGGI/PA – RGGI results drive sharp criticism from Jobs Alliance in PA

Climate – new study finds world is close to climactic tipping point

ALE – Mine unions reach 47-month labor agreement with mine operators

Policy/Nuclear – AP profiles SMRs with a focus on Rolls-Royce data points

RI/PPL – Public comment period opens for offshore wind RFP

CA – CA fighting multiple fires with continued drought conditions; hurricane weather to bring wind and wet weather

- Calfire is fighting multiple wildfires in California, while weather reports anticipate hurricane weather to bring cooler weather and heavy rainfall.
- Fairview Fire, 27,000 acres, 49% contained, 52 structures damaged or destroyed.
- Mosquito Fire, 41,000 acres, 10% contained, no damage report.
- None of the active incidents have significant damage reports yet
- More on Calfire incidents [here](#).

Guggenheim takeaway: We continue to monitor for wildfire conditions and damage assessments but despite the continued frequency of wildfires, damage reports have been minimal. While the Fairview fire threatened some more populated areas (more than 10,000 homes) Calfire has increased containment and upcoming weather suggest rains could provide some reprieve. PCG related incident reports have not identified any damaged equipment or downed wires and structures near alleged points of ignition have been inspected according to WMP requirements.

Michigan – MI governor issues statement on loan application to bring Palisades nuclear plant out of decommissioning

- MI Governor's office issued a statement on the application for a DOE loan to get Palisades nuclear plant restarted and off the decommissioning path.
- Holtec (private), who is the owner and decommissioning agent, is supportive of the reopening plan.
- PR [Here](#).

Guggenheim takeaway: We caught up with CMS mgmt. shortly after the announcement and the company maintains its prior stance in support of MI policy. Palisades would be able to participate in the resource RFP as outlined in the CMS IRP and would be eligible for the FCM (if the plant can submit an economic bid). That said, reversing the decommissioning path is a heavy lift given the currently shut down status, needing to invest in capex, finding labor and or an ultimate owner for the power plant (ETR has been clear in commitments to cease operations at Palisades prior to the decommissioning sale. There are currently no regulatory mechanisms for LT operations support at Palisades and further state level support would require legislative intervention. This could present some upside for CMS but too early in the process. We wrote on this when it first came up, see [HERE](#).

Hydrogen – New hydrogen technology unveiled using direct charge from solar energy

- SunHydrogen (HYSR, OTCMKTS) has unveiled a direct solar charge technology to create green hydrogen
- Technology remains in prototype stage.
- More [here](#).

Guggenheim takeaway: We continue to monitor emerging technologies and commercialization of hydrogen which remains in early stages.

ED – CECONY comments on rising gas costs this summer; customers to see bills increase by up to 30%

- Con Edison is urging customers to take conservation measures as electricity and natural gas are expected to be substantially higher this year
- The increases in customer bills are mainly due to increases in the market cost of natural gas, CECONY anticipating 30%+ increases.
- The company also offers energy-saving tips and a number of payment assistance options, including levelized billing.
- More [here](#).

Guggenheim takeaway: FYI. We continue to monitor bill headroom issues, especially in the northern US states that rely heavily on natural gas for heating and power generation. This could present an issue throughout the country and the Commissioners we have met with are well aware of these tail risks. The question is, while Fuel and Purchase Power are

September 14, 2022

THE FLEISHMAN DAILY 9/14/22

Palisades nuclear plant reopen?, Utility bills rising, ETR, Liquids Index, FSLR, Hydrogen sector

The Fleishman Daily 9/14/22

Utilities: Palisades nuclear plant reopen?, Utility bills rising, ETR

Midstream: Liquids Index

Clean Energy: FSLR, Hydrogen sector

Utilities

Palisades nuclear plant reopen? – New owner Holtec files for DOE Civil Nuclear Credit to restart plant with Gov Whitmer support

Utility bills rising – datapoints from ED and yesterday's CPI report

ETR – NRC to conduct additional oversight of Waterford 3 nuclear plant; seems minor

Midstream

FERC Liquids Pipeline Index – Preliminary August data comes in for 2nd straight month, down 1.7% from July, still up 12.7% from August 2021

Clean Energy

FSLR – Compounding IRA credit value

Hydrogen sector – ITM '23 guidance short of street, CEO leaving, and expansion difficulties; Topsoe

Wolfe Utility & Midstream Materials: [Utility Comps \[research.wolferesearch.com\]](https://research.wolferesearch.com), [Utility Stock Charts \[research.wolferesearch.com\]](https://research.wolferesearch.com), [Midstream Comps \[research.wolferesearch.com\]](https://research.wolferesearch.com), [Midstream Stock Charts \[research.wolferesearch.com\]](https://research.wolferesearch.com), [Clean Energy Comps \[research.wolferesearch.com\]](https://research.wolferesearch.com), [Valuation Charts \[go.wolferesearch.com\]](https://go.wolferesearch.com), [Models \[research.wolferesearch.com\]](https://research.wolferesearch.com)

Utilities

Palisades nuclear plant reopen? – New owner Holtec files for DOE Civil Nuclear Credit to restart plant with Gov Whitmer support

- Last week, Holtec filed with the DOE seeking a Civil Nuclear Credit (CNC) to support reopening and operation of the Palisades Nuclear Plant in Michigan.
- Holtec bought the plant from ETR as part of plans to decommission it, but is now looking to restart it.

- Gov Whitmer voiced the state's support for the plant reopening and receiving CNCs, a program set up in last year's bipartisan Infrastructure Bill. This is the same program that has helped revive Diablo Canyon. Note Energy Secretary Granholm is also the former Governor of Michigan.

This is another sign of the Nuclear Renaissance in the US following Diablo's revival and the nuclear PTC passed as part of IRA. However, the hurdle here is much higher since a permanently shut nuclear plant has never reopened. We think significant capital work needs to be done on the plant and they will need to find fuel somewhere since none had been needed. So it may take a couple years to get the plant restarted. Finally, they will need a PPA with CMS and maybe other Michigan utilities, which will again require a lot of state support. But when there's a will, there's a way. Stay tuned.

Utility bills rising – datapoints from ED and yesterday's CPI report

- Yesterday, ED sent an email asking customers to prepare for significantly higher electric / gas winter bills vs. last year; estimated utility bill increases compared to last winter are as follows:
 - 22% / 27% more for residential CECONY (NYC) / O&R (Westchester) electric customers.
 - 23% / 28% more for small / large commercial customers.
 - 32% more for residential gas customers.
- Separately, the Bureau of Labor Statistics (BLS) reported Energy Services CPI data for August 2022 at 264.748 – this represents a +2.1% sequential MoM change and a YoY change of +19.9%.
 - BLS reports monthly average Energy Services data (seasonally adjusted; both electric and gas) for U.S. cities and all urban consumers.
 - In the CPI report, electricity counts for 2.6% and utility (piped) gas services counts for 1.0% of the overall CPI index.
- For reference, since the start of 2022, the YoY change in Energy Services has ranged from approximately +12% to +20% – see the graph below.

Given elevated natural gas prices, we remain watchful of customer bill pressure and sense that this will increasingly become an investor concern into the winter. While ED's projected winter bill increases are considerably large, rising bills are an industry trend in the utility sector. As a reminder, ED is largely a T&D utility and does not own generation. ED is also offering plans to spread out payments equally across the year in an effort to mitigate some bill impact.

Source: Wolfe Utilities & Power Research; Bureau of Labor Statistics (BLS)

ETR – NRC to conduct additional oversight of Waterford 3 nuclear plant; seems minor

- On 9/13, the NRC placed ETR's Waterford 3 nuclear plant in LA under increased oversight because radiation monitors were be calibrated improperly between Jan 2011 and Feb 2022.
- The risk associated with the issue was labeled low to moderate (i.e., white) by the NRC, as there could have been unnecessary evacuations and risks to the public
- ETR argued the risks were very low safety significance (i.e., green) since they could have found other ways of measuring radiation levels in the case of an accident.
- The NRC says ETR had multiple opportunities to correct the errors before they were identified by workers this year.

From: [Steve Fleishman](#)
To: [Scripps, Daniel \(LARA\)](#)
Subject: The Fleishman Daily 9/14/22 - Palisades nuclear plant reopen?, Utility bills rising, ETR, Liquids Index, FSLR, Hydrogen sector
Date: Wednesday, September 14, 2022 9:06:52 AM

CAUTION: This is an External email. Please send suspicious emails to abuse@michigan.gov



Wolfe banner



September 14, 2022

THE FLEISHMAN DAILY 9/14/22

Palisades nuclear plant reopen?, Utility bills rising, ETR, Liquids Index, FSLR, Hydrogen sector

The Fleishman Daily 9/14/22

Utilities: Palisades nuclear plant reopen?, Utility bills rising, ETR

Midstream: Liquids Index

Clean Energy: FSLR, Hydrogen sector

Utilities

Palisades nuclear plant reopen? – New owner Holtec files for DOE Civil Nuclear Credit to restart plant with Gov Whitmer support

Utility bills rising – datapoints from ED and yesterday's CPI report

ETR – NRC to conduct additional oversight of Waterford 3 nuclear plant; seems minor

Midstream

FERC Liquids Pipeline Index – Preliminary August data comes in for 2nd straight month, down 1.7% from July, still up 12.7% from August 2021

Clean Energy

FSLR – Compounding IRA credit value

Hydrogen sector – ITM '23 guidance short of street, CEO leaving, and expansion difficulties; Topsoe

Wolfe Utility & Midstream Materials: [Utility Comps](#), [Utility Stock Charts](#), [Midstream Comps](#), [Midstream Stock Charts](#), [Clean Energy Comps](#), [Valuation Charts](#), [Models](#)

Utilities

Palisades nuclear plant reopen? – New owner Holtec files for DOE Civil Nuclear Credit to restart plant with Gov Whitmer support

- Last week, Holtec filed with the DOE seeking a Civil Nuclear Credit (CNC) to support reopening and operation of the Palisades Nuclear Plant in Michigan.
- Holtec bought the plant from ETR as part of plans to decommission it, but is now looking to restart it.
- Gov Whitmer voiced the state's support for the plant reopening and receiving CNCs, a program set up in last year's bipartisan Infrastructure Bill. This is the same program that has helped revive Diablo Canyon. Note Energy Secretary Granholm is also the former Governor of Michigan.

This is another sign of the Nuclear Renaissance in the US following Diablo's revival and the nuclear PTC passed as part of IRA. However, the hurdle here is much higher since a permanently shut nuclear plant has never reopened. We think significant capital work needs to be done on the plant and they will need to find fuel somewhere since none had been needed. So it may take a couple years to get the plant restarted. Finally, they will need a PPA with CMS and maybe other Michigan utilities, which will again require a lot of state support. But when there's a will, there's a way. Stay tuned.

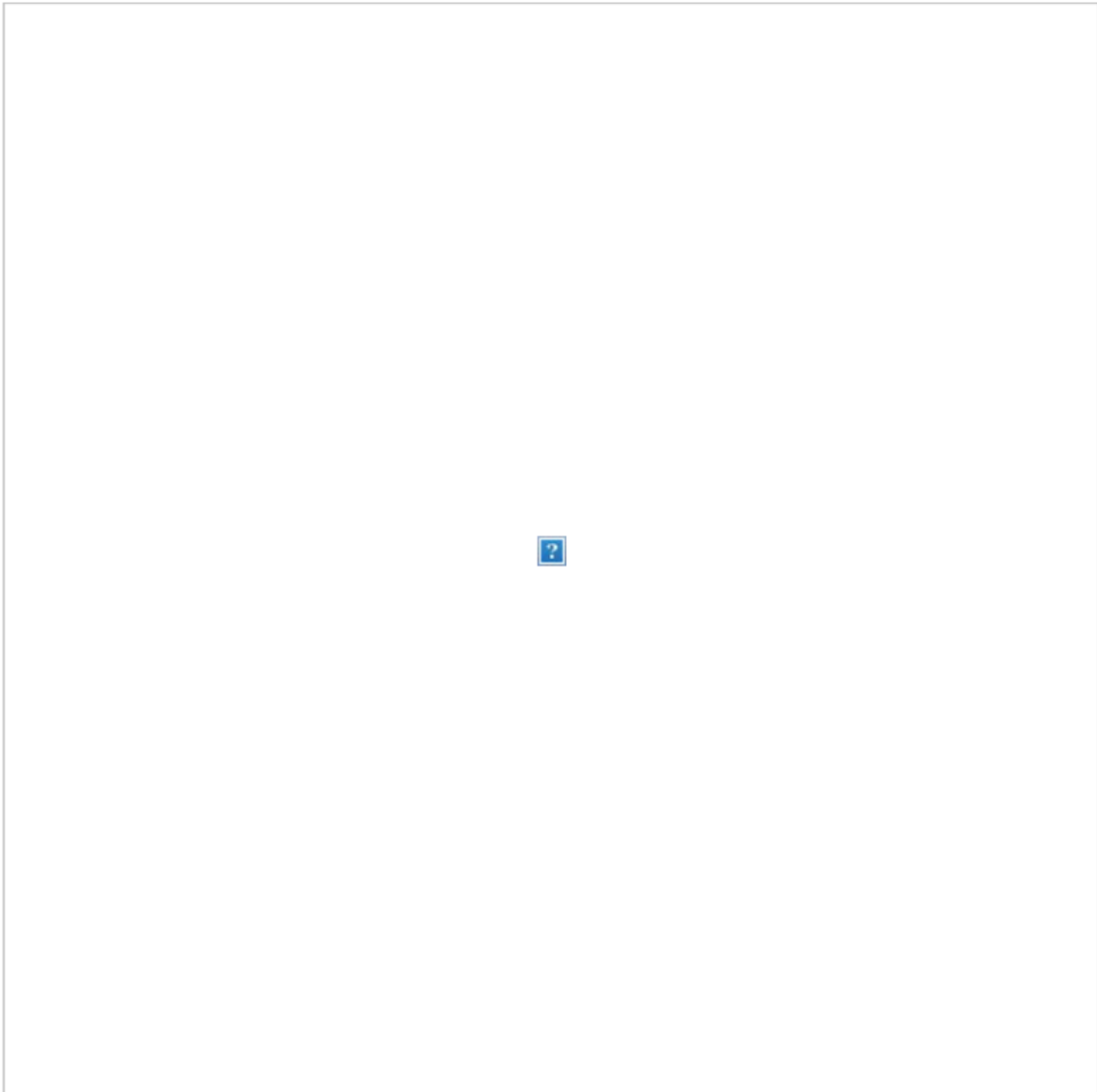
Utility bills rising – datapoints from ED and yesterday's CPI report

- Yesterday, ED sent an email asking customers to prepare for significantly higher electric / gas winter bills vs. last year; estimated utility bill increases compared to last winter are as follows:
 - 22% / 27% more for residential CECONY (NYC) / O&R (Westchester) electric customers.
 - 23% / 28% more for small / large commercial customers.
 - 32% more for residential gas customers.
- Separately, the Bureau of Labor Statistics (BLS) reported Energy Services CPI data for August 2022 at 264.748 – this represents a +2.1% sequential MoM change and a YoY change of +19.9%.
 - BLS reports monthly average Energy Services data (seasonally adjusted; both electric and gas) for U.S. cities and all urban consumers.
 - In the CPI report, electricity counts for 2.6% and utility (piped) gas services

counts for 1.0% of the overall CPI index.

- For reference, since the start of 2022, the YoY change in Energy Services has ranged from approximately +12% to +20% – see the graph below.

Given elevated natural gas prices, we remain watchful of customer bill pressure and sense that this will increasingly become an investor concern into the winter. While ED's projected winter bill increases are considerably large, rising bills are an industry trend in the utility sector. As a reminder, ED is largely a T&D utility and does not own generation. ED is also offering plans to spread out payments equally across the year in an effort to mitigate some bill impact.



Source: Wolfe Utilities & Power Research; Bureau of Labor Statistics (BLS)

ETR – NRC to conduct additional oversight of Waterford 3 nuclear plant; seems minor

- On 9/13, the NRC placed ETR's Waterford 3 nuclear plant in LA under increased oversight because radiation monitors were be calibrated improperly between Jan 2011

and Feb 2022.

- The risk associated with the issue was labeled low to moderate (i.e., white) by the NRC, as there could have been unnecessary evacuations and risks to the public
- ETR argued the risks were very low safety significance (i.e., green) since they could have found other ways of measuring radiation levels in the case of an accident.
- The NRC says ETR had multiple opportunities to correct the errors before they were identified by workers this year.

We view this as minor. Waterford 3 is ETR's first nuclear plant placed under additional oversight by the NRC in some time. The company embarked on an operational improvement program for its nukes in the middle of last decade. The rest of its nukes are in the NRC's column 1 (no additional oversight).

Midstream

FERC Liquids Pipeline Index – Preliminary August data comes in for 2nd straight month, down 1.7% from July, still up 12.7% from August 2021

- This morning, the U.S. Bureau of Labor Statistics released its preliminary August PPI data
- The August 2022 Final Demand-Finished Goods PPI reading of 258.1 reflects a 1.7% decrease from July and a 12.7% increase from August 2021
- As a reminder, midstream liquids pipelines have a natural hedge to inflation via their regulated rate structures – the FERC liquids pipeline index applies an “annual changes in PPI-FG + adder” methodology, where the annual increase in 2022 PPI - 0.21% will be added to regulated liquids pipeline ceiling rates for the July 1, 2023 to June 30, 2024 period.

PPI – Finished Goods cooled off for a second straight month in August, but remains up 12.7% YoY (vs. being up 18.3% YoY in June). Of note, PPI – FG (which is used in the FERC liquids pipeline index) rose much faster than headline PPI through much of the year, but is now moderating more considerably as well as it likely reflects a greater energy tilt. Overall, inflation remains a constructive story in midstream supporting strong tariff increases, and we actually find the recent moderation in the index as somewhat comforting as we had started to worry more about regulatory, consumer, and political backlash as the rate of PPI-FG increases had been getting out of control back in June.

Clean Energy

FSLR – Compounding IRA credit value

[Click here to view our complete note](#)

In the driver's seat. The Inflation Reduction Act (IRA) is a game changer for FSLR that gives the company a competitive advantage as the only sizable U.S. solar manufacturer. FSLR should receive \$0.17/watt of stacked credits on U.S. production across modules, cells, and wafer equivalents starting in 2023, plus likely domestic content benefits. The credits could

ramp up to a whopping \$1.3B in 2025 when new capacity additions come online. FSLR's plan to invest \$1.2B to further expand U.S. capacity by 4.4 GW is a smart move to capitalize the IRA windfall and first mover advantage. For example, the new capacity has a capital cost of \$0.27/watt, implying less than a 2-year payback just from the \$0.17/watt in IRA credits.

Hydrogen sector – ITM '23 guidance short of street, CEO leaving, and expansion difficulties; Topsoe announces big solid oxide electrolyzer order for green ammonia

- ITM Power reported FY22 revenues/EBITDA of GBP5.6M/(GBP39.7M) vs. GBP4.5M/(GBP21.7); these were short of estimates
 - **Guidance below consensus.** ITM sees FY23 revenues at GBP23M-28M on sales of 48-65 MW; cons is GBP42M. EBITDA guidance is (GBP45-50) vs. consensus at (GBP40)
 - **CEO departing.** The company announced that founder/CEO Graham Cooley will be stepping down once a new CEO is found; Cooley will stay on in an advisory role going forward
 - **Pulling back on capacity growth targets.** ITM announced they were no longer looking to add a second factory in the UK given cost and construction bottlenecks; will boost capacity at existing site by 50% to 1.5GW and focus on development of capacity on the continent; no longer expecting 5 GW of production capacity by 2024
- Topsoe solid oxide electrolyzer order. Overnight Topsoe announced a framework agreement with First Ammonia to provide 5 GW of solid oxide electrolysis capacity over time
 - First Ammonia is a US-based startup that plans to build out a green ammonia network in the US and Europe
 - The initial order is for 500 MW of electrolyzers to be delivered to sites in Germany and the US Southwest in 2025
 - Topsoe FID'd a 5 GW electrolyzer factory in Denmark a few weeks ago; the order will be fulfilled from that facility

Shares of ITM were down 25% as of the time of this writing on the combination of the guidance miss, CEO announcement, and bottleneck on growth potential. The company's outlook is a notable contrast with companies such as the US names that already have scale and have large fuel cell/electrolyzer order books. We note that despite the issues with UK construction, Topsoe just FID'd a factory on the continent. However, this does underscore execution risks in the sector and we will be monitoring how the macro environment could impact other expansions. With respect to the Topsoe announcement there are a few takeaways. First, it's another sign that commercial interest for electrolyzers is increasing. Second, this is a reminder that even on the solid oxide side there will be competition - it's not just Bloom. On the other hand, we note that First Ammonia is a startup and not an established entity with scale in the ammonia market and we have not yet seen commercial installations of the Topsoe electrolyzer at this point; deliveries are still a few years out.

Wolfe Events

September 13-15: EXC non-deal roadshow on West Coast

September 28-30: Wolfe Utilities, Midstream, and Clean Energy Conference in NYC – register

[here](#)

September 30: AEE non-deal roadshow in Boston

October 4-7: SRE non-deal roadshow in Europe

Recent Popular Reports

[Wolfe Clean Energy Initiation](#)

[Utilities Top 10 for 2022](#)

[Midstream Top 10 for 2022](#)

[Clean Energy Top 10 for 2022](#)

[Power Supply Outlook 2021](#)

[Wolfe Hydrogen Primer](#)

[Wolfe Resi Solar Primer](#)

[Utility Proxy Review](#)

[Midstream Proxy Review](#)

[Clean Energy Proxy Review](#)

[PJM Auction Postview](#)

[Utilities Credit Metrics Outlook](#)

[Midstream Credit Metrics Outlook](#)

[Utilities 2020 Election Preview](#)

[Utility Pension Review](#)

[Utility Liquidity Review](#)

[Midstream Leverage Report](#)

[Wolfe Utilities Primer](#)

[Wolfe Midstream Primer](#)

Calendar



[View Comp Table](#)

Steve Fleishman
sfleishman@wolveresearch.com
(646) 582-9241
[View Steve's Research](#)

Alex Kania
akania@wolveresearch.com
(646) 582-9244
[View Alex's Research](#)

Keith Stanley, CFA
kstanley@wolveresearch.com
(646) 582-9243
[View Keith's Research](#)

David Paz
dpaz@wolferesearch.com
(646) 582-9242

Michael Sullivan, CFA
msullivan@wolferesearch.com
(646) 582-9245

David Peters
dpeters@wolferesearch.com

Aditya Gandhi
agandhi@wolferesearch.com

For important disclosures regarding companies covered by Wolfe Research, LLC, please see <https://wolferesearch.bluematrix.com/sellside/Disclosures.action>.

The information contained in this e-mail is intended for the exclusive use of the addressee(s) and may contain confidential or privileged information. Any review, use, disclosure, distribution or copying of this transmittal is prohibited except by or on behalf of the intended recipient. The contents of this e-mail, including any attachments, is to be used solely for informational purposes, and should not be regarded as an offer, or a solicitation of an offer to buy or sell a security, financial instrument or service discussed herein. Opinions in this communication constitute the current judgment of the author as of the date and time of this e-mail and are subject to change without notice. Information herein is believed to be reliable but Wolfe Research, LLC and its affiliates, including but not limited to WR Securities, LLC doing business as Wolfe Research Securities and as Wolfe Capital Markets and Advisory, makes no representation that it is complete or accurate. Recipients are encouraged to seek financial advice from their financial advisor regarding the appropriateness of investing in a security or financial instrument referred to in this e-mail and should understand that statements regarding the future performance of the financial instruments or the securities referenced herein may not be realized. We will not be able to accept orders by email to buy or sell securities, transfer funds or which involve time-sensitive instructions. Subject to applicable law, Wolfe Research and its affiliates reserve the right to intercept, monitor and retain communications transmitted through its systems.

www.wolferesearch.com

Wolfe Research
757 Third Avenue, 6th Floor
New York, NY 10017
(646) 845-0700

This email is limited to clients of Wolfe Research. **Please do not forward.**

Please help us protect your advantage...

DO NOT FORWARD

[Contact Your Salesperson to Manage Subscriptions](#)

[Unsubscribe](#)

From: [Steve Fleishman](#)
To: [Scripps, Daniel \(LARA\)](#)
Subject: The Fleishman Daily 10/27/22 - XEL, PCG, CMS, SO, AEP, DTE, NJ Offshore Wind Transmission, POR, OGE, FE, AGR, MMP, NOVA, FSLR, Hydrogen
Date: Thursday, October 27, 2022 9:18:55 AM

CAUTION: This is an External email. Please send suspicious emails to abuse@michigan.gov



October 27, 2022

THE FLEISHMAN DAILY 10/27/22

XEL, PCG, CMS, SO, AEP, DTE, NJ Offshore Wind Transmission, POR, OGE, FE, AGR, MMP, NOVA, FSLR, H2

The Fleishman Daily 10/27/22

Utilities: XEL, PCG, CMS, SO, AEP, DTE, NJ Offshore Wind Transmission, POR, OGE, FE, AGR

Midstream: MMP

Clean Energy: NOVA, FSLR, Hydrogen

Utilities

XEL – Small Q3 miss, FY22 narrowed at higher midpt; 2023 guide in-line; big capex adds with lot of upside; IRA benefits highlighted; net positive

PCG – Q3 beats, FY22 guidance in line, FY23 guidance slightly below consensus but EPS growth affirmed, no equity needs through 2024; net positive

CMS – Q3 EPS in-line, 2022 guidance raised, 2023 guidance misses, high-end of 6-8% EPS CAGR affirmed, \$493M equity contracted; mixed

SO – Q3 misses but FY22 guidance raised to top end; Vogtle schedule unchanged; sales growth robust; in line

AEP – Q3 beats but FY22 and FY23 guidance affirmed; 6-7% EPS growth reaffirmed consistent with Analyst Day update; in line

DTE – Q3 in-line, 2022 guide reaffirmed; bigger update at EEI

NJ Offshore Wind Transmission – FE the big winner, almost \$1B opportunity

POR – Upsizes equity forward to ~\$499M from ~\$431M at \$43/sh. public offering price; \$260M of net proceeds to be utilized towards repaying term loan

OGE – Intervenors file testimony in OG&E's request to recover ~\$424M of fuel costs in OK over 24 months; largely recommend longer amortization periods

FE – Who will be the new King of Akron?

AGR – Sorting through the moving pieces

Midstream

MMP – Q3 beats but with more moving pieces than usual; Raises 2022 guidance slightly; Buyback pace remains robust

Clean Energy

NOVA – Q3 misses, 2022 guidance cut on lower principal payments; triple-double, triple plan reaffirmed; net negative

FSLR – Incremental booking announcement; New bookings update on tonight's earnings call will be important

Hydrogen – ITM warns on supply chain and warranty provisions; highlights execution challenges for the hydrogen space

Quarterly data: [Weather](#), [Forward Prices](#), [Spot Prices](#), [Nuke Outages](#)

Wolfe Utility & Midstream Materials: [Utility Comps](#), [Utility Stock Charts](#), [Midstream Comps](#), [Midstream Stock Charts](#), [Clean Energy Comps](#), [Valuation Charts](#), [Models](#)

Utilities

XEL – Small Q3 miss, FY22 narrowed at higher midpt; 2023 guide in-line; big capex adds with lot of upside; IRA benefits highlighted; net positive

- **Small Q3 miss.** XEL reported \$1.18 of EPS vs consensus at \$1.21 (WRe \$1.23)
- **FY22 narrowed at higher midpoint.** \$3.14-3.19 vs \$3.10-3.20 prev.; new \$3.17 midpoint matches us/consensus
- **2023 guidance in-line, 5-7% annual EPS growth target affirmed.** 2023 range of \$3.30-3.40 vs consensus/us at \$3.37/\$3.36
- **\$3.5B added to 5-yr capex plan (+13.5%), \$2-4B of upside too.** 2022-27 rate base CAGR of 6.5% under base plan, 7.5% w/ incremental capex (prior was 6.5% base CAGR, 7.3% incremental)
 - Upside = \$1.5-3B from renewables in CO/MN and \$0.5-1.0B for transmission in CO
- **Very modest equity needs, \$750M in 5-yr plan.** \$325M of ATM equity, \$425M of DRIP equity
- **IRA benefits.** Expected to drive \$500M in customer savings over the next 5 years from existing projects, nuke PTC could add \$0-200M starting in 2024
 - **Wind and solar PTC** – reduces LCOE for solar by 25-40%, wind by 50-60%

- Cost comparison assumes a limited ITC for solar and no PTC for wind projects without IRA
- **Transferability** – expected to improve CFO by \$1.8B over next 5 years; FFO/D expected to be 100bps higher, now pointing to 18%
- **Alternative minimum tax** – no material impact expected

2023 guidance was in-line after consensus came down a couple pennies over the past week. The refreshed capex and financing plan looks positive – a 6.5% CAGR sustained off a higher base + \$2-4B of upside from renewables and transmission and very modest equity needs given the benefits from transferability in the IRA (100bps accretive to FFO/D). As we expected, XEL reaffirmed its 5-7% EPS growth target but our sense that could prove conservative as a lot of the IRA benefits materialize (also potential ROE upside in MN). We will be looking for an update on the MN rate case on the call, where settlement timing is ripe between now and mid-December.

PCG – Q3 beats, FY22 guidance in line, FY23 guidance slightly below consensus but EPS growth affirmed, no equity needs through 2024; net positive

- **3Q22 beats:** \$0.29 vs \$0.25 consensus, \$0.24 WRe. The Q included +\$0.06 from cost reductions.
- **2022 guidance narrowed around original midpoint.** Now sees \$1.09-1.11 vs \$1.07-1.13 previously; consensus is \$1.10 consensus vs \$1.09 WRe. PCG points to 4Q22v4Q21 decline on “reinvestment and other”.
- **2023 guidance slightly below consensus.** \$1.19-1.23 vs \$1.23 consensus, \$1.19 WRe (our estimate assumed a 50bp cut to currently allowed CPUC ROE).
 - Key factors are \$370-430M from unrecoverable interest expense but positive drivers are AFUDC equity, incentive revenues, tax benefits, cost savings, all unquantified
- **Total return of at least 10%/yr affirmed.** Target for LT Non-GAAP core EPS growth and dividend yield is at least 10%. EPS growth is expected to be 10% through 2024, implying \$1.33 in 2024 vs \$1.35 consensus and \$1.31 WRe (assumes a 50bp ROE cut). PCG projects at least 9% EPS growth in 2025-26.
- **No equity needs through at least 2024:** PCG now projects zero equity through 2024; previously PCG projected at most \$250M of equity this year and had not provided forecasts beyond 2022. PCG targets \$2B of holdco debt paydown by YE26 and continues to target mid-to-high teens FFO/Debt by 2024.
- **Capex and rate base growth for 2022-2026 higher:** PCG’s 2022-26 capex is ~\$3B higher and its rate base growth is now 9.5% vs 9% previously; annual rate base vs previous guidance:
 - 2022: \$49.8B vs \$49.8B previously
 - 2023: \$56-60B vs \$56-59B
 - 2024: \$60-67B vs \$60-66B
 - 2025: \$62-74B vs \$62-71B
 - 2026: \$65-82B vs \$65-77B

The results are net positive. Although 2023 consensus was a little light, PCG raised its capex

and rate base projections while eliminating equity needs through at least 2024. PCG affirmed its LT EPS growth and total return outlook. PCG also provided a number of statistics, suggesting its wildfire prevention measures are working. On the call, we expect questions on the implications of recent undergrounding legislation and Diablo Canyon extension and timing of OEIS/CPUC approval of Wildfire Mitigation Plan and Safety Certificate. We also anticipate questions on the cost of capital proceedings, expected proceeds from the minority interest sale in the newly created Pacific Generation utility sub, and risk in the balance of this year's wildfire season.

CMS – Q3 EPS in-line, 2022 guidance raised, 2023 guidance misses, high-end of 6-8% EPS CAGR affirmed, \$493M equity contracted; mixed

- **CMS reported adjusted 3Q22 EPS of \$0.56 vs. \$0.54 last year – in-line** versus consensus \$0.54 and our \$0.54 estimate
 - Divers: Rate relief, lower O&M/storms; partially offset by higher investment costs and weather -0.03 (+0.06 vs. normal)
- **Raises 2022 guidance to \$2.87-2.89 from \$2.85-2.89** (consensus \$2.88; WRe: \$2.87)
- **Issues 2023 guidance at \$3.05-3.11 and pointing to high-end – miss** (consensus \$3.12; WRe: \$3.14)
 - Reflects 8.0% growth at the high-end off new 2022 guidance midpoint
- **Reaffirms 6-8% EPS growth with continued confidence toward high-end, off 2022 guidance midpoint base**
- **Equity.** Contracted \$493M, \$438M for Covert at \$68/sh in 2022 (remainder done in 2020) – done via forward
- **IRA/AMT.** IRA enhances competitive position for owned renewables (opportunity for >50% owned). No material impact from minimum tax through the decade.
- Q3 weather-normalized electric sales growth = +3.1%; R/C/I = -2.0%/+0.3%/+19.3
- Relatedly, yesterday Holtec was quoted as saying that it expects to decide on the Palisades nuclear plant in January and it depends on whether it gets DoE grant funding

As we had previewed, the bar for 2023 proved too high, and the Covert upside never really materialized. Guiding up 2022 and growing at 6-8% off that, with continued confidence at the high-end is still really solid – but expectations had gotten ahead of itself here. The size of the Covert equity financing is in-line, but it looks like it was done discretely and before the utilities sector collapsed in recent weeks.

SO – Q3 misses but FY22 guidance raised to top end; Vogtle schedule unchanged; sales growth robust; in line

- **3Q22 misses:** \$1.31 vs \$1.34 consensus, \$1.35 WRe; SO's guidance was \$1.32.
- **2022 guidance raised to “near the top end” of range:** Now points to top end of \$3.50-3.60 vs \$3.59 consensus and \$3.59 WRe.
- **Vogtle schedule unchanged, cost forecast consistent with last update; U-3 fuel load completed:** SO's in-service dates remain 1Q23 for Unit 3 and 4Q23 for Unit 4. And capital cost estimate is \$10.383B (SO's share), with \$1.1B remaining estimate to complete.
 - U-3 fuel load complete, next major milestone is initial criticality in Jan 2023.

- U-4 electrical production levels support projected Dec 2023 in-service date but must be sustained for several more weeks; testing becomes critical path.
- **Interest rate risk:** SO illustrated the average time to maturity of its LT debt is among the longest (~18 years) in the sector with an average coupon rate around the median (~3.6-3.7%), as of 9/30/22. SO's holdco has \$1.9B and \$1.5B maturities in 2023 and 2024, respectively.
- **3Q22 vs 3Q21 weather-adj sales growth +1.8% better than forecasted, again led by Resi and Comm:** Weather-adj total sales +1.8% (vs +1.0% SO's forecast), with Resi +1.3% (vs +0.3%), Commercial +2.0% (vs -0.4%) and Industrial +2.2% (+3.2%). SO's FY22 guidance was +0.7% total sales, with Residential -1.0%, Commercial +0.1% and Industrial +3.1%. SO notes economic development pipeline in its service territories remains robust.

The update was largely in line. SO had been tracking well ahead of guidance, and the company now sees "near" the high end – on top of our and consensus estimates. SO had already announced U-3 fuel load earlier this month, turning investor focus onto U-4. It is good to see the U-4 schedule is unchanged but productivity must be sustained in the near-term to meet Dec 2023. Stronger sales/customer growth continue to be a positive tailwind for SO, likely mitigating the impact of higher interest rates, which SO suggested is a risk but not much different from any other utility. On the call, we expect questions on Vogtle; sales growth and potential implications to SO's 2023+ growth; intervenor recommendations in the pending GA Power rate case; refinement of any IRA impact, and possibly succession plans.

AEP – Q3 beats but FY22 and FY23 guidance affirmed; 6-7% EPS growth reaffirmed consistent with Analyst Day update; in line

- **3Q22 beats:** \$1.62 vs \$1.57 consensus, \$1.52 WRe
- **2022 guidance affirmed:** \$4.97-5.07 vs \$5.00 consensus, \$5.02 WRe.
- **2023 guidance affirmed:** \$5.19-5.39 vs \$5.28 consensus, \$5.30 WRe.
- **Affirms LT EPS growth target of 6-7%:** Implies 2024E of \$5.64 (off original 2022 guidance midpoint) vs \$5.62 consensus, \$5.58 WRe.
- **Weather-adj retail sales strong in 3Q22; AEP recently raised sales growth target:** Total sales grew +2.6%, with Residential -0.8%, Commercial +3.4% and Industrial +6.0%. AEP's FY22 guidance assumes +2.9% total sales growth, with Resi +0.7%, Comm +3.4%, and Ind +4.9%.
- **FFO/D target remains 14-15%:** AEP's FFO/D is 14.5% (on a Moody's basis) in line with targeted range; AEP's 2024-26 equity needs are unchanged at \$600M/\$700M/\$700M. And 2027 is \$700M.
- **KY Power sale expected to close in Jan 2023:** Expected to occur following FERC approval, which is due by 12/16/22. KY Power sale cash net proceeds are \$1.2B.
- **No update on unregulated contracted renewables sale:** AEP still expects to close the transaction in 2Q23. Portfolio is 1,365 MW (1,200 MW of wind, rest solar) with 10+ year PPAs. Net investment (equity position) is \$1.5B as of 9/30/22; segment expected to earn \$0.13-0.17 in 2022.

The disclosures were largely in line after AEP's Analyst Day earlier this month. On the call, we

anticipate investor focus on the KY Power sale closure, buyer interest in AEP's Contracted Renewables business, sustainability of sales growth, and interest rate risk. On the latter, AEP just updated its growth outlook, incorporating the higher interest rate environment.

DTE – Q3 in-line, 2022 guide reaffirmed; bigger update at EEI

- **Reports Q3 operating EPS of \$1.60 vs. \$1.72 last year – in-line** vs. consensus/us at \$1.57/\$1.59
 - DTE Electric +0.11 (weather = -0.05 YoY and +0.03 vs. normal) on deferred tax amortization; partially offset by rate base costs
 - DTE Gas +0.04 (weather = +0.01 YoY and flat vs. normal)
 - Vantage (formerly P&I) -0.24 on REF roll-off
 - Trading -0.18 on power portfolio performance and timing of physical gas portfolio
 - Corporate/Other = +0.15 on timing of taxes and 2021 one-timers
- **Reaffirms 2022 operating EPS guidance at \$5.90-6.10** (consensus: \$6.02, WRe: \$6.01)
 - Segments unchanged
- **EEI.** Will provide 2023 guidance and 5-year plan refresh (EPS growth rate, business segment outlook, capex, etc.)
- **IRP.** Filing in November.
- **IRA/AMT.** No material impact from minimum tax – notes accelerated depreciation and tax credit carryforwards
- **Electric rate case.** Not on today's MI PSC meeting agenda
- **Weather-normal electric sales = flat YTD** (R/C/I = -2%/flat/+2%)

Overall uneventful, as expected. The year looks on track. We're waiting on the rate case outcome and IRP filing. We (and most investors) expect DTE to formally raise its EPS growth rate to 6-8% at EEI.

NJ Offshore Wind Transmission – FE the big winner, almost \$1B opportunity

- Yesterday the New Jersey BPU issued an order selecting the winning bids in the state's coordinated offshore wind transmission solution submitted through PJM's State Agreement Approach – [link](#)
- In total, the BPU selected bids amounting to \$1.079B in spend with \$900M in customer savings – but the primary winner was Mid-Atlantic Offshore (EDF/Shell) / JCP&L's (FE) Larrabee Tri-Collector Solution
 - FE's bid covers \$723M of that and its partners Mid-Atlantic (EDF/Shell JV) won another \$121M, plus FE has the opportunity to acquire an equity stake in the EDF/Shell offshore generation project that has already won
 - PEG won \$40M, EXC won \$25M, LS Power won \$61M, NEE won nothing
 - The BPU broke it down into \$504M for the offshore transmission and \$568M for the onshore upgrades
- Most of the construction/spend would be expected to take part in the second half of the decade
- New Jersey recently increased its offshore wind goal to 11 GWs by 2040 – 4.3 GWs have been awarded thus far

This was a bit surprising. PEG is one of the biggest utilities in the state and one of the biggest FERC transmission players. NEE has also been focused on this as an opportunity despite being cautious around offshore wind generation itself – several investors suggested to us NEE was the frontrunner. The results came out during FE's call yesterday – mgmt. pointed to it as a \$1B upside opportunity over 8-10 years with spend starting in 2024-2025. FE filed for a 10.2% ROE on this investment in its bid. FE hasn't made any decision yet on whether to take the equity option.

POR – Upsizes equity forward to ~\$499M from ~\$431M at \$43/sh. public offering price; \$260M of net proceeds to be utilized towards repaying term loan

- Pre-market open yesterday, POR priced 10.1M common shares under forward sale agreements at a public offering price of \$43/sh., with a 30-day option for 1.515M additional shares.
 - On a per share basis, the underwriting discount is \$1.23625 and proceeds to POR are \$41.76375.
 - The \$43/sh. public offering price represents a ~3.8% discount to POR's \$44.68 share price when the preliminary prospectus was filed.
- All-in, POR issued a ~\$499.4M equity forward with ~\$485.1M of net proceeds. This is upsized vs. POR's preliminary prospectus of a \$375M equity forward, with a \$56.25M greenshoe provision.
- POR expects to use ~\$260M of net proceeds to repay its term loan.
 - On 10/21/22, POR obtained a \$260M 366-day term loan under a bridge credit agreement that expires on 10/22/23.
 - The loan bears interest at the Term Secured Overnight Financing Rate (SOFR) plus Term SOFR Adjustment Rate of 10 basis points and applicable margin of 87.5 basis points.
- POR also intends to allocate net proceeds to finance, in whole or in part, one or more eligible green investments under its Green Financing Framework.
 - Recall, at Q3, POR announced that it will own 208 MW (67%) of Clearwater Wind constructed by NEE under a BOT agreement, with a ~\$415M investment and YE23 COD.

We anticipate that POR will utilize net proceeds from this equity forward to make milestone/final payments for Clearwater Wind in 2023, while repayment of the term loan would help improve POR's equity ratio (estimated to be ~46+% by YE22 on a regulated basis vs. 50% allowed) and maintain its credit ratings. Excluding more RFP wins, we view POR's growth closer to the lower-end of its 5-7% EPS growth target. Remaining RFP projects that POR is able to rate base will be a key determinant of where it performs within its 5-7% range – see our recent note [here](#).

OGE – Intervenor file testimony in OG&E's request to recover ~\$424M of fuel costs in OK over 24 months; largely recommend longer amortization periods

- Yesterday, intervenors filed testimony with the OCC in the show-cause investigation into OG&E's request to recoup ~\$424M of fuel under-recovered balance through Aug. 2022

- over 24 months.
- PUD Staff recommended that the OCC:
 - Direct OG&E to revise its fuel factor to account for updated forecasts and collect its entire under-collection as of Dec. 2022 over a 48-month period, starting 1/1/23.
 - Approve modifications to OG&E's fuel cost adjustment (FCA) tariff including quarterly FCA factor revisions with the following language:
 - The PUD may approve or deny proposed FCA factor revisions submitted by OG&E.
 - OG&E or PUD may file a case with the OCC if any disputes arise during the factor revision process.
 - If the over/under-recovered balance exceeds \$50M, the amortization period may be extended beyond 12 months.
 - Office of OK's AG recommended that the OCC change the threshold for an interim rate adjustment to OG&E's FCA from the cumulative true-up balance of \$50M to 10% of recoverable fuel costs incurred in the prior calendar year.
 - OIEC recommended that the OCC should extend the amortization period for OG&E's under-recovery balance through Sept. 2022-end (~\$467M) to 5 years, with adjustments to FCA Rider:
 - All future under-recovery balances < \$100M be amortized over a 24-month period; > \$100M be amortized over periods up to 60 months as determined by the OCC.

It is good to see intervenors not recommended an outright disallowance of fuel costs. That said, suggested modifications, specifically longer than 24-month recovery periods, could add some pressure to OGE's balance sheet/cash flow, which has historically had strong credit metrics. We will look for management commentary on OGE's Q3 call on 11/3, with a hearing scheduled to be held by the OCC later that afternoon.

FE – Who will be the new King of Akron?

[Click here to view our complete note](#)

Pension pressure grows to \$0.45, while offsets remain at \$0.30. This wasn't surprising as pension assets continued to underperform in Q3. Mgmt. has been clear it is holding the line on offsets at \$0.30 to avoid jeopardizing the future, which makes sense. The market rally in Q4 only helps a bit, but this is a moving target into year-end. FE continues to explore ways to reduce this volatility. We expect 2023 guidance on the Q4 call. FE reaffirmed its 6-8% EPS CAGR long-term.

AGR – Sorting through the moving pieces

[Click here to view our complete note](#)

Q3 miss and 2022 guide reaffirmed. Q3 EPS of \$0.31 was below \$0.34 last year and consensus/us at \$0.35/0.34. Networks was down YoY on higher costs, while Renewables was up despite a weaker wind capacity factor. AGR reaffirmed 2022 guidance at \$2.20-2.38, but seems to be tracking above the midpoint, as an implied Q4 at the midpoint looks conservative.

Midstream

MMP – Q3 beats but with more moving pieces than usual; Raises 2022 guidance slightly; Buyback pace remains robust

- **Q3 beats but with more moving pieces than usual.** EBITDA of \$372M came in 4-5% above our estimate / consensus of \$355M / \$357M. Drivers are a little harder to reconcile this quarter with several moving pieces.
 - Refined products margin beat our expectation net of MTM. The company's tariff rate was higher than forecast due to Mid-con supply disruptions that drove greater long-haul shipments at higher rates, while O&M was lower due to favorable product overages and a prior period adjustment to property taxes.
 - Refined products volumes were a little lower than our forecast on lower distillates, but were essentially flat YoY
 - Crude operating margin also beat our expectation with a \$26M YoY benefit from higher product margin from crude marketing activities as well as MTM gains. Crude segment opex was adversely affected by less favorable product overages.
 - To the negative, G&A was up a large \$12M YoY and MMP also had \$9M of higher other expense for certain legal matters
- **2022 guidance raised slightly.** MMP raised FY 2022 EBITDA and DCF guidance by \$7-10M to \$1,404M and \$1,100M, respectively.
- **Capex.** MMP raised 2022 growth capex by \$10M to \$90M. The company disclosed an expectation for \$100M of growth capex in 2023 and \$40M in 2024 tied to committed projects, inclusive of the El Paso expansion project.
- **Robust pace of buybacks.** MMP repurchased another \$138M of stock in Q3 at an average price around \$50/unit and has now repurchased over \$375M YTD.

The headline Q3 result is strong, but with a number of moving pieces – temporary benefits from Mid-con supply disruptions, surprising marketing benefits at Crude, but also higher G&A and one-time legal settlement costs, which makes it tougher to assess core business results. Refined products volumes looked fine and were flattish YoY. The guidance increase is good to see and could be more differentiated vs. peers this earnings season. Initial 2023 capex guidance is slightly below our forecast. Lastly, MMP continued a very robust pace of stock buybacks in Q3 with now over \$375M of repurchases YTD.

Clean Energy

NOVA – Q3 misses, 2022 guidance cut on lower principal payments; triple-double, triple plan reaffirmed; net negative

- **Q3 EBITDA + P&I and miss; customer adds in-line w/ us.** EBITDA of \$41.3M was slightly ahead of us/cons at \$39M but P&I of \$37.4M was below our \$52M
 - Customer additions of 21.8K was in-line with our 21.5K estimate
- **2022 EBITDA + P&I guidance lowered on 34% cut to principal payments.**
 - EBITDA was reaffirmed at \$117-137M (consensus/us at \$130M/\$135M)
 - Principal payments lowered to \$90-100M from \$134-154M (WRe: \$128M)
 - Interest payments raised to \$50-60M from \$45-55M (WRe: \$55M)

Customer additions was reaffirmed at 85-89K (WRe: 85.2K)

- **Triple-double, triple plan reaffirmed.** Targeting EBITDA + P&I of \$530M by YE23 vs our \$535M estimate
- **Unlevered return up to 10.2% in Q3.** This is up from 9.7% in 2Q22 on new originations; **TTM implied spread fell to 460bps (was 520bps)** given the higher weighted avg cost of debt (4.8%)
- **Battery attachment rate on Q3 originations down to 30%.** Was 31% in 2Q22; overall penetration rate up to 14.5% from 14.2%
- **\$841M of total liquidity available (up from \$482M at Q2).** Cash balance only up modestly from Q2 (\$412M vs \$208M) despite the \$585M raised from the convert

We had anticipated that NOVA would likely cut its guidance for principal payments, but the extent of which was a bit surprising to us. EBITDA + P&I for 2022 is now expected to be down 14% vs NOVA's original guidance. Still, NOVA reaffirmed its triple-double, triple plan (i.e., \$530M of EBITDA + P&I next year) and pointed to anticipated offsets in its prepared remarks – higher interest collections from larger loan balances, higher EBITDA from loan sales and other initiatives.

FSLR – Incremental booking announcement; New bookings update on tonight's earnings call will be important

- This morning, FSLR announced a 2 GW order to supply Arevon Energy with newer vintage Series 7 modules. 0.7 GW of this order was already included in FSLR's bookings data as of the Q2 call.
- This follows yesterday's announcement that FSLR will provide Swift Current Energy with 2 GW of modules in 2025-26

One area of focus for us when FSLR reports earnings tonight is the pace of new bookings and any commentary on ASPs. FSLR is already effectively sold out through 2025 (excluding India). Management has indicated they don't plan to adjust ASPs to "share" the IRA credits and so if the company continued to add a lot of bookings at reasonable ASPs, including way out in the 2026+ timeframe, we think it makes it more likely they are able to retain most or all of the IRA credits and would be positive news, in our view.

Hydrogen – ITM warns on supply chain and warranty provisions; highlights execution challenges for the hydrogen space

- Overnight ITM Power, a producer of PEM electrolyzers, warned that it would be toward to low end of guidance for 2022
- Current guidance is 48MW-65MW of deliveries and revenue of £23m-£28m
- ITM cited production issues including tooling delays and stack testing
- Company also expects to boost warranty provisions and this could delay timing of future contract negotiations
- Search for a CEO continues

ITM is down nearly 30% this morning on the news. While it's unclear specifically what the

issues on production are, we note that this comes about a couple weeks after Plug Power cut its 2022 outlook on delays both on its own production from its new factory as well as delays on the customer end as well. While the backdrop for the space is about as good as it every has been, the pivot to execution for some of these names is representing a challenge.

Wolfe Events

November 9-10: BE non-deal roadshow in Europe

November 13-15: Wolfe hosted EEI Conference meetings

December 1-2: NEE non-deal roadshow in NYC and Boston

December 13: ES non-deal roadshow in Boston

Recent Popular Reports

[Wolfe Clean Energy Initiation](#)

[Utilities Top 10 for 2022](#)

[Midstream Top 10 for 2022](#)

[Clean Energy Top 10 for 2022](#)

[Power Supply Outlook 2022](#)

[Wolfe Hydrogen Primer](#)

[Wolfe Resi Solar Primer](#)

[Utility Proxy Review](#)

[Midstream Proxy Review](#)

[Clean Energy Proxy Review](#)

[PJM Auction Postview](#)

[Utilities Credit Metrics Outlook](#)

[Midstream Credit Metrics Outlook](#)

[Utilities 2020 Election Preview](#)

[Utility Pension Review](#)

[Utility Liquidity Review](#)

[Midstream Leverage Report](#)

[Wolfe Utilities Primer](#)

[Wolfe Midstream Primer](#)

Calendar



[View Comp Table](#)

Steve Fleishman

sfleishman@wolferesearch.com

(646) 582-9241

[View Steve's Research](#)

Alex Kania

akania@wolferesearch.com

(646) 582-9244

[View Alex's Research](#)

Keith Stanley, CFA

kstanley@wolferesearch.com

(646) 582-9243

[View Keith's Research](#)

David Paz
dpaz@wolferesearch.com
(646) 582-9242

Michael Sullivan, CFA
msullivan@wolferesearch.com
(646) 582-9245

David Peters
dpeters@wolferesearch.com

Aditya Gandhi
agandhi@wolferesearch.com

For important disclosures regarding companies covered by Wolfe Research, LLC, please see <https://wolferesearch.bluematrix.com/sellside/Disclosures.action>.

The information contained in this e-mail is intended for the exclusive use of the addressee(s) and may contain confidential or privileged information. Any review, use, disclosure, distribution or copying of this transmittal is prohibited except by or on behalf of the intended recipient. The contents of this e-mail, including any attachments, is to be used solely for informational purposes, and should not be regarded as an offer, or a solicitation of an offer to buy or sell a security, financial instrument or service discussed herein. Opinions in this communication constitute the current judgment of the author as of the date and time of this e-mail and are subject to change without notice. Information herein is believed to be reliable but Wolfe Research, LLC and its affiliates, including but not limited to WR Securities, LLC doing business as Wolfe Research Securities and as Wolfe Capital Markets and Advisory, makes no representation that it is complete or accurate. Recipients are encouraged to seek financial advice from their financial advisor regarding the appropriateness of investing in a security or financial instrument referred to in this e-mail and should understand that statements regarding the future performance of the financial instruments or the securities referenced herein may not be realized. We will not be able to accept orders by email to buy or sell securities, transfer funds or which involve time-sensitive instructions. Subject to applicable law, Wolfe Research and its affiliates reserve the right to intercept, monitor and retain communications transmitted through its systems.

www.wolferesearch.com

Wolfe Research
757 Third Avenue, 6th Floor
New York, NY 10017
(646) 845-0700

This email is limited to clients of Wolfe Research. **Please do not forward.**

Please help us protect your advantage...

DO NOT FORWARD

[Contact Your Salesperson to Manage Subscriptions](#)

[Unsubscribe](#)

From: [Steve Fleishman](#)
To: [Scripps, Daniel \(LARA\)](#)
Subject: The Fleishman Daily 11/21/22 - DTE, ETR, Nuclear, AWK, FTS, Poll Results, KMI, LNG sector, Midstream of Consciousness, Wolfe GREEN Playbook
Date: Monday, November 21, 2022 9:06:25 AM

CAUTION: This is an External email. Please send suspicious emails to abuse@michigan.gov



November 21, 2022

THE FLEISHMAN DAILY 11/21/22

DTE, ETR, Nuclear, AWK, FTS, Poll Results, KMI, LNG sector, Midstream/GREEN Weeklies

The Fleishman Daily 11/21/22

Utilities: DTE, ETR, Nuclear, AWK, FTS, Poll Results

Midstream: KMI, LNG sector, Midstream of Consciousness

Clean Energy: Wolfe GREEN Playbook

WEBCAST: Wolfe Natural Resources Weekly Webcast, TODAY at 11:00am ET; register [here](#)

[WEBCAST REPLAY: Fleish on Fridays; replay here, slides here, poll results here](#)

Utilities sentiment meter – still at “2”. EEI was clouded by D reverberations and a negative bias by a few companies on 2023 earnings – mainly due to rates/pension. Moody’s and Fitch piled on putting the sector on negative outlook with the impact of rising fuel and related bill pressures as a key concern. Investor sentiment turned bearish in our poll last week post EEI with only 28% seeing utilities outperform from here vs 46% underperform. Despite the negativity, the majority of utilities are executing well and consistently achieving their 5-7% or 6-8% growth rates. Hopefully investors will feel better after a full a few servings of turkey and stuffing this week.

[Utilities](#)

DTE – MI PSC orders \$31M electric rate increase, 9.90% ROE, \$20.5B rate base; revenue very light

ETR – FERC set to hearing a complaint over Grand Gulf nuclear plant seeking damages, prudency review

Nuclear – Diablo Canyon receives \$1.1B from DoE; Palisades does not, will stay shut

AWK – CA Coastal Commission approves desalination slant well permit; good to see

FTS – Files Arizona rate case at small UNS subsidiary; requesting 10.25% ROE, \$25M rate increase, \$400M rate base

Fleish on Friday – Click here to see this week's Fleish on Friday Poll Results

Midstream

KMI – Settlement reached in El Paso rate case; Expect small headwinds over 3 years, resolves a modest overhang

LNG sector – Freeport now expecting initial production in mid-December, 2 Bcf/d in January

Midstream of Consciousness – Investor feedback into yearend

Clean Energy

Wolfe GREEN Playbook – Clean Energy tidbits from EEI; NOVA Analyst Day takeaways

Quarterly data: [Weather](#), [Forward Prices](#), [Spot Prices](#), [Nuke Outages](#)

Wolfe Utility & Midstream Materials: [Utility Comps](#), [Utility Stock Charts](#), [Midstream Comps](#), [Midstream Stock Charts](#), [Clean Energy Comps](#), [Valuation Charts](#), [Models](#)

Utilities

DTE – MI PSC orders \$31M electric rate increase, 9.90% ROE, \$20.5B rate base; revenue very light

- On Friday, the Michigan PSC issued an order in DTE's electric rate case – \$30.5M rate increase, 9.9% allowed ROE (50% equity), and \$20.4B rate base
 - The largest amount of the reduction in the approved rate came from disputed projections used in the utility's sales forecast based on changing patterns of residential electricity as Michigan moved beyond early restrictions in place during the COVID-19 pandemic
- DTE originally requested – \$388M (7.5%) rate increase, 10.25% allowed ROE, and \$21.27B rate base
- Michigan PSC Staff previously filed – recommending a \$143M rate increase, 9.60% allowed ROE, and \$20.6B rate base
- Michigan PSC ALJ previously filed – recommending a \$146M rate increase, 9.90% allowed ROE, and \$20.5B rate base
- DTE electric was previously allowed a 9.90% allowed ROE (50% equity) and its last approved rate increase and rate base were \$188M (\$351M original request) and \$17.89B respectively

- DTE gas was recently approved for a 9.90% allowed ROE (51% equity ratio)
- Rates are expected to go into effect on November 25 and would be the first rate increase in 2.5 years

The revenue requirement and rate base portion of the order looks very light, as it was well below what Staff/ALJ had even recommended, which is disappointing. It looks sales estimates were boosted reflecting changing load patterns post-COVID. This effectively lowered the revenue need by over \$100M. This reminds us of CMS' electric rate order a year ago, which had an equally tepid rate hike. We still believe this is manageable within DTE's conservative financial planning, but it will likely require pulling some levers that wouldn't have otherwise been necessary. Michigan has a history of constructive regulation, but this is now 2 disappointing orders in the last 12 months, which is a little bothersome.

ETR – FERC set to hearing a complaint over Grand Gulf nuclear plant seeking damages, prudence review

- Last week, FERC set to hearing a complaint filed in early 2021 by LaPSC, ArkPSC and the City of New Orleans, seeking damages in excess of \$360M from ETR for its “imprudent operation of the Grand Gulf nuclear plant.”
- They also requested an investigation of the prudence of ETR's \$800M capacity uprate of Grand Gulf in 2012, which led to overall decreased output from the plant between 2012-20, and changes to the Unit Power Sale Agreement between ETR and four of its utilities.
- FERC set to hearing all but one of the issues against ETR's subsidiary SERI, which operates the 1498 MW Grand Gulf plant.
- Around YE22, a settlement judge will be assigned. By early March, the judge will report to FERC on discussions. Another update will be filed every 60 days until a settlement or notification that talks have failed.
- By 5/4/23, an ALJ initial decision could be issued if no settlement is reached. A final FERC decision would then be expected by 3/4/24 (within eight months after an ALJ proposal).

The go-forward in the case is a little disappointing, but FERC is far from issuing any decision. And the parties are currently in talks over all the SERI proceedings at FERC. Last week, FERC approved a settlement between ETR and MS regulators on all SERI proceedings. We think that is helpful in the context of ETR settling with the other state regulators. A fully litigated proceeding will take a long time. A settlement, on the other hand, could provide relief to customers much quicker.

Nuclear – Diablo Canyon receives \$1.1B from DoE; Palisades does not, will stay shut

- This morning, the DoE announced it would give a \$1.1B Civil Nuclear Credit (CNC) to PCG's Diablo Canyon nuclear station in CA.
- Diablo Canyon was previously expected to shut in 2024/25 but received state legislation this past summer to extend the useful lives by 5 years; the legislation includes, among other things, a \$1.4B state loan.

- Last week, Holtec said the DOE denied the company a CNC to support reopening and operation of the Palisades Nuclear Plant in Michigan.
- Holtec bought the plant from ETR as part of plans to decommission it, but announced in September plans to seek the CNCs to restart it, with support from MI Gov Whitmer.
- Palisades shut this past spring.

This may appear to be mixed for US nuclear, following successes for nuclear plants, namely nuke PTCs. However, Palisades was going to need to restart and procure fuel. It would have required a PPA with CMS and maybe other Michigan utilities, which likely would have required a lot of state support. Unlike Palisades, Diablo Canyon's two units are still operating and received legislation this past summer that includes financial support for Diablo.

AWK – CA Coastal Commission approves desalination slant well permit: good to see

- On 11/17, the CA Coastal Commission approved Cal Am's coastal development permit for intake slant wells to supply water to Monterey Peninsula Water Supply Project's desalination plant.
 - Recall, Staff recommended approval of Cal Am's application too.
- Conditions required by the Commission include Cal Am agreeing to expand/improve affordability programs for customers.
 - A \$3M community benefit for Marina residents to address concerns about the location of intake wells in the city was also included as a condition.
- Cal Am will continue to seek the remaining permits necessary to construct this project, which includes two other major components – aquifer storage/recovery and groundwater replenishment/recycled water.
- Construction of the desalination plant is expected to begin in 2024, with the plant estimated to be in-service by the end of 2027.
 - Cal Am expects to maximize State Revolving Fund financing and other available grants to reduce the cost impact to customers.
- The plant has an initial 4.8M gallons/day capacity, but has a flexible design to accommodate a phased increase in capacity to address future supply needs of the Monterey Peninsula.

Given considerable opposition that AWK has faced since originally proposing this project ~8 years ago, the CA Coastal Commission's approval represents a critical step of progress towards finally solving Monterey Peninsula's decades-long water supply crisis. Based on AWK's last disclosures related to this topic, we believe the desalination plant represents ~\$320M of capex, ~\$280M of which has yet to be deployed. We will look for more details on capex/financing for this project on the Q4/YE earnings call.

FTS – Files Arizona rate case at small UNS subsidiary; requesting 10.25% ROE, \$25M rate increase, \$400M rate base

- On Friday, FTS subsidiary UNS filed an Arizona rate case, requesting – 10.25% allowed ROE, 53.72% equity ratio, \$25.2M rate increase, and \$400M USD rate base

- Rates are expected to go into effect in early-2024 and is UNS' first rate request in 7 years
- FTS subsidiary TEP filed a much bigger Arizona rate case earlier this year, where Staff testimony is expected on January 6

UNS is the much smaller subsidiary in Arizona, serving only ~100k customers. For reference, Arizona is about 20-25% of EPS/rate base for FTS. Of that, TEP is about 90% (filed for \$3.6B rate base), and UNS is about 10% (filed for \$400M rate base). We'll be watching the upcoming TEP Staff testimony closely. From a sensitivity perspective, we estimate every 25bps of ROE across UNS (TEP is biggest subsidiary) is equal to \$0.02/sh and every 100bps of equity ratio is equal to \$0.01/sh.

[Fleish on Friday – Click here to see this week's Fleish on Friday Poll Results](#)
[Click here to view poll results](#)

1. Best stock from now to EEI 2023?
2. Best line or funniest story from EEI?
3. Premium utilities – which do you like best here?
4. Premium utilities – which do you like least here?
5. EXC – how did you feel after EEI meetings?
6. Large Regulateds – which do you like best here?
7. Large Regulateds – which do you like least here?
8. PEG – agree or disagree on downgrade and why?
9. PNW – agree or disagree on upgrade and why?
10. DTM – agree or disagree with downgrade to Peer Perform?
11. MMP – agree or disagree with downgrade to Underperform?

Midstream

KMI – Settlement reached in El Paso rate case: Expect small headwinds over 3 years, resolves a modest overhang

- On Friday, KMI's El Paso pipeline filed an uncontested settlement with FERC in its El Paso pipeline rate case
 - Recall, back in April FERC ordered for El Paso's rates to be investigated under section 5 of the Natural Gas Act
- The settlement calls for a 16% cumulative reduction to El Paso's maximum rates over 2023-25. More specifically, the settlement reduces max rates by 6% in January 2023, another 5% in January 2024, and a final 5% in January 2025
 - There will be a rate moratorium through September 2027

We estimate the settlement will create about a \$10M headwind each year over 2023-25 for a total impact of around \$30M, which we think is a reasonable outcome that now resolves a modest overhang for the company. The El Paso pipeline had about \$800M of revenues last year and our understanding is only about 22% of volumes are subject to maximum rates which are being directly reduced in the settlement. An estimated 69% subject to negotiated rates on

the pipeline is unaffected by the settlement, and an estimated 9% subject to discounted rates may or may not be affected by the settlement.

LNG sector – Freeport now expecting initial production in mid-December, 2 Bcf/d in January

- On Friday Freeport LNG issued an update on latest views on timing of the restart of the export terminal
- Freeport indicated that 90% of reconstruction work as been completed with completion expected by the end of the month
- Initial production is planned for December with a ramp-up to 2 Bcf/d in January; full operations is contemplated by March

There have been a lot of conflicting reports on the timing of a restart to it is good to see a firm announcement by the company. The addition of 2 Bcf/d of LNG capacity to the global markets will be especially important in the winter. We note that the restart is governed by FERC and PHMSA approvals so ultimately those agencies will have the ultimate say on when a restart is permitted.

Midstream of Consciousness – Investor feedback into yearend

- In yesterday's Midstream of Consciousness ([link](#)), we caught up on investor feedback after marketing live and virtual over the past couple weeks.
- We also discuss feedback on our downgrades last week of DT Midstream and Magellan, noting that pushback was relatively more muted than we had expected

Clean Energy

Wolfe GREEN Playbook – Clean Energy tidbits from EEI; NOVA Analyst Day takeaways

- In yesterday's Wolfe GREEN Playbook, we discuss Clean Energy takeaways from EEI as well as highlight company and broader resi solar takeaways from NOVA's Analyst Day.
- **What we learned at EEI.** We always get some good color from EEI on Clean Energy, especially with NEE, AES, and CA utility CEOs there. Topics included differing views on NEM 3.0, IRA commentary, UFLPA, renewables costs, hydrogen, and offshore wind.
- **Sunnova Analyst Day Takeaways – Service, Service, and more Service.** The overarching message that NOVA wanted to convey was that it is an energy services company, not a product or financing company. There weren't any splashy announcements and new financial disclosures were on the edges as we expected.
- **Some Broader Sector Takeaways from NOVA's Analyst Day.** There is a focus in the resi solar sector of moving towards a more simplified model through more gain-on-sale transactions. All three rooftop solar companies are investing to position themselves well to play the theme of customer service + software. IRA benefits are likely shift the resi market to more lease/PPA vs. loan.
- Please see the full report [here](#) for more.

Wolfe Events

December 1-2: NEE non-deal roadshow in NYC and Boston

December 13: ES non-deal roadshow in Boston

Recent Popular Reports

[Wolfe Clean Energy Initiation](#)

[Utilities Top 10 for 2022](#)

[Midstream Top 10 for 2022](#)

[Clean Energy Top 10 for 2022](#)

[Power Supply Outlook 2022](#)

[Wolfe Hydrogen Primer](#)

[Wolfe Resi Solar Primer](#)

[Utility Proxy Review](#)

[Midstream Proxy Review](#)

[Clean Energy Proxy Review](#)

[PJM Auction Postview](#)

[Utilities Credit Metrics Outlook](#)

[Midstream Credit Metrics Outlook](#)

[Utilities 2020 Election Preview](#)

[Utility Pension Review](#)

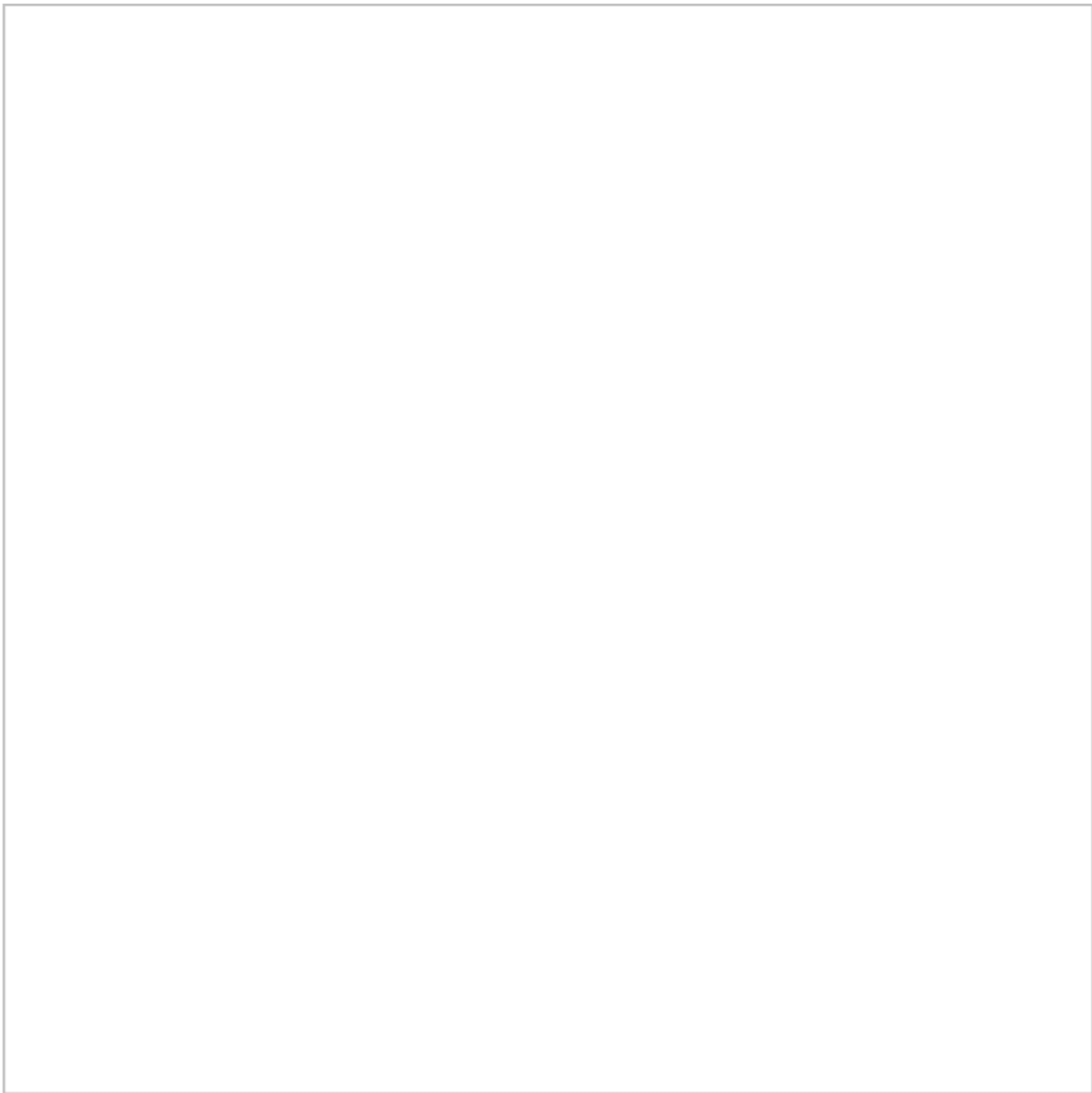
[Utility Liquidity Review](#)

[Midstream Leverage Report](#)

[Wolfe Utilities Primer](#)

[Wolfe Midstream Primer](#)

Calendar



[View Comp Table](#)

Steve Fleishman
sfleishman@wolferesearch.com
(646) 582-9241
[View Steve's Research](#)

Alex Kania
akania@wolferesearch.com
(646) 582-9244
[View Alex's Research](#)

Keith Stanley, CFA
kstanley@wolferesearch.com
(646) 582-9243
[View Keith's Research](#)

David Paz
dpaz@wolferesearch.com
(646) 582-9242

Michael Sullivan, CFA
msullivan@wolferesearch.com
(646) 582-9245

David Peters
dpeters@wolferesearch.com

Aditya Gandhi
agandhi@wolferesearch.com

For important disclosures regarding companies covered by Wolfe Research, LLC, please see <https://wolferesearch.bluematrix.com/sellside/Disclosures.action>.

The information contained in this e-mail is intended for the exclusive use of the addressee(s) and may contain confidential or privileged information. Any review, use, disclosure, distribution or copying of this transmittal is prohibited except by or on behalf of the intended recipient. The contents of this e-mail, including any attachments, is to be used solely for informational purposes, and should not be regarded as an offer, or a solicitation of an offer to buy or sell a security, financial instrument or service discussed herein. Opinions in this communication constitute the current judgment of the author as of the date and time of this e-mail and are subject to change without notice. Information herein is believed to be reliable but Wolfe Research, LLC and its affiliates, including but not limited to WR Securities, LLC doing business as Wolfe Research Securities and as Wolfe Capital Markets and Advisory, makes no representation that it is complete or accurate. Recipients are encouraged to seek financial advice from their financial advisor regarding the appropriateness of investing in a security or financial instrument referred to in this e-mail and should understand that statements regarding the future performance of the financial instruments or the securities referenced herein may not be realized. We will not be able to accept orders by email to buy or sell securities, transfer funds or which involve time-sensitive instructions. Subject to applicable law, Wolfe Research and its affiliates reserve the right to intercept, monitor and retain communications transmitted through its systems.

www.wolferesearch.com

Wolfe Research
757 Third Avenue, 6th Floor
New York, NY 10017
(646) 845-0700

This email is limited to clients of Wolfe Research. **Please do not forward.**

Please help us protect your advantage...

DO NOT FORWARD

[Contact Your Salesperson to Manage Subscriptions](#)

[Unsubscribe](#)

From: [Shahriar Pourreza, CFA](#)
To: [Scripps, Daniel \(LARA\)](#)
Subject: The Guggenheim Daily Transmission: NEE NDR, CA, Michigan, Hydrogen, ED, PCG, OGE, DUK, VA, Wind, POR, Power/PJM, ERCOT, RGGI/PA, Climate, ALE, Nuclear, RI/PPL - Guggenheim Securities, LLC
Date: Monday, September 12, 2022 8:38:25 AM

CAUTION: This is an External email. Please send suspicious emails to abuse@michigan.gov



The Guggenheim Daily Transmission: NEE NDR, CA, Michigan, Hydrogen, ED, PCG, OGE, DUK, VA, Wind, POR, Power/PJM, ERCOT, RGGI/PA, Climate, ALE, Nuclear, RI/PPL

Power & Utilities

September 12, 2022

[Shahriar Pourreza, CFA](#) 212 518 5862
[Constantine Lednev](#) 212 651 0847
[James Kennedy](#) 212 823 6741
[Jamieson Ward, CFA](#) 212 518 9661
[Guggenheim Utilities Research Team](#)

[Access This Report](#)

For details on our Guggenheim-hosted client Utility events including: our OGS NDR; EEI Conference meetings; and other events, scroll down ...

NEE NDR: Top IRA Idea - Runway Set for Takeoff; Fundamentals On NEER, FPL Start Spring-loading Growth; Raising TP to \$108 (see our note [HERE](#))

Forward Power Curves, Genco MtM, and Weekly Commentary (see our note [HERE](#))

CA – CA fighting multiple fires with continued drought conditions; hurricane weather to bring wind and wet weather

Michigan – MI governor issues statement on loan application to bring Palisades nuclear plant out of decommissioning

Hydrogen – New hydrogen technology unveiled using direct charge from solar energy

ED – CECONY comments on rising gas costs this summer; customers to see bills increase by up to 30%

ED – CECONY replies with rate case settlement status update, negotiations continue through September 30, 2022

PCG – ALJ sets hearing dates for September 21,23 in the PG&E 2023 GRC

OGE – AARP comments on unopposed settlement for OG&E 2022 rate case

DUK – Duke Energy Florida once again granted permission to construct ~749MW of new solar

VA – Democrats and Youngkin continue to spar over energy and environmental policy

Wind – GE-Siemens suit results in injunction against further Haliade-X sales

POR – PGE conducts PSPSs across footprint over the weekend, begins restorations

DUK – Duke teams up with Ford for EV grid balancing pilot program

Power/PJM – PE firm Earthrise acquires 2 gas plants from ArcLight

ERCOT – Brazos bankruptcy plan could be approved on 9/13

RGGI/PA – RGGI results drive sharp criticism from Jobs Alliance in PA

Climate – new study finds world is close to climactic tipping point

ALE – Mine unions reach 47-month labor agreement with mine operators

Policy/Nuclear – AP profiles SMRs with a focus on Rolls-Royce data points

RI/PPL – Public comment period opens for offshore wind RFP

CA – CA fighting multiple fires with continued drought conditions; hurricane weather to bring wind and wet weather

- Calfire is fighting multiple wildfires in California, while weather reports anticipate hurricane weather to bring cooler weather and heavy rainfall.
- Fairview Fire, 27,000 acres, 49% contained, 52 structures damaged or destroyed.
- Mosquito Fire, 41,000 acres, 10% contained, no damage report.
- None of the active incidents have significant damage reports yet
- More on Calfire incidents [here](#).

Guggenheim takeaway: *We continue to monitor for wildfire conditions and damage assessments but despite the continued frequency of wildfires, damage reports have been minimal. While the Fairview fire threatened some more populated areas (more than 10,000 homes) Calfire has increased containment and upcoming weather suggest rains could provide some reprieve. PCG related incident reports have not identified any damaged equipment or downed wires and structures near alleged points of ignition have been inspected according to WMP requirements.*

Michigan – MI governor issues statement on loan application to bring Palisades nuclear plant out of decommissioning

- MI Governor's office issued a statement on the application for a DOE loan to get Palisades nuclear plant restarted and off the decommissioning path.
- Holtec (private), who is the owner and decommissioning agent, is supportive of the reopening plan.
- PR [Here](#).

Guggenheim takeaway: *We caught up with CMS mgmt. shortly after the announcement and the company maintains its prior stance in support of MI policy. Palisades would be able to participate in the resource RFP as outlined in the CMS IRP and would be eligible for the FCM (if the plant can submit an economic bid). That said, reversing the decommissioning path is a heavy lift given the currently shut down status, needing to invest in capex, finding labor and or an ultimate owner for the power plant (ETR has been clear in commitments to cease operations at Palisades prior to the decommissioning sale. There are currently no regulatory mechanisms for LT operations support at Palisades and further state level support would require legislative intervention. This could present some upside for CMS but too early in the process. We wrote on this when it first came up, see [HERE](#).*

Hydrogen – New hydrogen technology unveiled using direct charge from solar energy

- SunHydrogen (HYSR, OTCMKTS) has unveiled a direct solar charge technology to create green hydrogen
- Technology remains in prototype stage.
- More [here](#).

Guggenheim takeaway: *We continue to monitor emerging technologies and commercialization of hydrogen which remains in early stages.*

ED – CECONY comments on rising gas costs this summer; customers to see bills increase by up to 30%

- Con Edison is urging customers to take conservation measures as electricity and natural gas are expected to be substantially higher this year
- The increases in customer bills are mainly due to increases in the market cost of natural gas, CECONY anticipating 30%+ increases.
- The company also offers energy-saving tips and a number of payment assistance options, including levelized billing.
- More [here](#).

Guggenheim takeaway: *FYI. We continue to monitor bill headroom issues, especially in the northern US states that rely heavily on natural gas for heating and power generation. This could present an issue throughout the country and the Commissioners we have met with are well aware of these tail risks. The question is, while Fuel and Purchase Power are passthroughs in many jurisdictions, could we eventually see a crowding out of capital growth opportunities with bill pressures?*

ED – CECONY replies with rate case settlement status update, negotiations continue through September 30, 2022

- CECONY posted an update on the rate case settlement process per ALJ request.

CECONY and intervenors anticipate continued settlement talks with the next update due around September 30, 2022.

- CECONY factsheet [here](#).
- Docket: [22-E-0064](#) / [22-G-0065](#)

Guggenheim takeaway: FYI.

PCG – ALJ sets hearing dates for September 21, 23 in the PG&E 2023 GRC

- CPUC ALJ has set the schedule for evidentiary hearings on September 21 and 23, 2022 in the PCG GRC.
- PG&E previously filed updated testimony in the 2023 General Rate Case which incorporates updated cost escalation on O&M and capital, as well as tax law changes which impact revenue requirements.
- The updated testimony results in a 2023 base year revenue requirement increase of \$835M (the bulk of the contribution from expense escalation, \$641M).
- Escalation for 2024-2026 results in revenue requirement increases of \$31M, \$105M and \$119M in the respective attrition years.
- Capital cost escalation also results in increased to rate base, with a 2023 base year step up to \$50.9B (+\$1.7B vs prior request) and up to \$68B by 2026 (+\$5.4B vs. prior request)
- Docket: [A2106021](#)

Guggenheim takeaway: *The updated testimony is a significant shift for both revenues and rate base, but largely driven by macro factors. Despite PCG's continued efforts to balance spending with cost efficiencies, cost of service in the current inflationary environment continues to escalate. Intervenors have previously been focused on specific revenue reductions, including alternative insurance proposals, reduction in operating costs, reduction in capital programs including undergrounding, etc. Between the broader stakeholder support for undergoing, and legislative outcomes (**noted [HERE](#)**), there is a clear push to do more in CA, but we acknowledge the regulatory process bid-ask and intervenor scrutiny. Ultimately, we still see an upside to the base capex for PCG even among the bid-ask as system needs are not going away. **More on our thesis [here](#).***

OGE – AARP comments on unopposed settlement for OG&E 2022 rate case

- AARP issued comments on OG&E rate case settlement approval.
- Comments specifically note the reduction from the initial request.
- OCC approved 3-0 the settlement in the OG&E rate case.
- Intervenors in the OG&E rate case have previously signed on to a modified settlement agreement with OG&E, with no opposing parties (AARP does not oppose).
- Docket: [PUD202100164](#) available through search.

Guggenheim takeaway: FYI.

DUK – Duke Energy Florida once again granted permission to construct ~749MW of new solar

- The total to be paid by participants over the duration of the program is projected to be \$833.4m, which is \$39.2m more than the fixed revenue requirement, according to the Florida PSC's order.
- "This excess inures to the benefit of the general body of ratepayers, as the electricity generated by the

program's solar power plants will be used to provide service to all customers... The total amount to be paid by program participants in subscription fees was calculated as 104.9% of the fixed revenue requirement associated with constructing and operating the program's solar power plants, net of avoided generation and transmission capital, fixed costs, and gas reservation charges" – **Sept 8th Florida PSC order** (see link to docket below)

- Docket [20200176](#)

Guggenheim takeaway: *The plans had originally called for two solar farms to come online this year, followed by four more in each of the following two years, respectively.*

VA – Democrats and Youngkin continue to spar over energy and environmental policy

- 61 Democrats in the Virginia General Assembly wrote a letter to Youngkin late last week warning that his efforts to withdraw from RGGI were not legal
- "RGGI is nothing more than an additional tax on household energy use for Virginia families." – Youngkin spokesperson via WaPo
- Youngkin has also begun to target VA's linkages to CA vehicle emissions requirements, which could see the state phase out ICEs in 13 years
- More [HERE](#)

Guggenheim takeaway: *Flagged for your awareness, but generally in line with the noisy status quo in our opinion. This is his focus, not retail rate pressures.*

Wind – GE-Siemens suit results in injunction against further Haliade-X sales

- A judge blocked the sale of the large turbine offering from GE in the US following a lengthy legal battle between the wind turbine makers
- More [HERE](#) [NYSE: GE, BMAD: SGRE]

Guggenheim takeaway: *ICYMI last week, and not a major surprise after the jury findings earlier in June/July. GE has also indicated it is exploring potential pathways to workarounds that would keep the product on the market. As a reminder, D's CVOW is using a Siemens Gamesa product, as are ES' JV projects South Fork, Revolution, and Sunrise.*

POR – PGE conducts PSPSs across footprint over the weekend, begins restorations

- The actions affected roughly 40k customers at certain points as high winds and dangerous fire conditions prompted the preventative measures in 10 areas
- "Sept. 10, 2022 — Service is starting to come back on for 5,365 Portland General Electric customers in the Southern West Hills and restoration efforts are underway for another 9,385 customers in the Scotts Mills, Central West Hills, North West Hills and Tualatin Mountain areas among 10 Public Safety Power Shutoff (PSPS) areas. Restoration efforts are also underway in Silver Falls, an area where PGE proactively turned power off in response to strong wind gusts and extreme fire conditions to help protect people and communities." - POR
- More [HERE](#)

Guggenheim takeaway: *Heads up on the re-energizations, and not a surprise after we highlighted the lead-up*

forecasts last week. As a reminder, POR's service territory is generally compact, with the Mt. Hood region a key focus area for PSPSs.

DUK – Duke teams up with Ford for EV grid balancing pilot program

- In exchange for a \$25 reduction to their monthly payments, drivers of F-150 Lightning pickup trucks would permit DUK to draw power three times per month from their vehicles at times of peak load during the summer and winter, and once per month during the remaining months of the year.
- Docket [E-7 Sub 1275](#)
- More [HERE](#)

***Guggenheim takeaway:** Minor FYI.*

Power/PJM – PE firm Earthrise acquires 2 gas plants from ArcLight

- The group acquired the Lincoln Energy Center (~660MW) and the Crete Energy Park (~330MW), both CTs
- More [HERE](#)

***Guggenheim takeaway:** More asset-level transactions in PJM for your awareness.*

ERCOT – Brazos bankruptcy plan could be approved on 9/13

- The plan will see the cooperative pay ERCOT \$1.1bn, alongside the sale of 3 plants
- More [HERE](#)
- “Generation Assets” means, as applicable, the Debtor's or the Reorganized Debtor's electric-generation facilities known as the Jack County Plant, the Randle W. Miller Plant, the Johnson County Plant, and assets related to the foregoing” – plan
- Plan [HERE](#)

***Guggenheim takeaway:** For your calendars, and some interesting potential asset transactions to monitor in the market as the CCGTs are put up for sale as there could be strong interest from privates based on activity in other RTOs (e.g., see above on PJM).*

RGGI/PA – RGGI results drive sharp criticism from Jobs Alliance in PA

- “PA electricity ratepayers applaud yet another month without having to suffer the burden of 30-40% electricity rate hikes from the \$800m/yr #RGGI ELECTRICITY TAX,” – Power PA Jobs Alliance
- More [HERE](#)

***Guggenheim takeaway:** Interesting bill headroom data point as RGGI remains a very noisy topic in PA.*

Climate – new study finds world is close to climactic tipping point

- The study points to large benefits to Antarctic and Greenland ice preservation from even tenths of a degree preservations around the crucial 1.5 degree threshold
- More [HERE](#), [HERE](#)

***Guggenheim takeaway:** Interesting data points, with the 1.5 degree threshold a key driving factor in some of*

the TAM analyses underpinning our SMR work – see our recent launch [HERE](#).

ALE – Mine unions reach 47-month labor agreement with mine operators

- More [HERE](#)

Guggenheim takeaway: *Interesting taconite data point.*

Policy/Nuclear – AP profiles SMRs with a focus on Rolls Royce data points

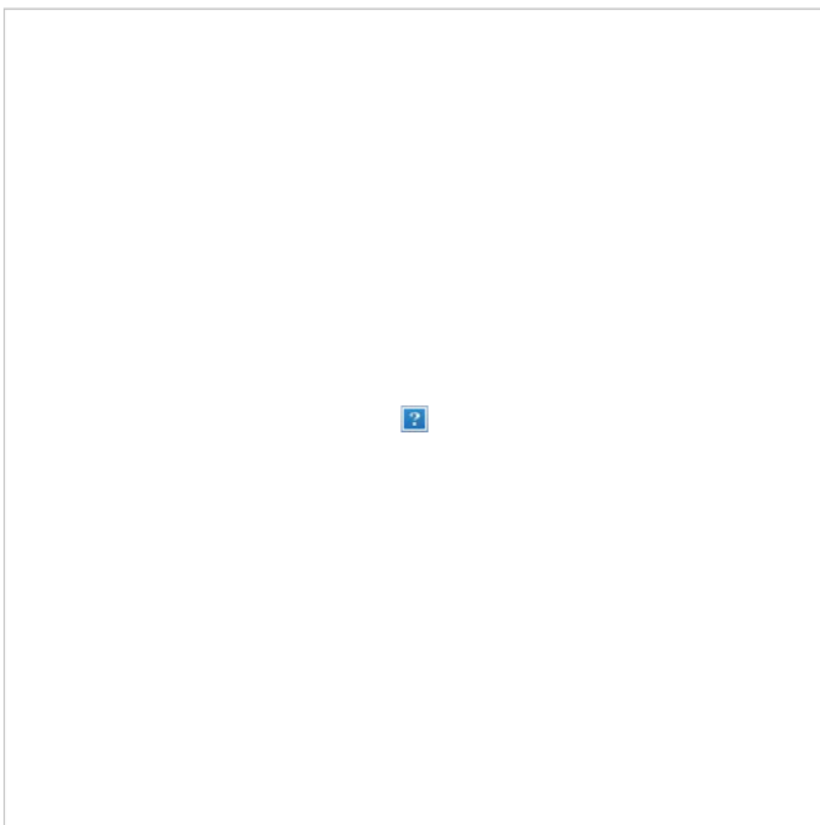
- More [HERE](#)

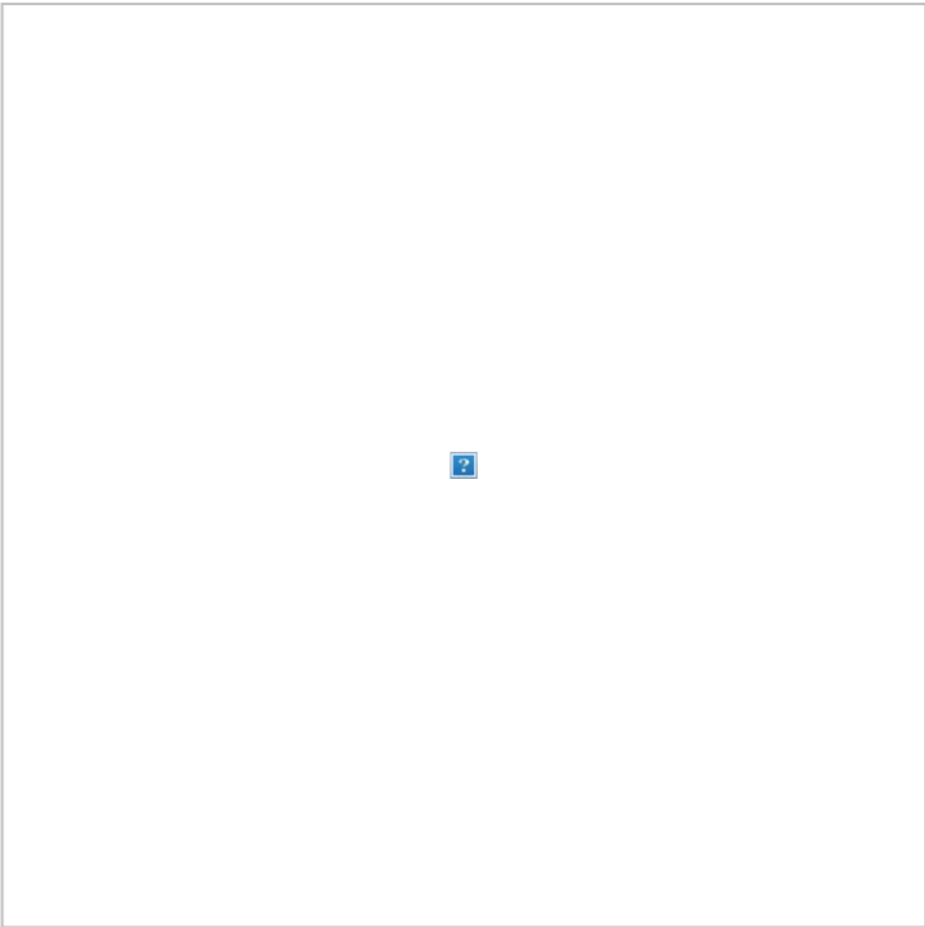
Guggenheim takeaway: *Minor FYI. As a reminder CEG has been involved in the RR offering [LON: RR]. For more on SMRs see our recent launch [HERE](#).*

RI/PPL – Public comment period opens for offshore wind RFP

- “Governor Dan McKee today announced that a 30-day public comment period for a drafted offshore wind procurement request for proposals is now open through October 7. The State’s primary utility company, Rhode Island Energy, is administering the RFP and will issue the procurement to the market no later than Oct. 15, 2022.” – Governor, [HERE](#)
- More [HERE](#)

Guggenheim takeaway: *Part of the process as the state seeks to get to 100% renewable by 2030.*

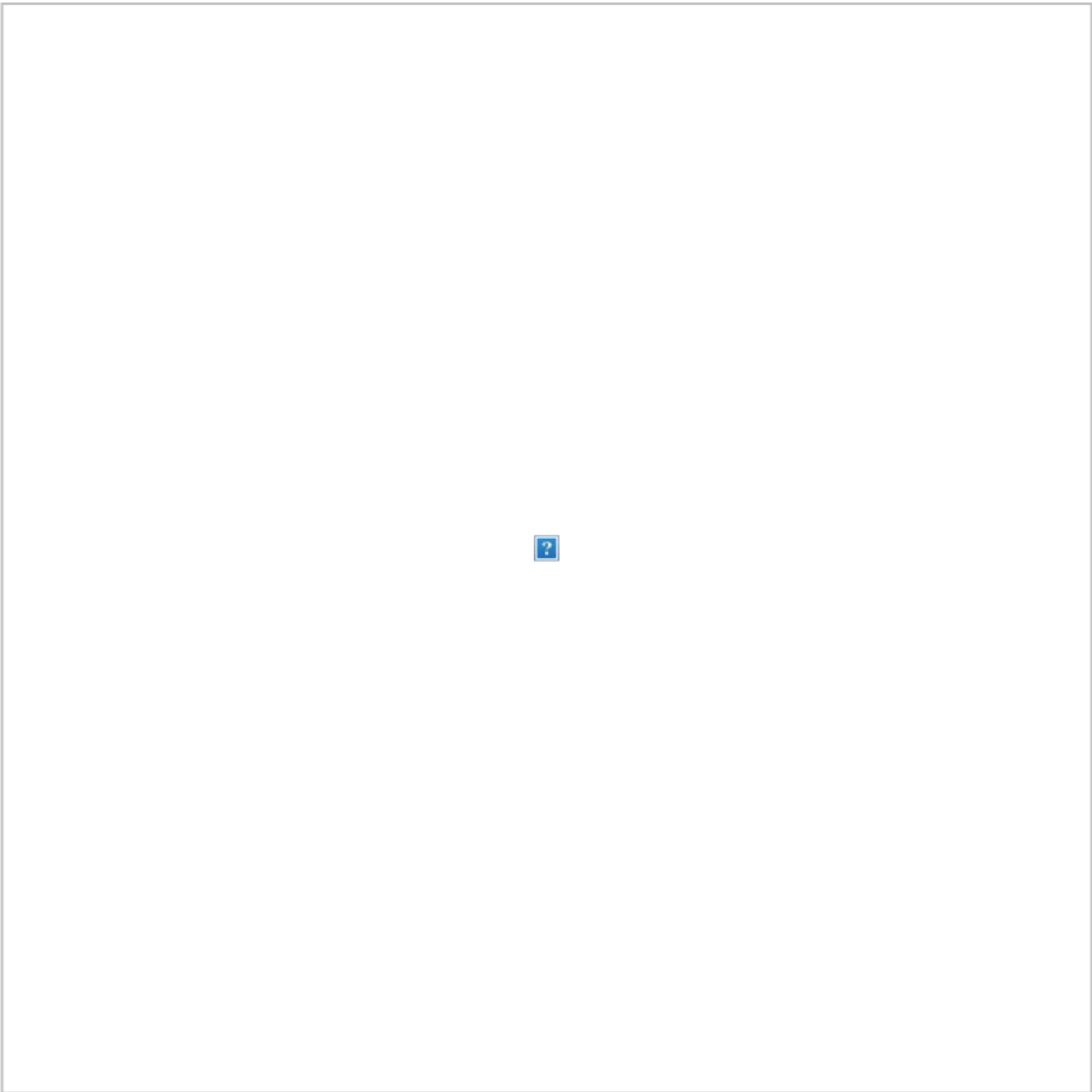




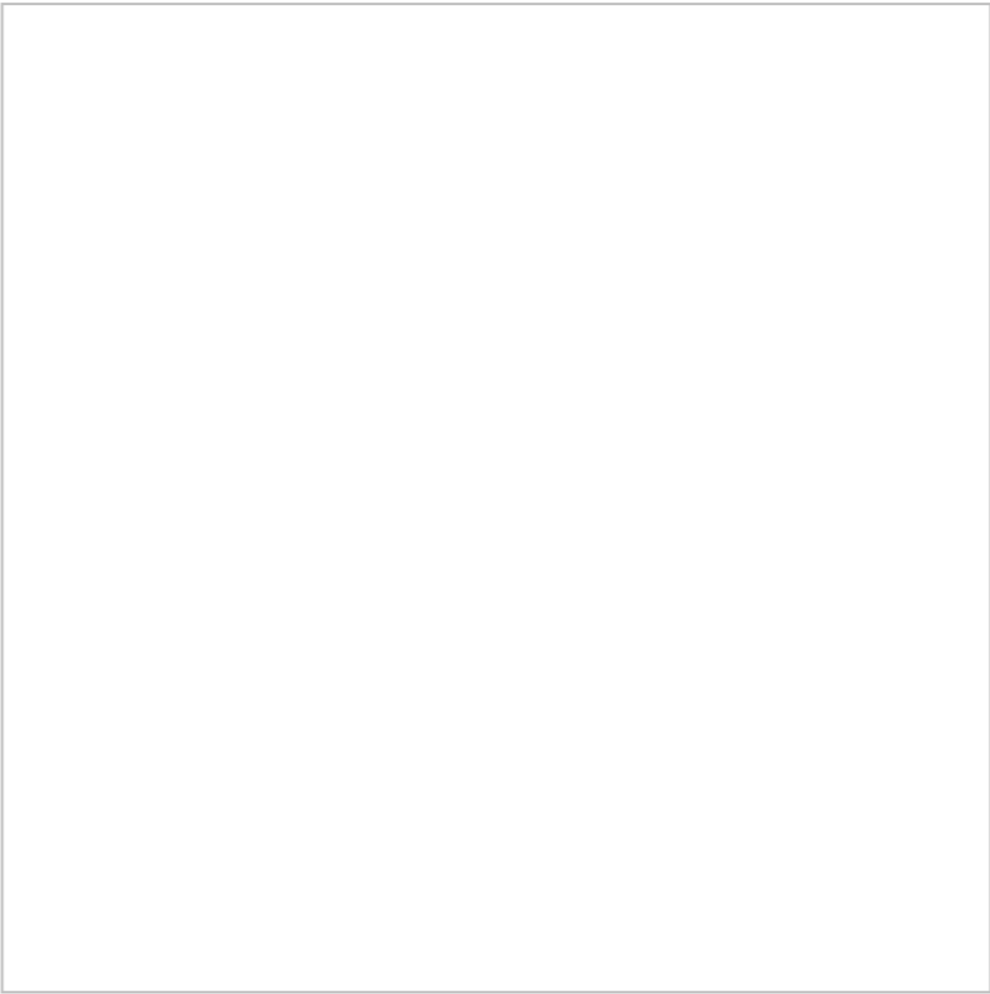
Guggenheim's Power & Utility Comp Sheet



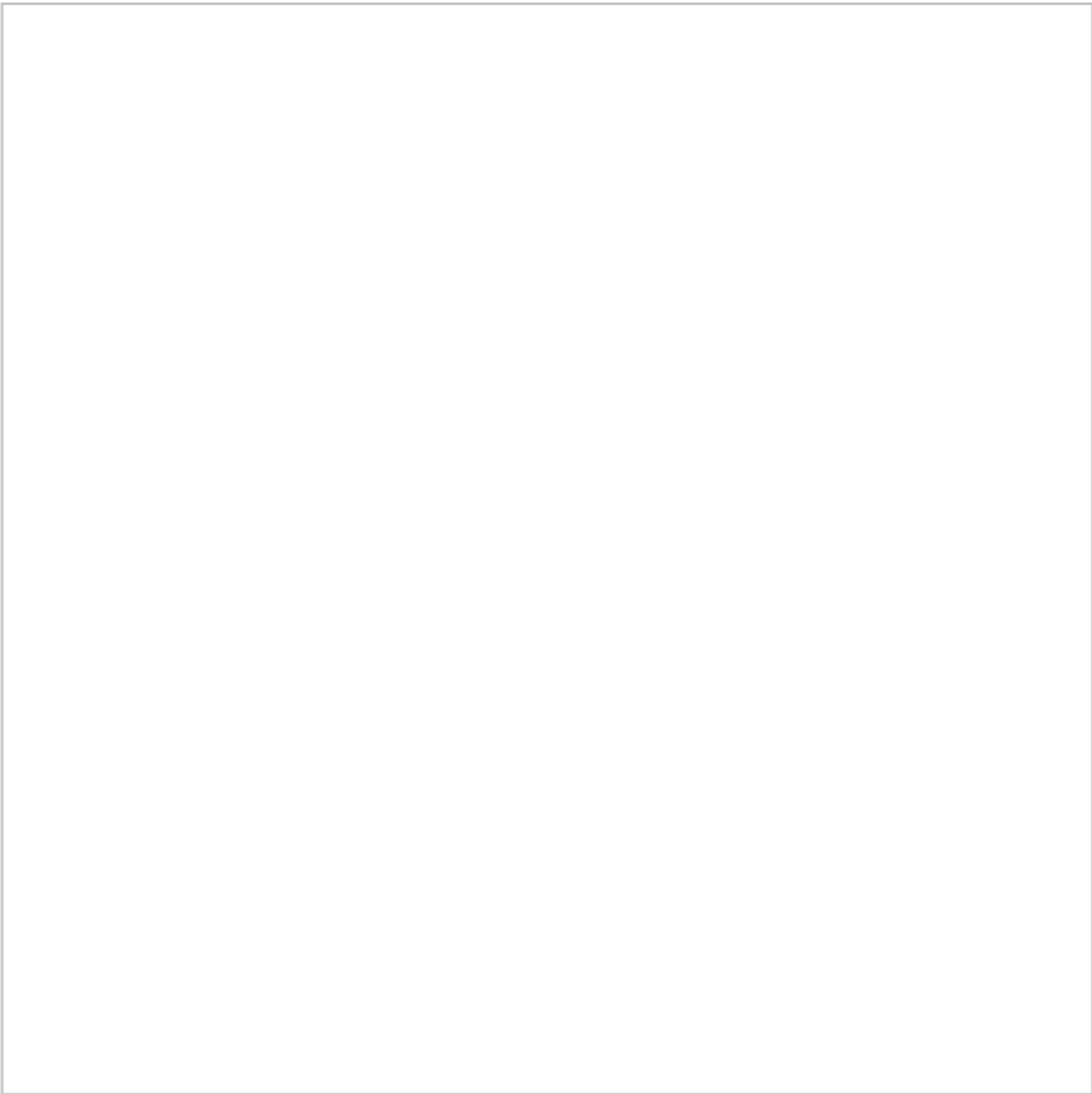
Share Price Performance (Year-to-Date, Three-Month, One-Month, & Five-Day Trailing)



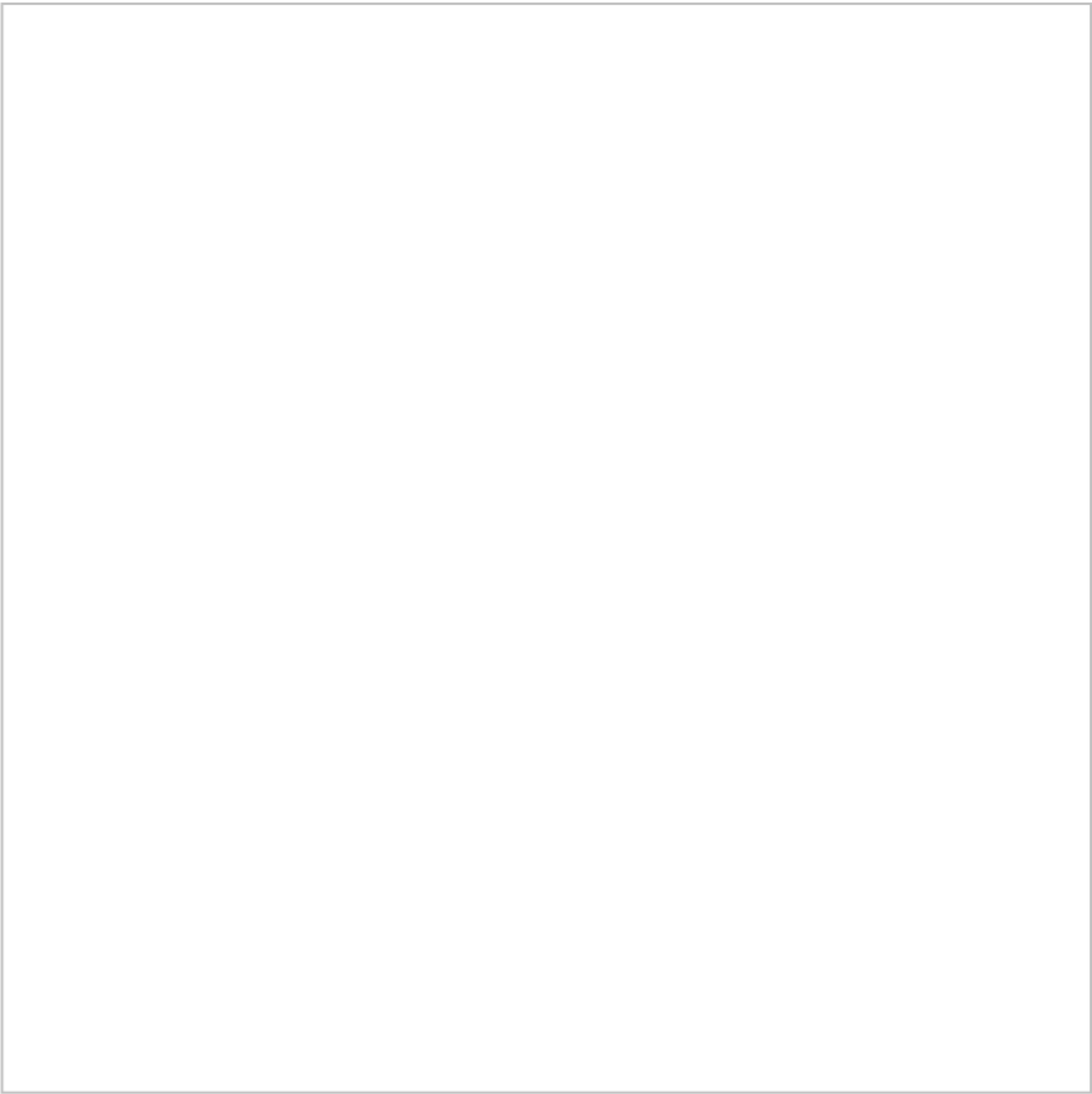
Guggenheim 2022 Client and Corporate Access Utility Events



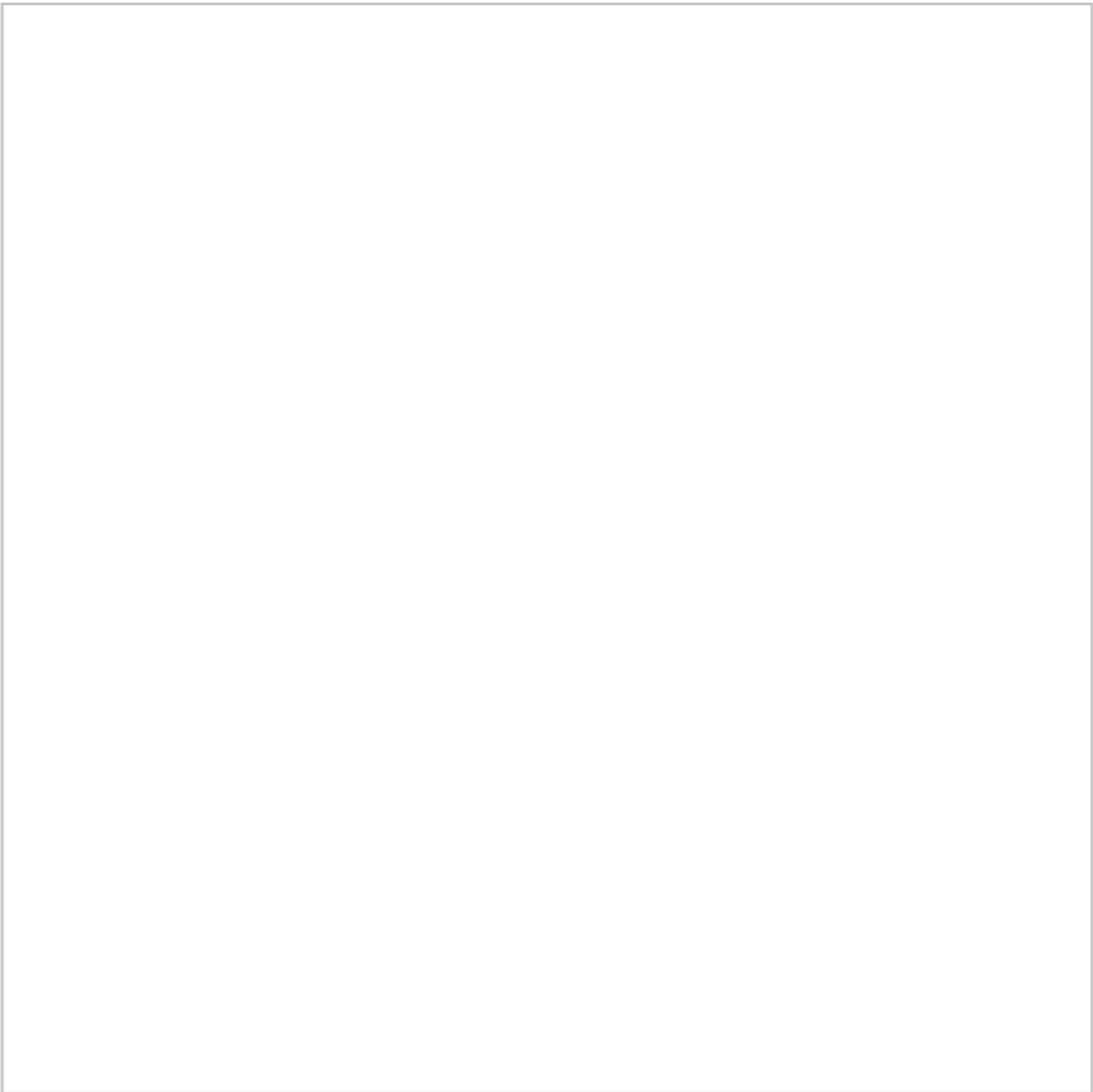
Generation and Mix



Weather



Peak Load



Regulatory Calendar

Key Research

Guggenheim's Forward Commodity Curves

- [Forward Power Curves, GenCo MtM, and Weekly Commentary](#)

Key Research

- [NEE NDR: Top IRA Idea - Runway Set for Takeoff; Fundamentals On NEER, FPL Start Spring-loading Growth; Raising TP to \\$108](#)
- [Policy: Existing Nuclear Comes In From the Cold](#)
- [SMR - NuScale: Initiating Coverage - Another Nuclear Renaissance? Yes Please...](#)
- [DTE – First NDR In a Post IRA World; DTE Stands to Gain on Capex Roll Forward and Strategic Value of Vantage Business](#)

- DUK: Damned If You Do, Damned If You Don't - Sale of Commercial Renewables Really Materially Dilutive? We Don't Think So – Some Misconceptions Out There
- Utilities — Life, Death... and Pension Expense?
- Mid-Summer Night's Dream – Utilities Sector Update: Individual Themes Playing Out, but We Continue to See Broader Support, Outperformance for Utilities Even as Fed Rates Get Factored In
- '22 Utilities Outlook: Sector Cheap, Fundamentals Strong but Get Ready for Another Bumpy Ride – Choose Your Picks Wisely
- SO GA Road Trip: Approaching the Apex the Southern Way... Cool, Calm, and Collected
- ES: Captain Nolan Charts a Course to Calmer Waters - Upgrading to BUY on Potential NT Catalysts, Valuation
- SO: Georgia Power Rate Case Filed; This Isn't Their First Rodeo
- PPL NDR: On the Road Again... Just Can't Wait to Get on the Road Again - Much Needed Face Time Helps Build Confidence
- PJM: Depressed 2023/24 BRA Results Not A Surprise
- ETR Analyst Day – Back in Step and Then Some: LT EPS Growth Set to 6-8%, Plan Reset to Solid Yet Conservative Trajectory; Maintain Buy, Estimates
- CMS – CEO/CFO Catch Up NDR; CMS Continues to Build on Premium Story With Transformed EPS Trajectory
- ES NDR: Landlubber? That's Fine with Us...
- NEE: Sunny Days Ahead for NEE; Analyst Day Steps Up EPS Growth Trajectory and Demonstrates Best in Class Positioning Across Business Lines
- LNT NDR: Solar Tariff Moratorium Defuses Key NT Overhang as Management Navigates a Busy Spring
- PCG: No Surprises Analyst Day Puts Together Winning Framework; Rebuilding Trust May Take Time, but Patience Gets Rewarded
- PNW: APS Rate Case Pushed Out to End of October
- PPL: Familiar Playbook Draws Mixed Investor Reaction
- EXC NDR: Getting Yourself Back Out There...
- Solar Tariff Touch Points: Quick Read
- AWK NDR: Reconstituted C-Suite Hits the Ground Running
- EVRG NDR: The Wichita Lineman Is Still on The Line...
- ED: CECONY GRC Testimony Posted; Solid Floor Set, Rate Base Mostly Intact; Upgrading to Neutral on Risks Subsiding
- AGA Day 2 Flash Recap
- AGA Day 1 Flash Recap
- CNP NDR: CNP Continues to Harmonize Capex Upside and Business Mix; Mgmt. Focused on Consistent 8% EPS Growth, but We See LT Plan Upside Potential
- [Show Me the Money on Gas LDCs? Reality – Keeping Is More Valuable Than a Check for 2x Rate Base](#)
- AEE NDR: Straightforward Updates Reinforce Premium Position; Gen Transition and Policy Work Continue
- ETR "In Person" NDR: Energy Intensive Industrial Customer Base and Heavy Storm Activity Dilutive to Valuation? Let's Talk Accretion...
- Uranium Baseline: Russia-Ukraine Fallout

- D: C-Suite NDR – Political Noise Gone with the Wind
- SJI: So Long and Thanks for All the Memories; LDC M&A Gets Even Hotter
- WEC NDR: Decarbonization and Growth Remain on Track; ESG Focus Is Clear Throughout This Premium Utility's Plans
- PCG: Misconceptions Gone in a Flash Ahead of Our NY Meetings; PCG 8K Highlights 10% EPS CAGR Through 2026
- DUK: CEO NDR - Accelerating Growth Driven by Clean Energy Transformation with a Decade of Visibility and Earnings Upside... What's Not to Like?
- CEG: The Longest Half Life of Any IPP? We Like but We Wait - Policy Upside Remains TBD; Initiating Coverage with NEUTRAL
- SO: Georgia Power IRP filed; coal retirements on track for 80% shut down by 2028; Southern Power to provide majority of replacement capacity
- NI: CEO(s) Catch-Up: Incoming CEO Brings Experience and Existing NI Knowledge; Business and Strategic Reviews Underway; May Analyst Day Next Event
- Timely Regulatory Insights: Open Dialogue with CT, GA, and VA Commissioners – Two Way Better Than One Way
- PNW: C-Suite Meeting Highlights Path to Higher Rate Base Growth and Earnings; Alignment with a Cooperative Commission Remains Key to Execution
- AVA: Washington Multiyear Rate Case Filed; 11-Month Process Kicks Off in Pursuit of Earning Allowed Return in 2023
- EXC: Constellation Analyst Day Lays Out Clear Strategy and Key Details; Investor Comfort May Take Time
- EXC: RemainCo Details Largely in Line with Our Expectations
- [EXC: Straightforward Spin? Constellation Details Much Appreciated, but Expectations Should Be Otherwise Grounded](#)

Copyright © 2022 by Guggenheim Securities, LLC ("Guggenheim"), a FINRA registered broker-dealer. All rights reserved. For Analyst Certifications and important disclosures, refer to the Disclosures section of the excerpted research report(s) which can be accessed via the hyperlink to the provided report or by clicking [here](#). Guggenheim Equity Research is a division of Guggenheim, which may be engaged in and seeks to do business with companies covered in its research reports. As a result, investors should be aware that Guggenheim may have a conflict of interest that could affect the objectivity of this report. Investors should consider whether the recommendations in this research are suitable for their particular circumstances and consider this report only as a single factor in making their investment decision. Past performance is not a guide to future performance. Research is provided "as is" to institutional clients. All research reports are disseminated and available to all of Guggenheim's clients simultaneously through electronic publication to our internal client websites. For research, models, or other data related to one or more securities, please contact your Guggenheim Sales representative, or click [here](#).

[Click here](#) to unsubscribe.

From: [Shahriar Pourreza, CFA](#)
To: [Scripps, Daniel \(LARA\)](#)
Subject: The Guggenheim Daily Transmission: NEE, ED, PCG, DUK, NJ, ETR, DTE, Michigan - Guggenheim Securities, LLC
Date: Friday, September 23, 2022 8:53:44 AM

CAUTION: This is an External email. Please send suspicious emails to abuse@michigan.gov



The Guggenheim Daily Transmission: NEE, ED, PCG, DUK, NJ, ETR, DTE, Michigan

Power & Utilities

September 23, 2022

[Shahriar Pourreza, CFA](#) 212 518 5862

[Constantine Lednev](#) 212 651 0847

[James Kennedy](#) 212 823 6741

[Jamieson Ward, CFA](#) 212 518 9661

[Guggenheim Utilities Research Team](#)

[Access This Report](#)

For details on our Guggenheim-hosted client Utility events including: our OGS NDR; EEI Conference meetings; and other events, scroll down ...

NEE – FPL proposes plan for customer bill refunds using new generated tax incentives

ED – CECONY posts notice of intent to extend settlement talks in September 23 settlement update in CECONY rate case

PCG – CPUC approves motion to extend settlement period on PG&E wildfire cost recovery

DUK – NCUC Chair disappointed with Intervenor's slow progress towards settlement for DUK's North Carolina Carbon Plan

NEE/ED – MVP files comments and disclosure around the pipeline GHG emissions

NJ – NJ Governor signs executive order to increase the state's offshore wind goals to 11GW by 2040

ETR – ETR received LPSC approvals for new solar capacity

ETR – LPSC candidate forum highlights rising bills and storm costs

ETR – ETR and Mississippi Power opposed new MPSC rules on distributed generation

DTE – Michigan AG in looking into DTE Energy debt collection practices

PCG – PG&E addresses safety practices in CPUC hearing

Michigan – Palisades nuclear plant continues down decommissioning path

NEE – FPL proposes plan for customer bill refunds using new generated tax incentives

- Florida Power & Light announced a plan to refund \$400M in savings resulting from the new federal tax law.
- The savings are the result of a federal production tax credit (PTC) for the development of solar assets at FPL.
- FPL is planning a one-time, \$25 million refund in the month of January 2023. Also starting next year and through 2025, the company plans to phase in nearly \$360 million in additional federal tax savings for future planned solar projects.
- Media reporting on the LPSC candidate forum highlighted the conversations around rising customer bills and storm costs.
- PR [here](#)

***Guggenheim takeaway:** FYI. FPL is one of the first utilities to recognize the ability to use new IRA mechanisms to help reduce customer bills, especially as the issue has become a hot topic in 2022.*

ED – CECONY posts notice of intent to extend settlement talks in September 23 settlement update in CECONY rate case

- NYPSC ALJ requested that CECONY and intervenors file an update on settlement negotiations by September 23 instead of September 30 as previously proposed.
- CECONY issued a notice that the company will seek an extension of settlement talks.
- CECONY will also need to extend the rate suspension period.
- CECONY factsheet [here](#).
- Docket: [22-E-0064](#) / [22-G-0065](#)

***Guggenheim takeaway:** FYI. CECONY settlement talks continue. Current rates are suspended through March 2023.*

PCG – CPUC approves motion to extend settlement period on PG&E wildfire cost recovery

- CPUC approved an extension of the settlement deadline with on deferred wildfire cost recovery (CEMA).
- Intervenors previously agreed to remove parts of the CEMA O&M requests from the application and agree on all other disputed facts as previously stated.
- Core issues include past wildfire mitigation measures including vegetation management.

- Docket: [A2109008](#)

Guggenheim takeaway: FYI. PG&E continues to progress on legacy wildfire memorandum account recovery. Request for extension signifies progress on a potential settlement.

DUK – NCUC Chair disappointed with Intervenor’s slow progress towards settlement for DUK’s North Carolina Carbon Plan

- 10 of the 16 intervenors asked the NCUC for settlement talks to be held in lieu of hearings on Wednesday and Thursday morning, but only provided DUK with material to review 90 minutes ahead of hearings resuming at 1:00pm on Thursday.
- “I’m just curious as to what the discussions have been and if there is some consensus achieved and you all took the time — the hearing time — that we had planned. Where are we?...The commission is under a statutory deadline, and we are not going to miss that deadline.” – Charlotte Mitchell, NCUC Chairwoman to intervenors in DUK’s Carbon Plan case
- Docket [E-100 Sub 179](#)
- More [HERE](#)

Guggenheim takeaway: The NCUC must issue a final Carbon Plan by Dec. 31, 2022, as ordered by the N.C. General Assembly, and remains clearly committed to making that deadline.

NEE/ED – MVP files comments and disclosure around the pipeline GHG emissions

- MVP filed a general correspondence arguing against opponents of the pipeline on GHG emissions.
- The filing discusses GHG emissions and MVP support for a clean energy transition.
- Mountain Valley Pipeline previously submitted an Implementation Plan for the Amendment Project for Mountain Valley Pipeline Project.
- The plan supports the amended application including changing the crossing method for 183 waterbodies and wetlands at 120 locations from open cut to trenchless.
- FERC Docket: [CP16-10](#). / [CP21-57](#)

Guggenheim takeaway: The continued efforts on resuming construction activities are potentially constructive for the MVP project. The MVP project was largely built (~90+% by prior developer estimates) but the recent fourth circuit rejection of water permits puts any potential progress on hold. The tug of war continues on MVP legal challenges. The final authorizations to resume construction are still outstanding and FERC commissioners have previously dissented on “continuation of work” approvals. Both ED and NEE have taken major write downs on the MVP project (i.e., not in financial guidance).

NJ – NJ Governor signs executive order to increase the state’s offshore wind goals to 11GW by 2040

- NJ Governor Phil Murphy signed an Executive Order increasing New Jersey’s offshore wind goal to 11,000 MW by 2040.
- The Executive Order directs the New Jersey Board of Public Utilities to study the feasibility of increasing the offshore wind target
- The state’s prior goal was 7,500 MW

More [here](#)

Guggenheim takeaway: FYI.

ETR – ETR received LPSC approvals for new solar capacity

- ETR LA received LPSC approval to add 475 MW of solar generating capacity,
- The commission also approved the company's green tariff, "Geaux Green"
- The projects include:
 - Vacherie Solar Energy Center – a 150-megawatt resource in St. James Parish. PPA
 - Jacques Louisiana Solar – a 150-megawatt resource in St. James Parish. Build-own-transfer
 - Elizabeth Solar – a 125-megawatt resource in Allen Parish. PPA
 - Sunlight Road Solar – a 50-megawatt resource in Washington Parish. PPA
- More [here](#)

Guggenheim takeaway: FYI. ETR continues to progress toward the 7GW solar goal by 2025. ETR also reiterated the 14-17GW renewables target by 2031.

ETR – LPSC candidate forum highlights rising bills and storm costs

- Media reporting on the LPSC candidate forum highlighted the conversations around rising customer bills and storm costs.
- The forum took place in district 3 where several candidates are up for election.
- More [here](#)

Guggenheim takeaway: FYI. Conversations around high bills continue to dominate the election cycle, which can become very noisy and a risk for shares.

ETR – ETR and Mississippi Power opposed new MPSC rules on distributed generation

- ETR and MS Power (SO) voiced opposition to new incentive rules for distributed generation in Mississippi
- The arguments made by the utilities focus on the cost shift for non-participating customers
- More [here](#)

Guggenheim takeaway: FYI. The debate around distributed generation continues to take different forms in various states (including the prime examples of net metering in FL and CA, where progress has stalled in both directions).

DTE – Michigan AG in looking into DTE Energy debt collection practices

- Michigan AG is reportedly taking a closer look at DTE debt collection practices.
- DTE reportedly sold bad debt to collections agencies.
- More [here](#)

Guggenheim takeaway: FYI but consider source.

PCG – PG&E addresses safety practices in CPUC hearing

PG&E provided updates on safety practices during a CPUC and OEIS hearing.

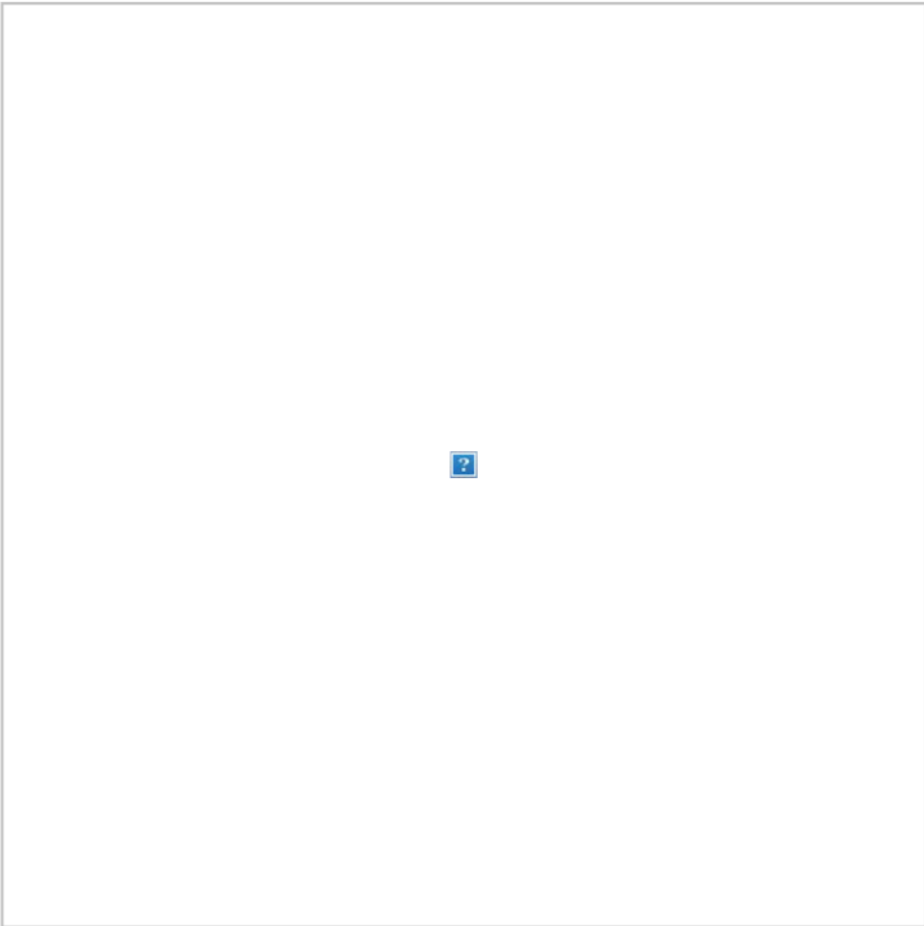
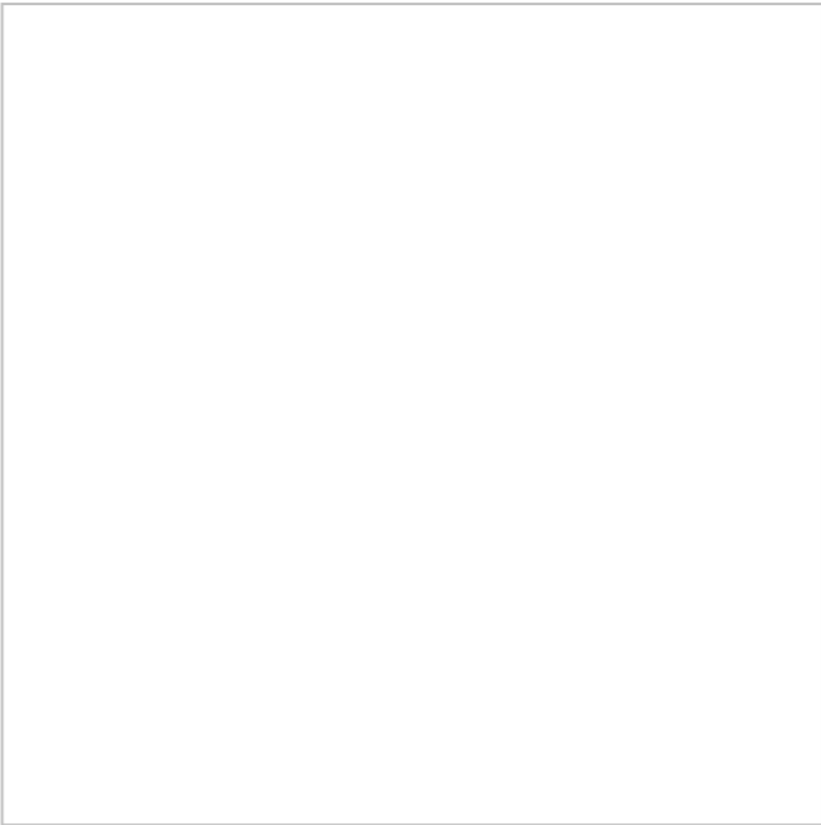
- The hearing focused on utility safety plans and PG&E acknowledged a vast amount of work on safety improvements still ongoing (including undergrounding).
- The hearing included PG&E's utility COO Adam Wright.
- More [here](#)

Guggenheim takeaway: FYI.

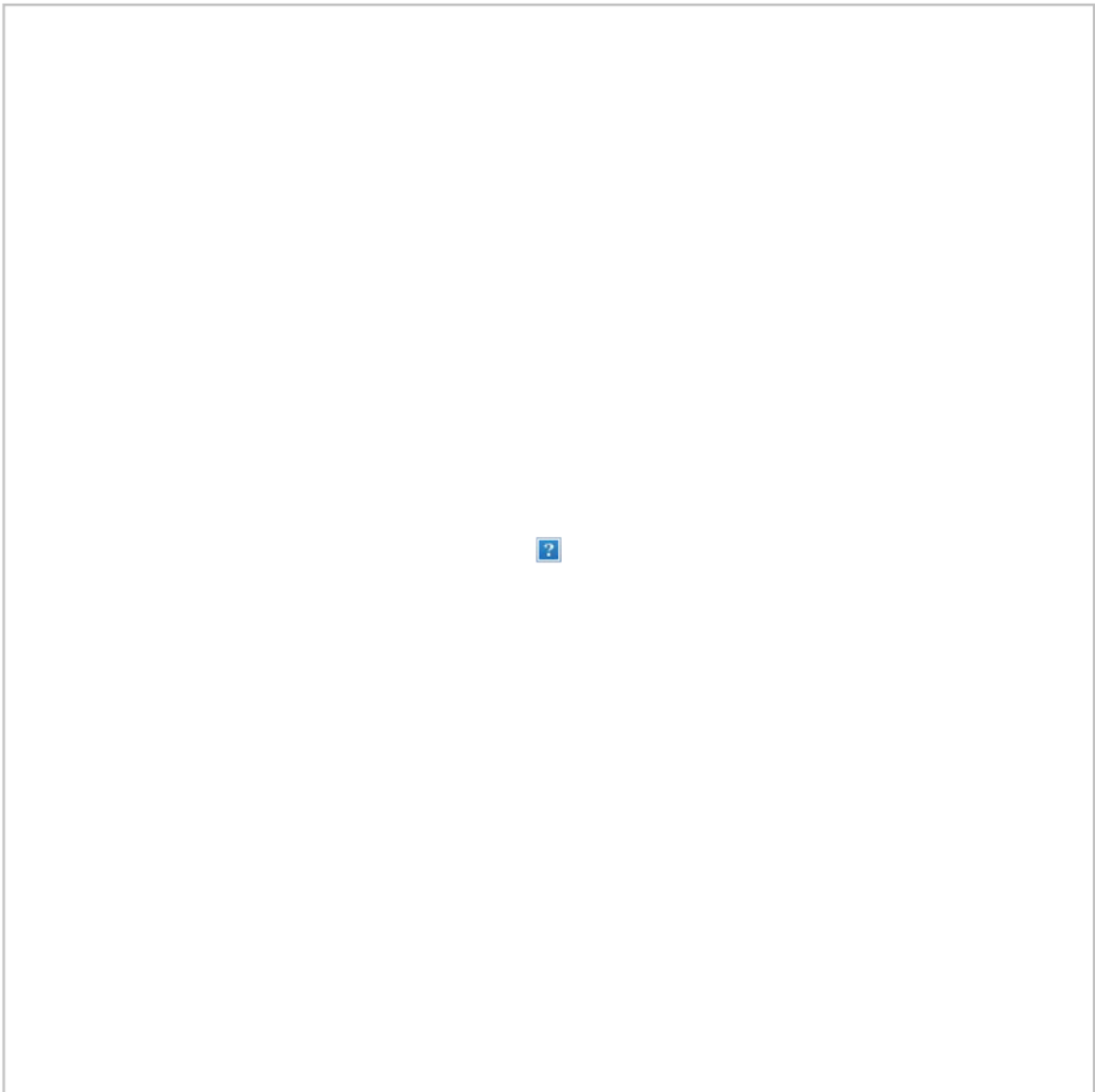
Michigan – Palisades nuclear plant continues down decommissioning path

- NRC community meeting continues to work through Palisades decommissioning plans despite prior attempts to find a reopening plan from the MI Governor.
- More in media [here](#)
- MI Governor's office previously issued a statement on the application for a DOE loan to get Palisades nuclear plan restarted and off the decommissioning path.
- Holtec (private), who is the owner and decommissioning agent, is supportive of the reopening plan.
- PR [Here](#).

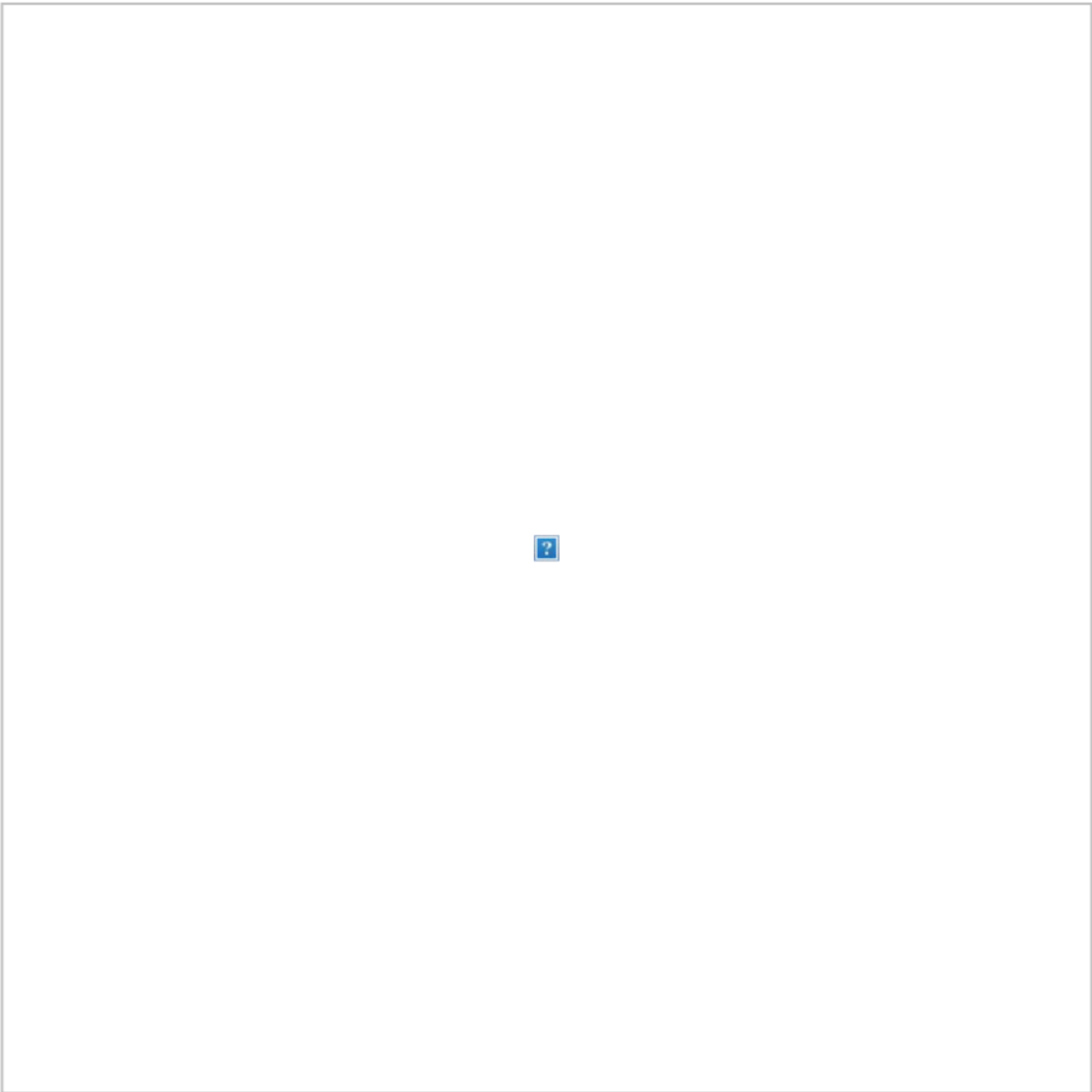
Guggenheim takeaway: CMS has maintained its prior stance in support of MI policy in either direction for Palisades. Palisades would be able to participate in the resource RFP as outlined in the CMS IRP and would be eligible for the FCM (if the plant can submit an economic bid). That said, reversing the decommissioning path is a heavy lift given the currently shut down status, needing to invest in capex, finding labor and or an ultimate owner for the power plant (ETR has been clear in commitments to cease operations at Palisades prior to the decommissioning sale). There are currently no regulatory mechanisms for LT operations support at Palisades and further state level support would require legislative intervention.



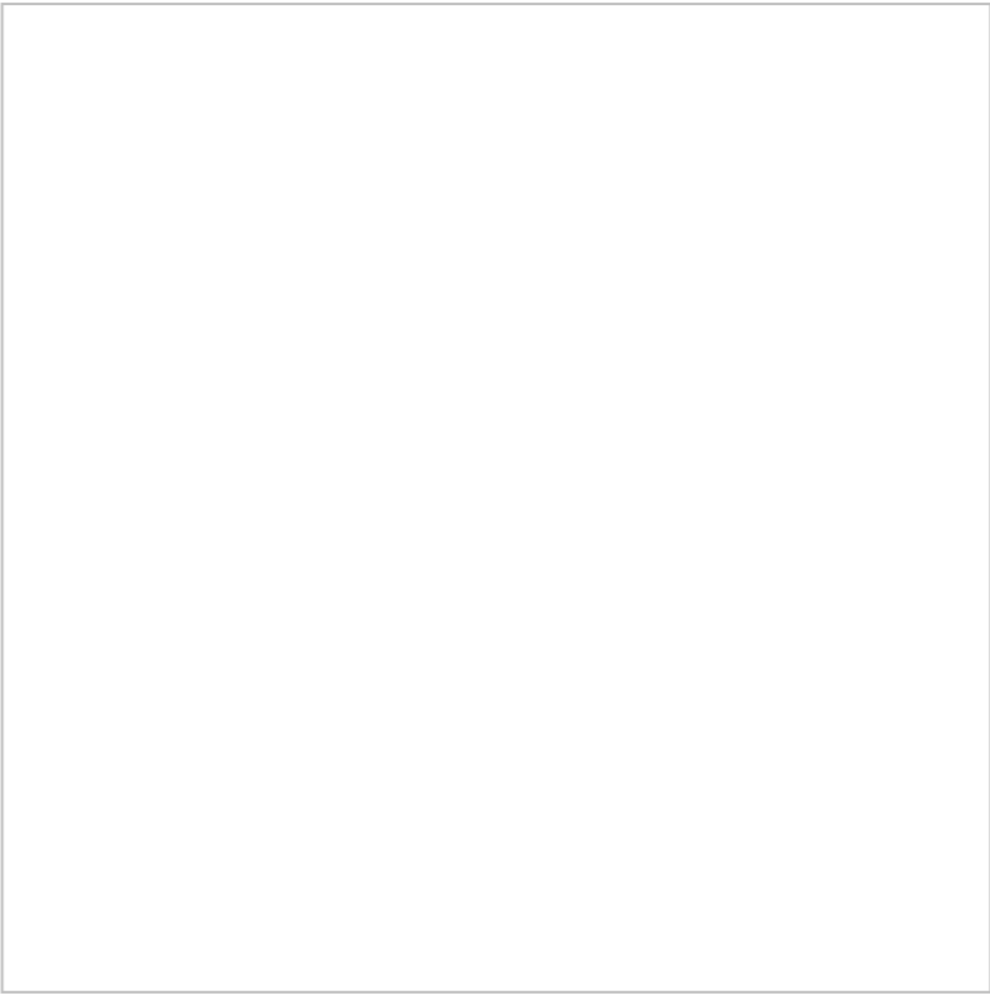
Guggenheim's Power & Utility Comp Sheet



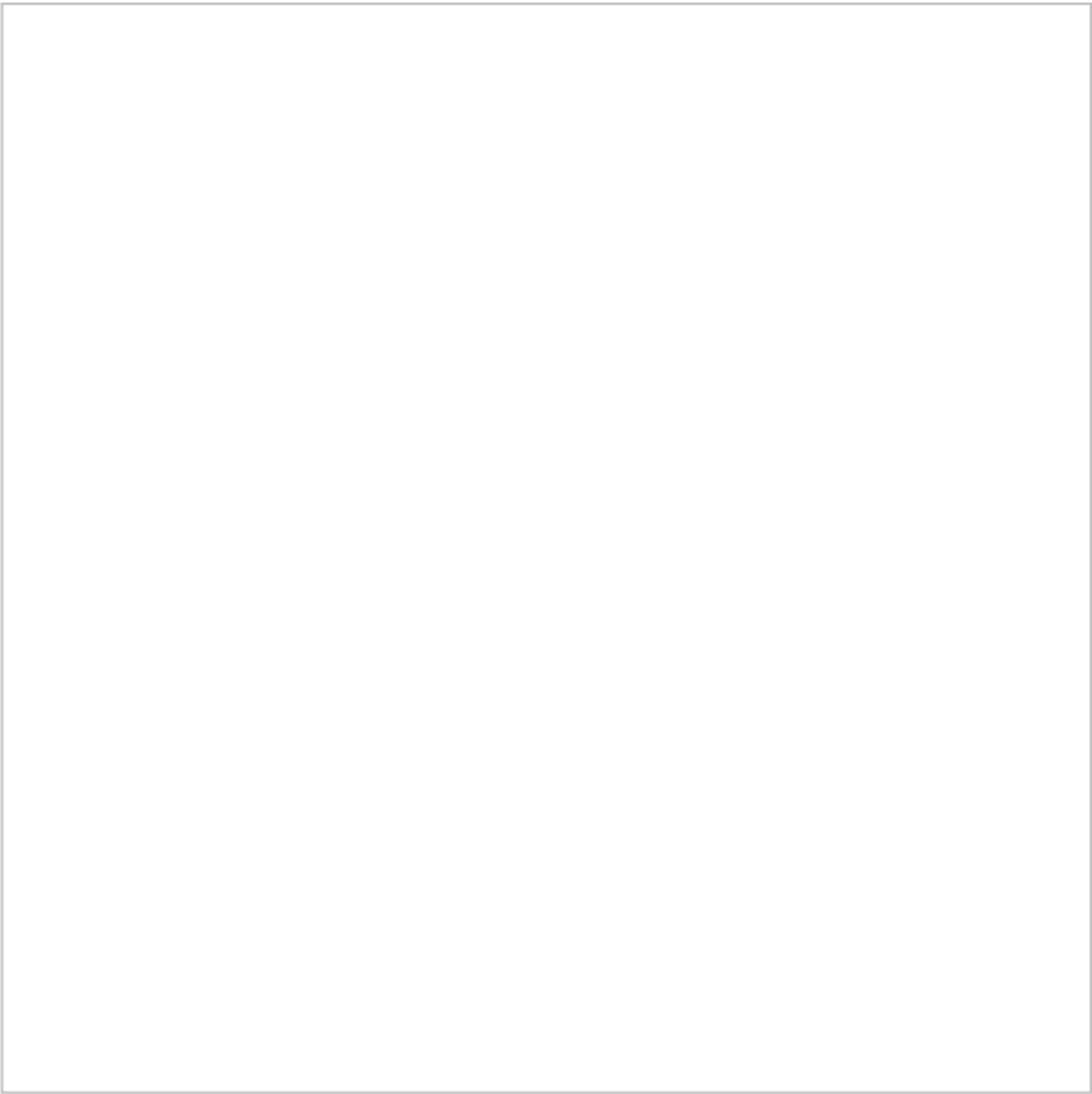
Share Price Performance (Year-to-Date, Three-Month, One-Month, & Five-Day Trailing)



Guggenheim 2022 Client and Corporate Access Utility Events



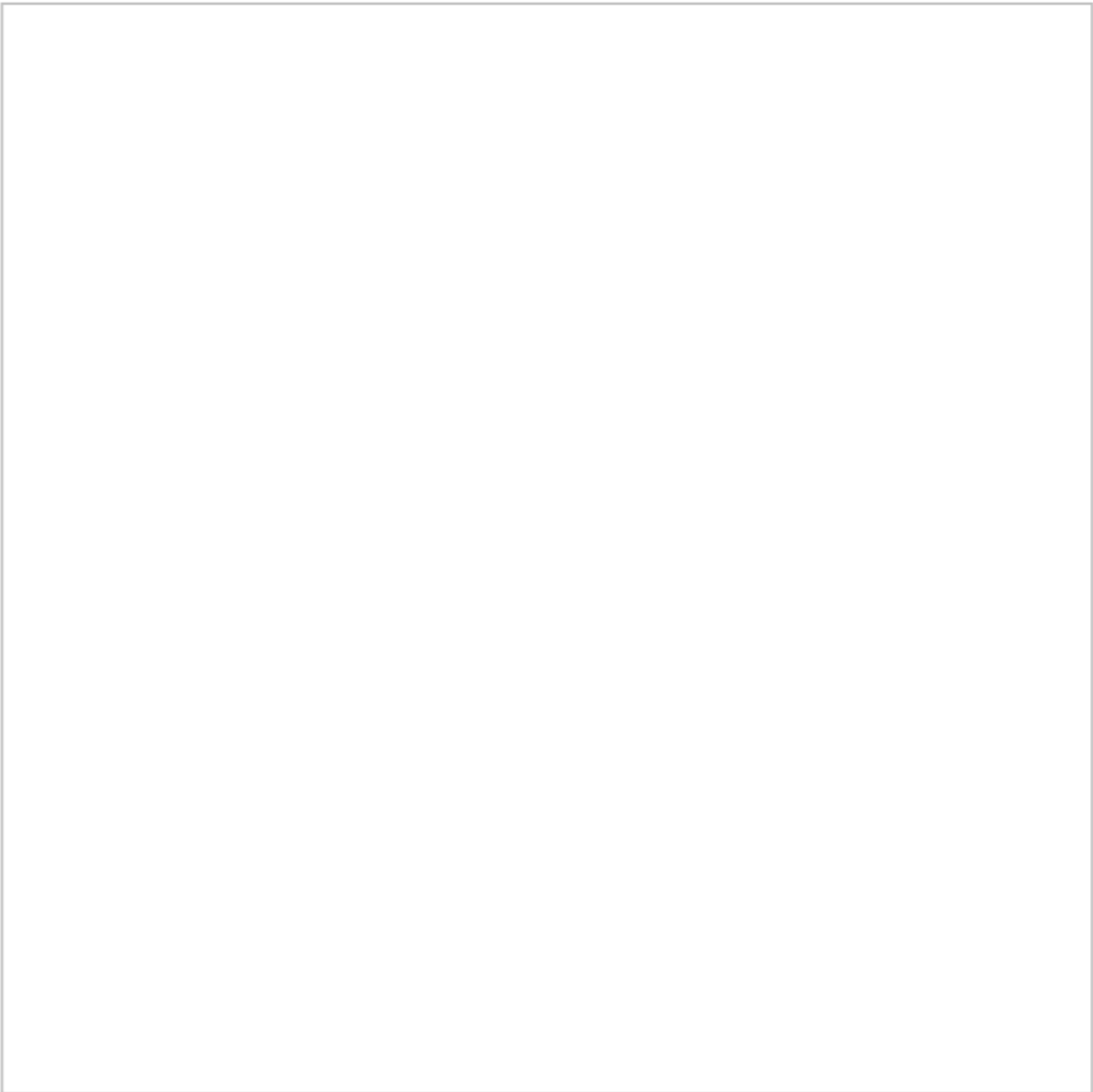
Generation and Mix



Weather



Peak Load



Regulatory Calendar

Key Research

Guggenheim's Forward Commodity Curves

- [Forward Power Curves, GenCo MtM, and Weekly Commentary](#)

Key Research

- [CEG: You Want a Unicorn, You Pay the Price – Raising TP to \\$121](#)
- [FE – CEO Change A Clearing Event? Almost...](#)
- [NEE NDR: Top IRA Idea - Runway Set for Takeoff; Fundamentals On NEER, FPL Start Spring-loading Growth; Raising TP to \\$108](#)
- [Policy: Existing Nuclear Comes In From the Cold](#)
- [SMR - NuScale: Initiating Coverage - Another Nuclear Renaissance? Yes Please...](#)

- DTE – First NDR In a Post IRA World; DTE Stands to Gain on Capex Roll Forward and Strategic Value of Vantage Business
- DUK: Damned If You Do, Damned If You Don't - Sale of Commercial Renewables Really Materially Dilutive? We Don't Think So – Some Misconceptions Out There
- Utilities — Life, Death... and Pension Expense?
- Mid-Summer Night's Dream – Utilities Sector Update: Individual Themes Playing Out, but We Continue to See Broader Support, Outperformance for Utilities Even as Fed Rates Get Factored In
- '22 Utilities Outlook: Sector Cheap, Fundamentals Strong but Get Ready for Another Bumpy Ride – Choose Your Picks Wisely
- SO GA Road Trip: Approaching the Apex the Southern Way... Cool, Calm, and Collected
- ES: Captain Nolan Charts a Course to Calmer Waters - Upgrading to BUY on Potential NT Catalysts, Valuation
- SO: Georgia Power Rate Case Filed; This Isn't Their First Rodeo
- PPL NDR: On the Road Again... Just Can't Wait to Get on the Road Again - Much Needed Face Time Helps Build Confidence
- PJM: Depressed 2023/24 BRA Results Not A Surprise
- ETR Analyst Day – Back in Step and Then Some: LT EPS Growth Set to 6-8%, Plan Reset to Solid Yet Conservative Trajectory; Maintain Buy, Estimates
- CMS – CEO/CFO Catch Up NDR; CMS Continues to Build on Premium Story With Transformed EPS Trajectory
- ES NDR: Landlubber? That's Fine with Us...
- NEE: Sunny Days Ahead for NEE; Analyst Day Steps Up EPS Growth Trajectory and Demonstrates Best in Class Positioning Across Business Lines
- LNT NDR: Solar Tariff Moratorium Defuses Key NT Overhang as Management Navigates a Busy Spring
- PCG: No Surprises Analyst Day Puts Together Winning Framework; Rebuilding Trust May Take Time, but Patience Gets Rewarded
- PNW: APS Rate Case Pushed Out to End of October
- PPL: Familiar Playbook Draws Mixed Investor Reaction
- EXC NDR: Getting Yourself Back Out There...
- Solar Tariff Touch Points: Quick Read
- AWK NDR: Reconstituted C-Suite Hits the Ground Running
- EVRG NDR: The Wichita Lineman Is Still on The Line...
- ED: CECONY GRC Testimony Posted; Solid Floor Set, Rate Base Mostly Intact; Upgrading to Neutral on Risks Subsiding
- AGA Day 2 Flash Recap
- AGA Day 1 Flash Recap
- CEG - The Stars Are Finally Aligned, Upgrading Constellation to a BUY
- CNP NDR: CNP Continues to Harmonize Capex Upside and Business Mix; Mgmt. Focused on Consistent 8% EPS Growth, but We See LT Plan Upside Potential
- [Show Me the Money on Gas LDCs? Reality – Keeping Is More Valuable Than a Check for 2x Rate Base](#)
- AEE NDR: Straightforward Updates Reinforce Premium Position; Gen Transition and Policy Work Continue

- ETR “In Person” NDR: Energy Intensive Industrial Customer Base and Heavy Storm Activity Dilutive to Valuation? Let’s Talk Accretion...
- Uranium Baseline: Russia-Ukraine Fallout
- D: C-Suite NDR – Political Noise Gone with the Wind
- SJI: So Long and Thanks for All the Memories; LDC M&A Gets Even Hotter
- WEC NDR: Decarbonization and Growth Remain on Track; ESG Focus Is Clear Throughout This Premium Utility’s Plans
- PCG: Misconceptions Gone in a Flash Ahead of Our NY Meetings; PCG 8K Highlights 10% EPS CAGR Through 2026
- DUK: CEO NDR - Accelerating Growth Driven by Clean Energy Transformation with a Decade of Visibility and Earnings Upside... What’s Not to Like?
- CEG: The Longest Half Life of Any IPP? We Like but We Wait - Policy Upside Remains TBD; Initiating Coverage with NEUTRAL
- SO: Georgia Power IRP filed; coal retirements on track for 80% shut down by 2028; Southern Power to provide majority of replacement capacity
- NI: CEO(s) Catch-Up: Incoming CEO Brings Experience and Existing NI Knowledge; Business and Strategic Reviews Underway; May Analyst Day Next Event
- Timely Regulatory Insights: Open Dialogue with CT, GA, and VA Commissioners – Two Way Better Than One Way
- PNW: C-Suite Meeting Highlights Path to Higher Rate Base Growth and Earnings; Alignment with a Cooperative Commission Remains Key to Execution
- AVA: Washington Multiyear Rate Case Filed; 11-Month Process Kicks Off in Pursuit of Earning Allowed Return in 2023
- EXC: Constellation Analyst Day Lays Out Clear Strategy and Key Details; Investor Comfort May Take Time
- EXC: RemainCo Details Largely in Line with Our Expectations
- [EXC: Straightforward Spin? Constellation Details Much Appreciated, but Expectations Should Be Otherwise Grounded](#)

Copyright © 2022 by Guggenheim Securities, LLC (“Guggenheim”), a FINRA registered broker-dealer. All rights reserved. For Analyst Certifications and important disclosures, refer to the Disclosures section of the excerpted research report(s) which can be accessed via the hyperlink to the provided report or by clicking [here](#). Guggenheim Equity Research is a division of Guggenheim, which may be engaged in and seeks to do business with companies covered in its research reports. As a result, investors should be aware that Guggenheim may have a conflict of interest that could affect the objectivity of this report. Investors should consider whether the recommendations in this research are suitable for their particular circumstances and consider this report only as a single factor in making their investment decision. Past performance is not a guide to future performance. Research is provided “as

is" to institutional clients. All research reports are disseminated and available to all of Guggenheim's clients simultaneously through electronic publication to our internal client websites. For research, models, or other data related to one or more securities, please contact your Guggenheim Sales representative, or click [here](#).

[Click here](#) to unsubscribe.

From: [Shahriar Pourreza, CFA](#)
To: [Scripps, Daniel \(LARA\)](#)
Subject: The Guggenheim Daily Transmission: PCG, SO, CMS, AEP, DTE, NEE, CEG/M&A, Solar/M&A, PJM/NJ, CA, Nuclear, AZ/PNW, ISO-NE, Uranium, DUK - Guggenheim Securities, LLC
Date: Friday, October 28, 2022 8:58:28 AM

CAUTION: This is an External email. Please send suspicious emails to abuse@michigan.gov



The Guggenheim Daily Transmission: PCG, SO, CMS, AEP, DTE, NEE, CEG/M&A, Solar/M&A, PJM/NJ, CA, Nuclear, AZ/PNW, ISO-NE, Uranium, DUK

Power & Utilities

October 28, 2022

[Shahriar Pourreza, CFA](#) 212 518 5862
[Constantine Lednev](#) 212 651 0847
[James Kennedy](#) 212 823 6741
[Jamieson Ward, CFA](#) 212 518 9661
[Guggenheim Utilities Research Team](#)

Access This Report

For details on our Guggenheim-hosted client Utility events including our EEI Conference meetings; and other events, scroll down...

PCG – 3Q EPS Beat; Clarity Continues to Emerge on a De-Risking Growth Story (see our note [HERE](#))

SO – 3Q22 Update — Vogtle on Track, 2024 Guidance Refresh Coming with Q4 Call, and We Still Expect a Constructive Outcome in Georgia Power’s Rate Case (see our note [HERE](#))

CMS – 3Q EPS Beat and Guidance Raise; CMS Remains Well Positioned for 8% LT Growth (see our note [HERE](#))

AEP – 3Q22 Results; Not Much Has Changed Since Analyst Day – More Granularity to Come at EEI; Focus Remains on Capital Allocation/Asset Sales (see our note [HERE](#))

DTE – 3Q EPS Beat Builds Anticipation for LT Rebase; All Eyes on EEI for Capex and LT Growth Update (see our note [HERE](#))

NEE 3Q EPS Beat, guidance reiterated; net backlog adds slow, announced acquisition of \$1.1B RNG

assets

CEG/M&A – Developments in Talen process yield insight into bidding; timeline tweaks

PCG – Fire Victim Trust selling 35M PCG shares

Solar/M&A – Engie buys 6GW of solar/storage projects from developer

PJM/NJ – NJ OSW transmission costs draw concerns over cost allocation

CA – CA Governor Newsom requests presidential major disaster declaration to help wildfire recovery

Nuclear – Holtec considering MI proposal to reopen Palisades nuclear plan

Nuclear – PacifiCorp and TerraPower announce joint study for potential additional reactors

AZ/PNW – Local media coverage profiling the candidates for the ACC's two open seats this election

ISO-NE – Maine PUC selects developer for new 345kv line

Uranium – Kazatomprom seeks to expand non-Russian transit route for western shipments

DUK – North Carolina Attorney General files testimony in Carbon Plan docket

NEE 3Q EPS Beat, guidance reiterated; net backlog adds slow, announced acquisition of \$1.1B RNG

assets

- NEE reported 3Q EPS \$0.85 vs. a \$0.81 consensus and our \$0.81 estimate.
- NEE guidance in 2022 long-term financial expectations remain unchanged.
- NextEra Energy Resources originated approximately 1,215 MW of wind, 965 MW of solar and 165 MW of battery storage projects.
- NextEra Energy Resources' renewables and storage backlog now stands at roughly 20,000 MW vs. 19,600 MW at 2Q (small net adds in part due to 680MW falling out of backlog)
- NextEra Energy Resources intends to purchase a portfolio of RNG assets for a total consideration of approximately \$1.1B
- The acquired portfolio will deliver more than \$220 million of adjusted EBITDA by 2025 (indicating a ~5x EV/EBITDA valuation)

CEG/M&A – Developments in Talen process yield insight into bidding; timeline tweaks

- While the debtors have received multiple IOIs, they do not see anything received to date as actionable
- The deadline for selecting a successful third-party bid was moved up to November 18th (from the 29th) in Talen's updated disclosure statement
- "The Debtors are presently soliciting votes on a Plan premised on either the Equitization Transaction or a toggle to a Sale Transaction that meets the requirements of an Eligible Alternative Restructuring. **As set forth above, although the Debtors have not received any actionable proposals in connection with**

the sale process, the Debtors will continue to consider any offers received, including those that do not meet the requirements of an Eligible Alternative Restructuring. For example, such bids may not contemplate payment of the Claims of Holders of the Unsecured Notes in full, including postpetition interest.” – filing [emphasis added]

- “These indications of interest were from both financial and strategic investors (collectively, the “IOI Parties”); however, no IOIs for the entire enterprise, nor any combinations of IOIs for non-overlapping sets of assets, exceeded the amount required to meet the definition of an “Eligible Alternative Restructuring” under the RSA. **Moreover, the Debtors received (i) one IOI for the Debtors’ enterprise at \$4.5 billion, the value implied by the Rights Offering in the RSA, (ii) another IOI for the Debtors’ enterprise at \$4.8 billion, and (iii) multiple IOIs seeking to bid on solely Susquehanna.** However, subsequent discussions with the IOI parties revealed that the \$4.5 billion and \$4.8 billion IOIs were conditioned on establishing a consortium that would require each IOI party to find one or more partners before having an actionable proposal. As a result, the Debtors and their advisors attempted to pair certain bidders in an effort to create a consortium that could lead to a viable proposal. However, the Debtors have been unable to create any such consortium to make either of these IOIs actionable.” – filing – [emphasis added]
- “Based on such discussions and updating the Consultation Parties of such discussions, the Debtors believe that none of the IOIs represent viable proposals because such proposals are not likely to lead to an actionable bid that provides value that is higher or better than the value provided to stakeholders under the Equitization Transaction (let alone qualify as an Eligible Alternative Restructuring) due to, among other factors, timing, value, structure, transaction-related costs, and execution risks associated with each of the IOIs.” – filing
- More [HERE](#), docket [HERE](#)

Guggenheim takeaway: *The negative tone on the IOIs received to date leads us to believe that CEG may be more interested in ENGH than our prior expectations. As we expected, based on our prior conversations, it appears several parties tried to carve out the Susquehanna plant from the balance of Talen’s fleet (fossil) in the process, or proposed a multiparty purchase structure that would ultimately end with the same fractionation of the assets (consortiums). Based on our conversations, bankruptcy processes are fairly fluid in this regard, with an obvious focus on maximizing recovery. What about Energy Harbor’s (ENGH) process? The timeline for this remains less clear, with initial bids due in late September, according to the trade press. We have seen few data points since then on the process. CEG management indicated in our meetings that its overall timing expectation for a transaction would be ~8-9 months at the NRC, putting ownership of new assets by YE23 within reach. See our detailed note [HERE](#) for more on high-level valuations of Susquehanna and ENGH.*

PCG – Fire Victim Trust selling 35M PCG shares

- Fire Victim Trusts (FVT) is selling 35M shares, ~\$14.90/sh according to trading desks.
- The current top 3 insider holders of PCG are FVT (343M sh), Blackstone (BX) Corporate Private Equity (48M sh), and Energy Capital Partners (private) (9M sh)
- PCG stock closed at \$15.38/sh yesterday which is above the implied \$14/sh value in the FVT funding calculation.

Guggenheim takeaway: *FYI. This was anticipated as the stock price has run up to the implied fully funded value for the FVT and the FVT receives no benefit for selling above the fully funded value. If the pricing and liquidity holds for PCG, we could see a faster wind down for FVT ownership and the FVT can continue selling after a 2*

week lock up period. We additionally note a series of constructive legislative and strategic outcomes for PCG which have supported the company financial plan and a constructive 3Q earnings update (note [HERE](#)).

Solar/M&A – Engie buys 6GW of solar/storage projects from developer

- The projects had been put up for sale earlier in the year, with the purchase marking Engie’s ongoing expansion in the US
- “ENGIE North America (ENGIE) announced it has acquired a 6 GW portfolio of solar, paired and stand-alone battery storage development projects from Belltown Power U.S. The transaction includes 33 projects comprising some 2.7 GW of Solar with 0.7 GW of paired storage and 2.6 GW of stand-alone battery storage. The projects are located across ERCOT, PJM, MISO and WECC” – release [ENGI:EN Paris]
- More [HERE](#)

***Guggenheim takeaway:** M&A data point for your awareness, although terms do not appear to be available at this time. As a reminder there are several developers/project books on the block at this time, of varying size and maturity.*

PJM/NJ – NJ OSW transmission costs draw concerns over cost allocation

- Several merchant transmission owners have raised concerns over the potential for costs from NJ’s policy-driven transmission work to be allocated unfairly
- “The filings by the PJM TOs and the NJ BPU highlight a fundamental problem—that under the proposed Tariff language, costs for the NJ-SAA projects would be involuntarily charged to Border Rate customers in states outside of New Jersey. As stated in the PJM TOs’ Deficiency Response, “[i]f the Border Rate Settlement is not approved and if transmission projects constructed to Rate Schedule FERC No. 49 are integrated with the PJM Transmission System, a small fraction of the revenue requirement of such facilities would be recovered through the Border Rate, including the Border Rate paid by MTF Parties.”” - protest
- More [HERE](#), ER22-2690

***Guggenheim takeaway:** Flagged for your awareness in the event this generates some noise. In our view this is a narrow technicality that the Commission and the PJM stakeholder processes are equipped to resolve.*

CA – CA Governor Newsom requests presidential major disaster declaration to help wildfire recovery

- CA Governor Newsom requested a major disaster declaration from the office of the president to open availability of federal resources for wildfire recovery.
- “We are deploying every tool we have, including seeking the support of the federal government, to help Californians as they rebuild and recover from wildfires driven by the recent record-breaking heat dome.” - Governor Newsom
- More [here](#).

***Guggenheim takeaway:** FYI. CA continues recovery from wildfires this year, although the level of property damage has been significantly reduced.*

Nuclear – Holtec considering MI proposal to reopen Palisades nuclear plan

- Media reports on Holtec (private) contemplating reopening Palisades nuclear plan in MI.
- The considerations come after MI announced interest in keeping the nuclear plant online (after shutdown this summer).
- Holtec will reportedly make a decision around January 2023.
- More [here](#).

Guggenheim takeaway: FYI. Holtec is the decommissioning agent, and it is unclear if there is available staffing to restart operations. CMS has maintained its prior stance in support of MI policy in either direction for Palisades. Palisades would be able to participate in the resource RFP as outlined in the CMS IRP and would be eligible for the FCM (if the plant can submit an economic bid). That said, reversing the decommissioning path is a heavy lift given the currently shut down status, needing to invest in capex, finding labor and or an ultimate owner for the power plant (ETR has been clear in commitments to cease operations at Palisades prior to the decommissioning sale). There is currently no regulatory mechanism for LT operations support at Palisades and further state level support would require legislative intervention.

Nuclear – PacifiCorp and TerraPower announce joint study for potential additional reactors

- “TerraPower [PRIVATE], a nuclear innovation company, and PacifiCorp [NYSE: BKH.A], a regulated utility, announced today their undertaking of a joint study to evaluate the feasibility of deploying up to five additional Natrium reactor and integrated energy storage systems in the PacifiCorp service territory by 2035. PacifiCorp and TerraPower announced last year their plans to bring the Natrium demonstration plant to Kemmerer, Wyoming, where a PacifiCorp coal-fueled power plant is slated for retirement.” - release
- More [HERE](#)

Guggenheim takeaway: Yet more activity in the advanced nuclear space – these two entities are already quite familiar with one another, with TerraPower specifically targeting potential brownfield coal sites – something we have seen from other players. As a reminder the design in question here remains fairly differentiated from more familiar LWRs – see our SMR launch [HERE](#) for more.

AZ/PNW – Local media coverage profiling the candidates for the ACC’s two open seats this election

- The article includes profiles of current incumbent Sandra Kennedy (D), Lauren Kuby (D), former ACC Staff member and now candidate Nicholas Myers (R), and Kevin Thompson (R).
- More [HERE](#)

Guggenheim takeaway: Flagging for the helpful profiles of all four candidates, which we believe will be of interest to investors in PNW.

ISO-NE – Maine PUC selects developer for new 345kv line

- “LS Power’s [PRIVATE] plan calls for building over 100 miles of new 345 kV transmission lines and multiple substations to deliver new wind generation from Aroostook County, Maine. These projects will provide significant benefits to Maine and the region, including jobs, tax revenues, and environmental benefits. The location of the new facilities will be determined through an open and transparent siting process.” - release
- More [HERE](#)

Guggenheim takeaway: *This line is intended to support in-state generation development (wind/biomass), with its completion at least partially dependent on the MA DPU's own deliberations. Its progress is in stark contrast to the CMP line which remains fiercely opposed.*

Uranium – Kazatomprom seeks to expand non-Russian transit route for western shipments

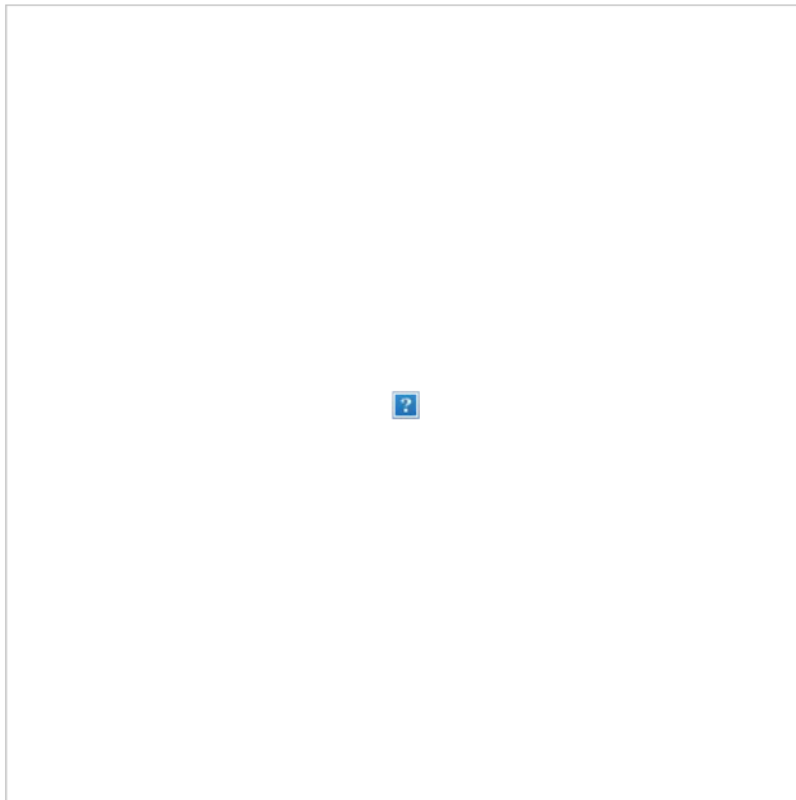
- The uranium producer [PRIVATE] is seeking to expand the Transcaspian route from its current 3500tU limit
- More [HERE](#)

Guggenheim takeaway: *Interesting data point for your awareness as future sanctions on Russian actors remains a possibility. As a reminder this route is something we flagged in our earlier uranium baseline – see [HERE](#).*

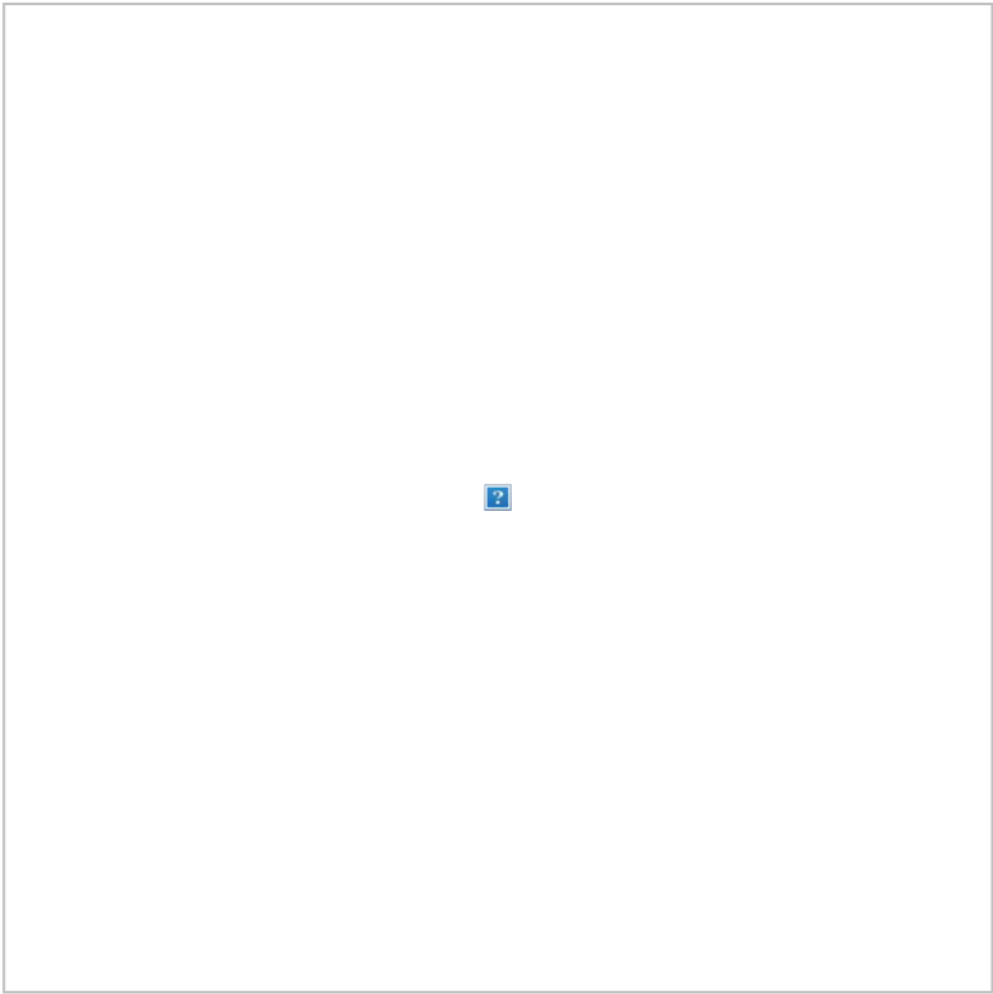
DUK – North Carolina Attorney General files testimony in Carbon Plan docket

- The NC Attorney General's Office files testimony arguing that in order to comply with HB 951, meeting the timelines for the authorized carbon reduction goals must be the primary consideration, arguably ahead of potentially other least cost paths.
- Docket [E-100.Sub.179](#)

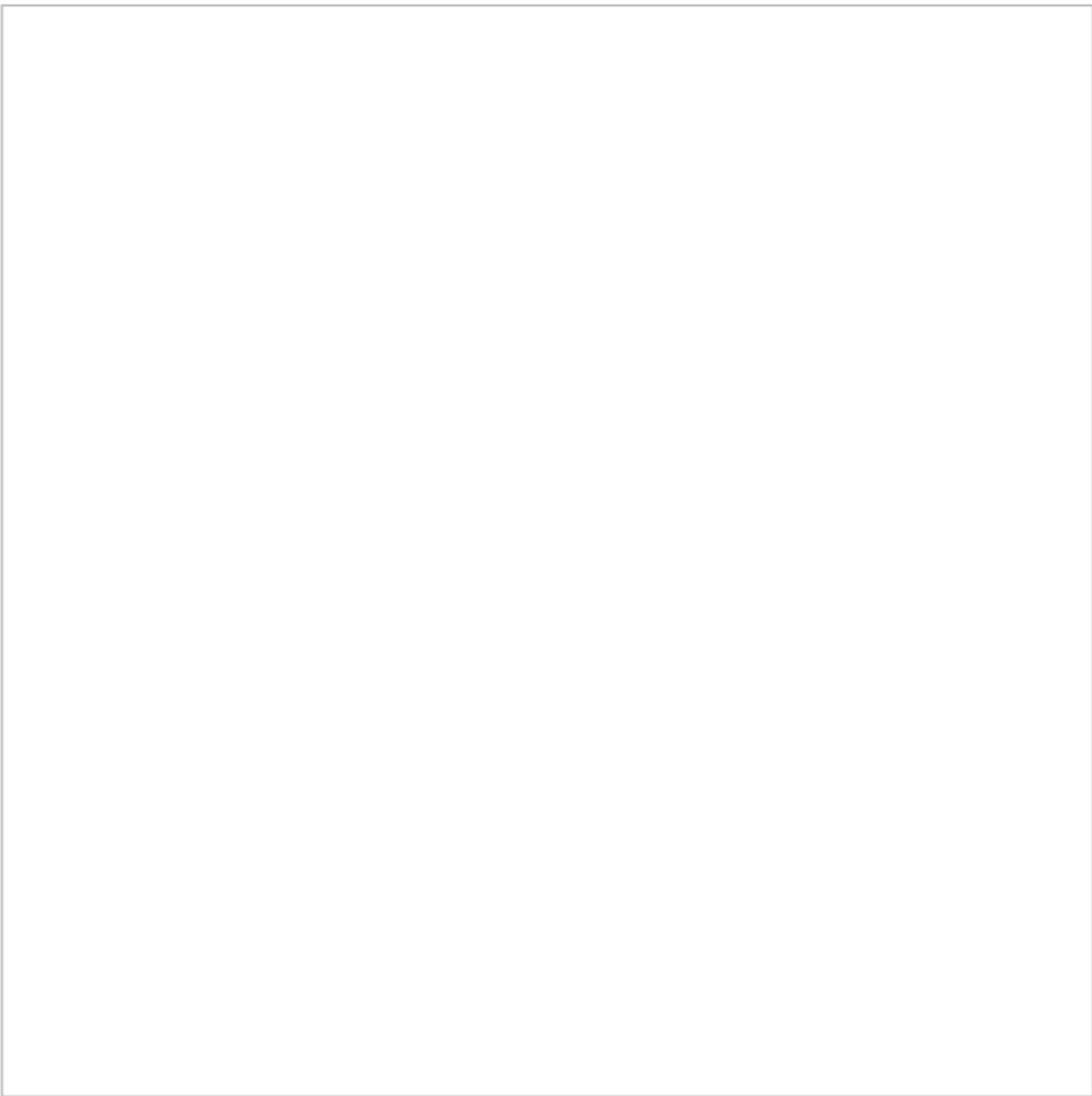
Guggenheim takeaway: *We note that the AG typically takes an adversarial role in NCUC proceedings.*



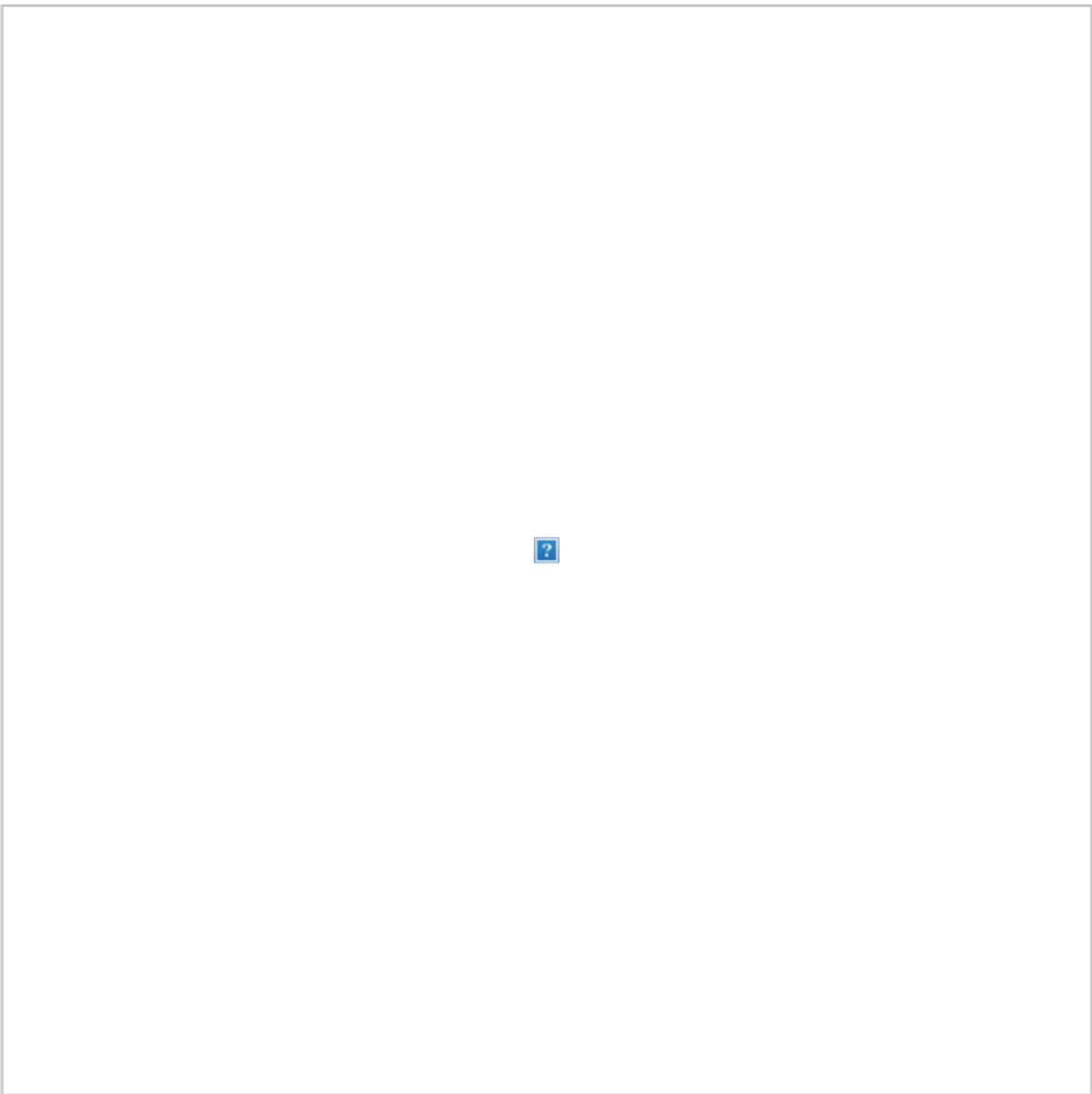
Guggenheim 2022 Client and Corporate Access Utility Events



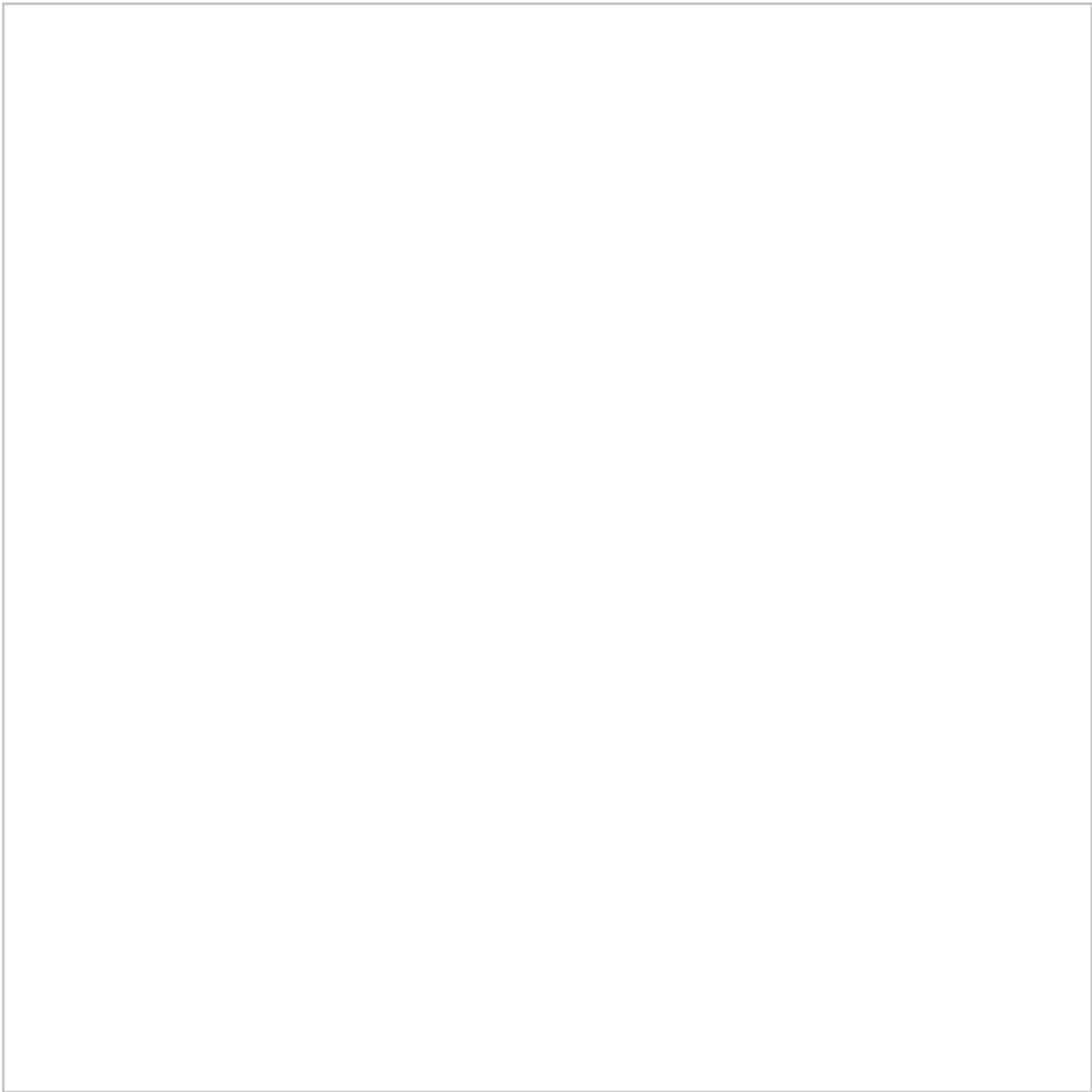
Guggenheim Comp Sheet



Share Price Performance (Year-to-Date, Three-Month, One-Month, & Five-Day Trailing)



Generation and Mix



Generation and Mix (continued)



Weather



Peak Load



Regulatory Calendar



Key Research

Guggenheim's Forward Commodity Curves

- [Forward Power Curves, GenCo MtM, and Weekly Commentary](#)

Key Research

- [Utility and IPP 3Q22 Model Sweep: Valuation and Estimate Adjustments](#)
- [DUK: Earnings Preview Focus – Rebasing 2023 for a “Clean” Slate Ahead of Q3 Announcement](#)
- [Canary in the Coal Mine or was Exelon an Unlucky One-Off? Q3 Earnings/EEI Could Provide Visibility](#)
- [EXC: Management Shuffle Surprises, but Follow-Up Call Helps Clear the Air](#)
- [AEP: Did They Mention Transmission? Analyst Day Better Than Expectations; Cemented Growth, and More Asset Sales Towards Simplification a Key Focus](#)
- [DUK ESG Day Recap: Bigger Capital Plan Supports Robust Growth While Mgmt. Continues to Defer](#)

Incremental Equity; November Rebase Not Draconian

- 2022 LCOE Analysis – LCOE Update Shows Rising Costs, But IRA Further Improves Solar/Wind Competitiveness; Gas Dominance Continues to Fade
- ED – CED Strategic Review Over; \$6.8B Sale Announced with Proceeds Trending Ahead of Expectations
- PCG: Strategic PacGen Split and Equity Sale Further Build on Top Quartile Financial Plan; Headline Accretive, Fundamentally Supportive
- CEG: You Want a Unicorn, You Pay the Price – Raising PT to \$121
- FE – CEO Change A Clearing Event? Almost...
- NEE NDR: Top IRA Idea - Runway Set for Takeoff; Fundamentals On NEER, FPL Start Spring-loading Growth; Raising TP to \$108
- Policy: Existing Nuclear Comes In From the Cold
- SMR - NuScale: Initiating Coverage - Another Nuclear Renaissance? Yes Please...
- DTE – First NDR In a Post IRA World; DTE Stands to Gain on Capex Roll Forward and Strategic Value of Vantage Business
- DUK: Damned If You Do, Damned If You Don't - Sale of Commercial Renewables Really Materially Dilutive? We Don't Think So – Some Misconceptions Out There
- Utilities — Life, Death... and Pension Expense?
- Mid-Summer Night's Dream – Utilities Sector Update: Individual Themes Playing Out, but We Continue to See Broader Support, Outperformance for Utilities Even as Fed Rates Get Factored In
- '22 Utilities Outlook: Sector Cheap, Fundamentals Strong but Get Ready for Another Bumpy Ride – Choose Your Picks Wisely
- SO GA Road Trip: Approaching the Apex the Southern Way... Cool, Calm, and Collected
- ES: Captain Nolan Charts a Course to Calmer Waters - Upgrading to BUY on Potential NT Catalysts, Valuation
- SO: Georgia Power Rate Case Filed; This Isn't Their First Rodeo
- PPL NDR: On the Road Again... Just Can't Wait to Get on the Road Again - Much Needed Face Time Helps Build Confidence
- PJM: Depressed 2023/24 BRA Results Not A Surprise
- ETR Analyst Day – Back in Step and Then Some: LT EPS Growth Set to 6-8%, Plan Reset to Solid Yet Conservative Trajectory; Maintain Buy, Estimates
- CMS – CEO/CFO Catch Up NDR; CMS Continues to Build on Premium Story With Transformed EPS Trajectory
- ES NDR: Landlubber? That's Fine with Us...
- NEE: Sunny Days Ahead for NEE; Analyst Day Steps Up EPS Growth Trajectory and Demonstrates Best in Class Positioning Across Business Lines
- LNT NDR: Solar Tariff Moratorium Defuses Key NT Overhang as Management Navigates a Busy Spring
- PCG: No Surprises Analyst Day Puts Together Winning Framework; Rebuilding Trust May Take Time, but Patience Gets Rewarded
- PNW: APS Rate Case Pushed Out to End of October
- PPL: Familiar Playbook Draws Mixed Investor Reaction
- EXC NDR: Getting Yourself Back Out There...
- Solar Tariff Touch Points: Quick Read

- AWK NDR: Reconstituted C-Suite Hits the Ground Running
- EVRG NDR: The Wichita Lineman Is Still on The Line...
- ED: CECONY GRC Testimony Posted; Solid Floor Set, Rate Base Mostly Intact; Upgrading to Neutral on Risks Subsiding
- AGA Day 2 Flash Recap
- AGA Day 1 Flash Recap
- CEG - The Stars Are Finally Aligned, Upgrading Constellation to a BUY
- CNP NDR: CNP Continues to Harmonize Capex Upside and Business Mix; Mgmt. Focused on Consistent 8% EPS Growth, but We See LT Plan Upside Potential
- Show Me the Money on Gas LDCs? Reality – Keeping Is More Valuable Than a Check for 2x Rate Base
- AEE NDR: Straightforward Updates Reinforce Premium Position; Gen Transition and Policy Work Continue
- ETR “In Person” NDR: Energy Intensive Industrial Customer Base and Heavy Storm Activity Dilutive to Valuation? Let’s Talk Accretion...
- Uranium Baseline: Russia-Ukraine Fallout
- D: C-Suite NDR – Political Noise Gone with the Wind
- SJI: So Long and Thanks for All the Memories; LDC M&A Gets Even Hotter
- WEC NDR: Decarbonization and Growth Remain on Track; ESG Focus Is Clear Throughout This Premium Utility’s Plans
- PCG: Misconceptions Gone in a Flash Ahead of Our NY Meetings; PCG 8K Highlights 10% EPS CAGR Through 2026
- DUK: CEO NDR - Accelerating Growth Driven by Clean Energy Transformation with a Decade of Visibility and Earnings Upside... What’s Not to Like?
- CEG: The Longest Half Life of Any IPP? We Like but We Wait - Policy Upside Remains TBD; Initiating Coverage with NEUTRAL
- SO: Georgia Power IRP filed; coal retirements on track for 80% shut down by 2028; Southern Power to provide majority of replacement capacity
- NI: CEO(s) Catch-Up: Incoming CEO Brings Experience and Existing NI Knowledge; Business and Strategic Reviews Underway; May Analyst Day Next Event
- Timely Regulatory Insights: Open Dialogue with CT, GA, and VA Commissioners – Two Way Better Than One Way
- PNW: C-Suite Meeting Highlights Path to Higher Rate Base Growth and Earnings; Alignment with a Cooperative Commission Remains Key to Execution
- AVA: Washington Multiyear Rate Case Filed; 11-Month Process Kicks Off in Pursuit of Earning Allowed Return in 2023
- EXC: Constellation Analyst Day Lays Out Clear Strategy and Key Details; Investor Comfort May Take Time
- EXC: RemainCo Details Largely in Line with Our Expectations
- EXC: Straightforward Spin? Constellation Details Much Appreciated, but Expectations Should Be Otherwise Grounded

reserved. For Analyst Certifications and important disclosures, refer to the Disclosures section of the excerpted research report(s) which can be accessed via the hyperlink to the provided report or by clicking [here](#). Guggenheim Equity Research is a division of Guggenheim, which may be engaged in and seeks to do business with companies covered in its research reports. As a result, investors should be aware that Guggenheim may have a conflict of interest that could affect the objectivity of this report. Investors should consider whether the recommendations in this research are suitable for their particular circumstances and consider this report only as a single factor in making their investment decision. Past performance is not a guide to future performance. Research is provided "as is" to institutional clients. All research reports are disseminated and available to all of Guggenheim's clients simultaneously through electronic publication to our internal client websites. For research, models, or other data related to one or more securities, please contact your Guggenheim Sales representative, or click [here](#).

[Click here](#) to unsubscribe.

From: [Utility Dive](#)
To: [Scripps, Daniel \(LARA\)](#)
Subject: Weekender: Dynegy manipulated MISO's 2015/16 capacity auction, driving up Illinois prices: FERC enforcement office
Date: Saturday, November 26, 2022 9:05:11 AM

CAUTION: This is an External email. Please send suspicious emails to abuse@michigan.gov

[Signup](#) | [Forward](#)



WEEKENDER

Nov. 26, 2022 | A roundup of this week's most read stories



BROUGHT TO YOU BY — Utility Dive's studioID

Increase Utility Efficiency Amidst Change

Utility providers must be agile and look for ways to increase operational and management efficiencies to save money and generate consumer savings. Explore how new tech can help in **this playbook**.

Dynegy manipulated MISO's 2015/16 capacity auction, driving up Illinois prices: FERC enforcement office

The Illinois attorney general and Public Citizen contend FERC should order Dynegy to disgorge \$428.6 million. Vistra, which bought Dynegy, denies the allegations.

DOE conditionally awards PG&E's Diablo Canyon nuclear plant \$1.1B to forestall shutdown

Holtec said Friday that its application to DOE's Civil Nuclear Credit Program for funds to reopen the Palisades nuclear plant was rejected.

DOE opens \$13B funding opportunity for transmission expansion, smart grid integration projects

The first round of funding for the Grid Resilience and Innovation Partnership program includes \$3.8 billion for fiscal years 2022 and 2023.

SPONSORED CONTENT by Enverus

Identify investment opportunities amid ERCOT congestion

With ERCOT's frequent congestion in West Texas, getting the precise area (or line) when trading, managing or assessing congestion is crucial.

OPINION

Today's rate designs are defective. How can utilities better recover their fixed costs, and from whom?

Volumetric rates, which place much of a utility's fixed costs in the usage (KWh) charge of a tariff, have created a number of social problems as they relate to economic efficiency and equity.

OPINION

Second-life EV batteries can bolster the energy storage market — if major challenges can be overcome

With 80% of a battery's capacity left at the end of its useful life in a vehicle and current constraints on supply chains for new batteries, repurposing electric vehicle batteries seems like a no-brainer.

RECOMMENDED FOR YOU

Improve your recommendations: [click here to update your profile.](#)

DEEP DIVE

The power grid faced heat waves, record demand and tight conditions in 2022. What happens next?

All over the country, a changing climate and extreme weather events – whether due to high temperatures, low temperatures or storms and hurricanes – are posing a threat to grid reliability.

image



Inside the Growth of Distributed Energy Resources

As distributed energy resources continue to experience significant growth in the U.S., they present tremendous opportunities for utilities. Learn the latest in this Trendline.

[Access Now](#)

FROM OUR LIBRARY

TRENDLINE

What's driving customer engagement and behavioral energy efficiency

Supported by Salesforce

[View all resources](#)

BEST OF WHAT WE'RE READING

E&E NEWS

Why utilities resist simple upgrades to boost renewables

FEDSCOOP

Biden administration seeks more power outage data from utility companies

POLITICO

Hochul signs partial cryptocurrency mining ban into New York law

BLOOMBERG

World's Largest Energy Retailer Set to Sell Green Power in US

BNN BLOOMBERG

High Costs, Low Reliability Imperil US Grid, Regulator Warns

THE WALL STREET JOURNAL

Duke Energy Enters Into Amazon Cloud Deal

Suggest a story we should read

DIVE INTO A TOPIC

[Generation](#)

[Load Management](#)

[Distributed Energy](#)

[T&D](#)

[Renewables](#)

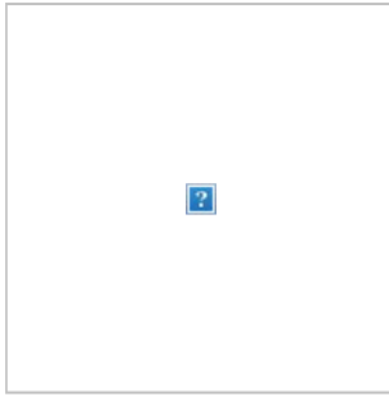
[Regulation & Policy](#)

[Grid Reliability](#)

[Energy Storage](#)

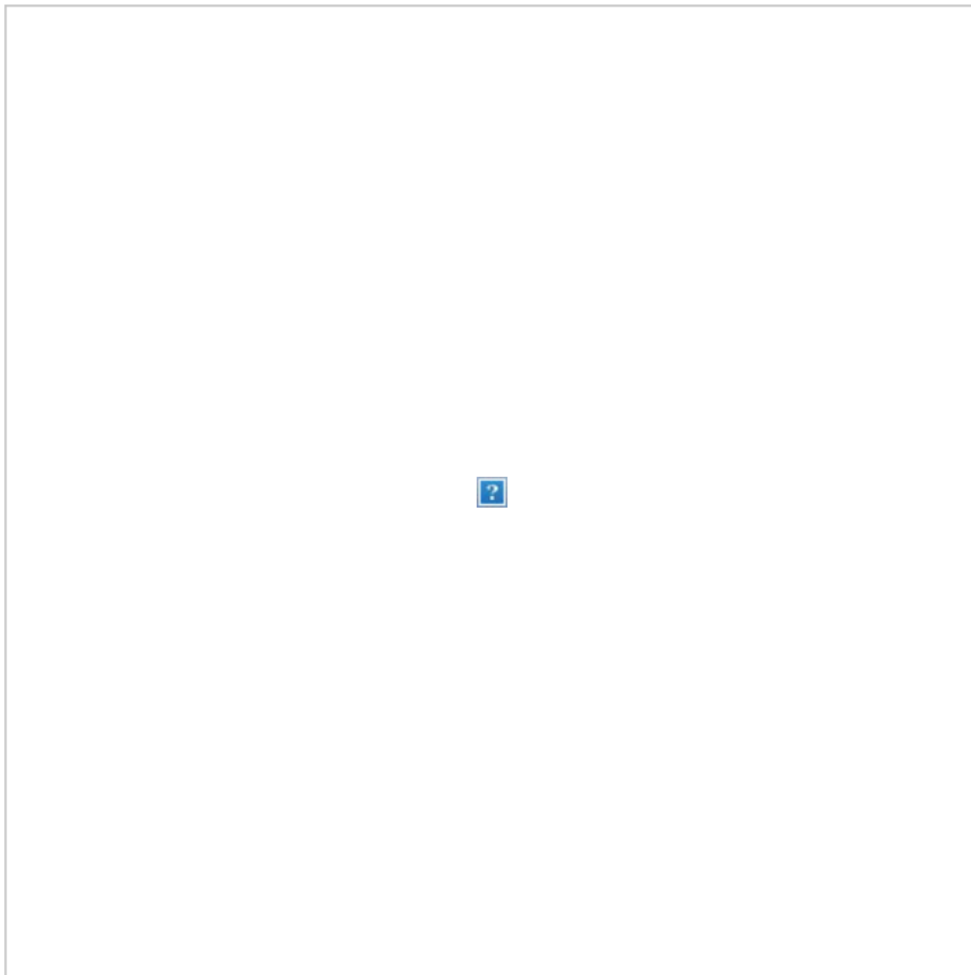
[Corporate News](#)

[Electrification](#)

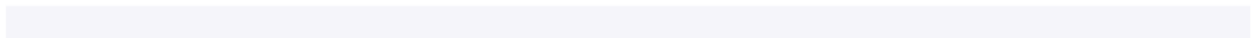


Share Utility Dive: Daily Dive with others and get rewarded.

You've referred **0** readers.



To become an official Dive Insider, just successfully refer 10 contacts to Utility Dive: Daily Dive. Here's your link to share: **https://www.utilitydive.com/signup/insiders/?signup_referred_by=5c7dae2acdb7ec7e0b5bbde5**



MORE THAN A NEWSLETTER

Related Publications

[Smart Cities Dive](#) | [Waste Dive](#)

Connect With Us

[Twitter](#) | [LinkedIn](#)

Editorial

[Contact an editor](#) | [Meet the team](#)

Advertising

[Contact our team](#)

About Utility Dive

Utility Dive provides in-depth journalism and insight into the most impactful news and trends shaping the utility industry. The newsletters and website cover topics such as smart grid, regulation and policy, demand response, generation, and more. Utility Dive is a leading publication operated by Industry Dive. Our business journalists spark ideas and shape agendas for 10+ million decision makers in competitive industries.

[Sign up for the newsletter](#)

This email is optimized for display on mobile phones. Utility Dive: Daily Dive is a product of [Industry Dive, Inc.](#) 1255 23rd Street NW, Suite 550, Washington, DC 20037. We value your privacy. We won't share your email address with anyone else without your permission. This message was sent to scrippsd1@michigan.gov. You can [unsubscribe](#) or [switch to a weekly newsletter subscription](#) anytime. See our full [privacy policy](#).

[Sign up](#) | [Manage subscription](#) | [Advertise with us](#) | [Submit story tip](#)





STATE OF MICHIGAN
OFFICE OF THE GOVERNOR
LANSING

GRETCHEN WHITMER
GOVERNOR

GARLIN GILCHRIST II
LT. GOVERNOR

September 9, 2022

The Honorable Jennifer Granholm
Secretary
U.S. Department of Energy
1000 Independence Ave., SW
Washington, DC 20585-1615

RE: State support of Holtec International's application to the Civil Nuclear Credit Program to save Palisades; protect a critical clean energy asset, hundreds of good-paying jobs, and regional economic resilience

Dear Secretary Granholm,

Keeping Palisades open is a top priority for the State of Michigan. In my previous letter, I said it would take creative and optimistic thinking to get it done. Thankfully, after months of hard work and collaboration, I am proud to support Holtec International's application for the Civil Nuclear Credit (CNC) and Loan Program Office for Palisades Nuclear Facility.

With your support, Holtec plans to repower and reopen the Palisades, a union plant in Southwest Michigan that employs 600 workers making an average of \$117,845, supports over 1,100 regional jobs, generates \$363 million in annual regional economic development, and produces more than 800 megawatts of reliable, clean power. Keeping Palisades open is critical for Michigan's competitiveness and future economic development opportunities.

As you stated in your reply to me in May, the CNC program is a "critical investment" that will "help avoid premature retirements of reactors across the country due to financial hardship, preserve thousands of good-paying clean energy jobs to sustain local economies, and protect our supply of carbon-free electricity generation." I want to see those impacts here in Michigan, and I am ready to do my part to make that happen.

We were grateful to see the program rolled out and designed in such a way that would afford Holtec a chance to compete for funding. I want to underscore that Michigan remains committed to supporting Holtec's efforts at Palisades. We are ready to do our part should they receive funding through the CNC program, including identifying state funding and facilitating a power purchase agreement.

I will do everything I can to keep this plant open, protect jobs, increase Michigan's competitiveness, lower costs, and expand clean energy production. We know the path ahead is not easy, but we are not going to let that stop us from fighting for economic opportunity for Southwest Michigan and reliable, clean energy for the state. Just because something's never been done before does not mean it cannot be done in Michigan. While we await a final decision from the Department of Energy (DOE), the State will continue efforts to diversify economic opportunities in Southwest Michigan



STATE OF MICHIGAN
OFFICE OF THE GOVERNOR
LANSING

GRETCHEN WHITMER
GOVERNOR

GARLIN GILCHRIST II
LT. GOVERNOR

through the Michigan Department of Treasury's Energy Transition Impact Project (ETIP) and economic development efforts.

Today, because of the actions of Holtec, we have a path forward to save Palisades, secure 1,700 jobs, and help fight climate change by generating more clean energy. I know this process has not been easy for the companies involved or the DOE team. I want to extend my gratitude to the staff at the DOE for their efforts on the CNC program and this application.

Sincerely,

A handwritten signature in blue ink that reads "Gretchen Whitmer".

Gretchen Whitmer
Governor of Michigan

CC: Dr. Kathryn Huff, Senior Advisor, Office of the Secretary, U.S. Department of Energy
Chris Hansen, Chair, U.S. Nuclear Regulatory Commission
Dan Scripps, Chair, Michigan Public Service Commission
Dr. Krishna Singh, Chief Executive Officer, Holtec International
Kelly Trice, President, Holtec International

No.	Criterion	Subsection of Criterion	File Name	Page of Guidance for More Detail	Response Provided In Holtec Document
1	Competes in a Competitive Electric Market		Revenue Changes	12	
2	Competes in a Competitive Electric Market		Cost of Service Pathways	12	
3	Economic Factors		Economic Narrative	15	
4	Economic Factors	Historical Annual Costs for Previous 5 Years	Historic Operating Conditions	17-19	
5					
6	Economic Factors	Projected Annual Operating Loss Over the Award Period	Projected Operating Conditions	19-20	
7	Economic Factors	Projected Annual Operating Loss Over the Award Period	Risk Explanation and Workbook	20	
8	Economic Factors	Supporting Documentation and Descriptions	Financial Performance	20	
9	Economic Factors	Supporting Documentation and Descriptions	Reactor Obligations	20-21	
10	Economic Factors	Supporting Documentation and Descriptions	List of Contracts	21	
11	Economic Factors	Supporting Documentation and Descriptions	Capacity Auctions and Workbook	21	
12	Economic Factors	Supporting Documentation and Descriptions	Data Provided to FERC NRC	21	
13	Economic Factors	Supporting Documentation and Descriptions	Audits Completed	21	

14	Economic Factors	Supporting Documentation and Descriptions	Assumptions Statement	21	
15	Economic Factors	Other Economic Factors Relevant to Reactor	Costs for Shutdown	22	302850ab
16	Economic Factors	Other Economic Factors Relevant to Reactor	Shutdown Impacts	22	
17	Economic Factors	Other Economic Factors Relevant to Reactor	Decommissioning Reports	22-23	302850ab
18	Emission Impact	Emission Spreadsheet	Emission Spreadsheet	23-25	302850ac
19	Emission Impact	Other Supporting Data	Reactor Regulatory Submissions	25	302850ab
20	Uranium And Fuel Source		Uranium Sources	25-26	
21	Uranium And Fuel Source		Uranium Sources Supporting	26-27	
22	Uranium And Fuel Source		Uranium Content	27	
23	Workforce and Labor Considerations		DEIA Plan	29	302850ac
24	Community Engagement and Impact		Reactor Closure Transitions Plans	30	302850ac



Krishna P. Singh Technology Campus, 1 Holtec Blvd., Camden, NJ 08104

Telephone (856) 797-0900

Fax (856) 797-0909

CONFIDENTIAL AND PRIVILEGED INFORMATION

September 26, 2022

Department of Energy
Civil Credit Nuclear Program
1000 Independence Ave SW
Washington, DC 20585

Attention: Mr. Alden Allen
Contract Specialist

Email: allenar@id.doe.gov
Phone: 208-526-4154

References: [1] Holtec International's Application for Federal and State Support to Enable Resurrection of the Palisades Nuclear Generation Station, Submitted July 5th, 2022

[2] Email message from Mr. Alden Allen, "Civil Nuclear Credit Program Application Request for Further Information" Dated September 9th, 2022

Subject: 302850ac Holtec International's Response to RAI #1

Dear Mr. Allen:

We appreciate the Department of Energy's (DOE) thoughtful consideration and review of our application [1] for state and federal support to enable resurrection of the Palisades Nuclear Generation Station (Palisades). Holtec's initial responses to the additional information requested by the DOE is provided in the attached document labeled as Attachment 1. For ease of tracking these responses, we have titled them as RAI #1.

We thank you for the opportunity to provide further clarification of our application to the DOE. The Holtec team will continue to be available at your convenience to provide any needed supplemental information that the DOE review team deems necessary to acquire a full understanding of our proposed plan to resurrect Palisades. Please do not hesitate to contact me if you have any questions or require additional information.

Sincerely,

A handwritten signature in black ink that reads "Corey DeWitt".

Corey DeWitt

Business Development Manager, HDI

Office: (856) 797-0900, Ext. 3681 | Mobile: (412) 889-3124

E-mail: c.dewitt@holtec.com

cc: Kelly Trice (k.trice@holtec.com)

Attachment: Holtec International's Response to RAI #1

Document ID: 302850ac

Attachment 1: Holtec International's Response to DOE's Request for Additional Information (RAI #1)

Criterion	Subsection of Criterion	File Name	Page of Guidance for More Detail	Holtec Response
Emission Impact	Emission Spreadsheet	Emission Spreadsheet	23-25	<p>Based on the most recent compiled data within the EPAs eGRID profile (2020 data), nuclear power contributed to 14.1% of the RFC Michigan Sub-Regions power generation (of 37,358 MW total capacity for the sub-region). As Palisades Nuclear Power Plant ceased power operations as of May 20, 2022; 800 MW of nuclear generation were removed. This is approximately 2.2% of the overall sub-region generation, which has since been replaced with increased natural gas and coal generation sources. It can be assumed that the increase in CO2 emission rates would be directly proportional to the increase in natural gas and coal production. As of 2020, the RFC Michigan Sub-Region ranked 22/27 in CO2 output emission rates, while the Palisades Nuclear Plant was still generating emission free power. It is estimated that electricity generated by Palisades will result in savings of approximately 3 million tons of CO2 emitted each year.</p>
Workforce and Labor Considerations		DEIA Plan	29	<p>2022 is a transitional year for Palisades as the plant shut down permanently and transitioned to new ownership under Holtec International on June 28, 2022.</p> <p>As a decommissioning plant there is minimal hiring, when we do recruit, the focus for our Leadership team is primarily on the application of core D&I principles. Internal posting and promotions with the selections driven by diverse interviewing panels. We strongly adhere to Holtec's business ethos "to seek meritorious individuals, regardless of the color of their skin, ethnicity, or religious belief, who share our worldview of equal opportunity and equality for all, and leadership at the site fully supports and honors this viewpoint."</p> <p>Currently, with minimal hiring, we are focusing on the retention of personnel staying on to configure the plant for long term storage and ultimately move all fuel to the ISFSI pads. Some people focused actions the site has taken, or plans</p>

				<p>to take include:</p> <ul style="list-style-type: none"> • Site Leadership Small Group meetings with each Department to share information, promote the new culture, Q & A and ask for feedback from associates on anything they want to share. • Regularly scheduled site lunches sponsored by the Leadership Team and their staff. • Communications- site-wide weekly Newsletters/Tailgates • Weekly "Nuclear Talks" – messages from site leadership with focused messages on various culture/people-oriented topics • Regular Diversity, Inclusion and Belonging messages in our weekly newsletter. • Providing resources for career development and opportunities • Regular Community Outreach programs- donating time and resources for various community groups. • Cross-functional job opportunities and expanded participation on special projects. • Diverse Interview panels and seeking out diverse candidate pools • Promoting Holtec International job opportunities.
<p>Community Engagement and Impact</p>		<p>Reactor Closure Transitions Plans</p>	<p>30</p>	<p>Palisades Nuclear Power Plant ceased power operations as of May 20, 2022, under Energy with formal notification to the Nuclear Regulatory Commission (NRC) on June 13, 2022. Holtec receipt of ownership occurred on June 28, 2022.</p> <p>Transaction planning focused on transition of Palisades employees and managing impact of affected communities and stakeholders.</p> <p>The Palisades team consisted of approximately 545 Entergy employees. "Making the Transition" was a themed effort targeted to enable smooth transfer of approximately 130 individuals within the Entergy system, approximately 235 individuals to the HDI Phase 1 organization, and approximately 180 individuals (more than half of those employees were retirement eligible) to separate from the company.</p> <p>"Making the Transition" actions included the following:</p> <ul style="list-style-type: none"> • Frequent informative newsletters detailing information, actions, and available resources;

				<ul style="list-style-type: none"> • Hosting job fairs for local career opportunities and those absorbed into other Entergy business units; • Training to enable new skills and qualifications; • Softskill workshops for interviewing and resume writing; and • Human resources services for transitioning and retiring employees. <p>The Community Advisory Panel (CAP) consisting of 32 members exists for local communities and stakeholders. The CAP Charter is established to provide open communication, public involvement, and education on decommissioning issues for the Palisades Power Plant and is detailed below.</p> <p>The CAP process also includes a forum for the "kinexus group", a University of Michigan Economic Growth Institute led economic impact analysis.</p> <p>Overall, three CAP meetings were held in 2022:</p> <ul style="list-style-type: none"> • January 26, 2022: Inaugural CAP meeting. Presentation by then-owner/operator Entergy Corporation. The primary purpose of the initial meeting was introductory and organizational with Entergy providing an overview on the steps that Palisades is taking to prepare for shutdown and decommissioning. • March 9, 2022: – Presentations by the U.S. Nuclear Regulatory Commission (NRC) detailing the NRC's role in Decommissioning oversight, and the University of Michigan's Economic Growth Institute. • April 13, 2022: Presentations by Holtec International detailing Holtec's Decommissioning (dismantlement and decontamination) plans for Palisades, and the University of Michigan's Economic Growth Institute. <p>Please see Appendix 1 for a description of CAP and its operations.</p>
--	--	--	--	--

Appendix 1

Palisades Community Advisory Panel Chapter Description

PALISADES COMMUNITY ADVISORY PANEL CHARTER

I. PURPOSE

A. The Community Advisory Panel (CAP) is established to provide for open communication, public involvement, and education on decommissioning issues for the Palisades Power Plant in Covert Township, Van Buren County, Michigan. The CAP will serve as a channel of community involvement with Palisades.

B. The CAP will evaluate and comment upon data and other information provided by Palisades and other reliable official sources. Information provided by Palisades may include (1) publicly available information regarding the balance of the Palisades nuclear decommissioning trust fund; (2) the status of decommissioning activities (including spent nuclear fuel management and site restoration work); and (3) filings submitted to the U.S. Nuclear Regulatory Commission (NRC).

C. The NRC has exclusive jurisdiction over the radiological decommissioning of nuclear facilities. Therefore, the CAP will function in an advisory capacity and shall have no role in directing the decommissioning or related work at Palisades. Palisades will consider advice or recommendations made by the CAP, but it has no obligation to act on such advice or recommendations.

II. ORGANIZATION AND MEMBERSHIP

A. Membership

1. The CAP will reflect the diverse viewpoints of residents within the Palisades primary Emergency Planning Zone (EPZ), which includes portions of Allegan, Berrien, and Van Buren counties.

2. The CAP will consist of thirty-three (33) members as follows:

i. Three (3) members of the Van Buren County Board of Commissioners, to be selected by the Van Buren County Boards of Commissioners; ii. The Supervisor of Covert Township, or his or her designee; iii. The Supervisor of South Haven Township, or his or her designee; iv. The Mayor of the City of South Haven, or his or her designee; v. The Tribal Council Chairman of the Pokagon Band of Potawatomi, or his or her designee; vi. The Van Buren County Drain Commissioner, or his or her designee; vii. The Superintendent of Covert Public Schools, or his or her designee; viii. The County Health Officer/Administrator for the Van Buren-Cass District Health Department, or his or her designee; ix. Three (3) members representing law enforcement/emergency preparedness agencies for the Palisades 10-mile EPZ, including one (1) representative from each Allegan, Berrien, and Van Buren Counties; 2 x. One (1) representative of the Michigan Department of Environment, Great Lakes, and Energy – Radiological Emergency Preparedness Unit; xi. One (1) representative of the Michigan Department of Natural Resources – Saugatuck Dunes and Van Buren State Park; xii. One (1) representative of the Michigan Public Service Commission; xiii. One (1) representative of the Utility Workers Union of America (UWUA) who is a present employee at Palisades; xiv. One (1) representative of the United Government Security Officers of America (UGSOA) who is a present employee at Palisades; xv. One (1) representative of the Laborers International Union of North America (LIUNA), to be selected by the Business Manager of the Local 355; xvi. Two (2) representatives of the licensee and owner of Palisades; xvii. One (1) representatives from a Southwest Michigan-based conservation/environmental organizations, to be selected by the Van Buren County Board of Commissioners; xviii. One (1) representative of the Southwest Michigan based planning commission, to be selected by the Van Buren County Board of Commissioners; xix. Two (2) representatives organizations representing the local business community, to be selected by the Van Buren County Board of Commissioners; xx. Seven (7) citizen representatives, from Covert Township, South Haven Township, the City of South Haven, Lake Michigan Homeowners Association, and the County-At-Large to be selected by the Van Buren County Boards of Commissioners.

3. For the members identified in paragraphs (i) through (viii), above, membership on the CAP extends to them for the duration of their time serving in their official position. Membership on the CAP is conferred on the basis of their election or appointment to the position listed and not to any of them in their individual or personal capacity. Where, as stated, said membership may be delegated, assigned, or otherwise transferred to another person.

4. For the members identified in paragraphs (ix) through (xvi), above, membership on the CAP shall be conferred by the organization named, with the understanding that a CAP member(s) so appointed should serve on the panel for at least two (2) years.

5. For the members identified in paragraphs (xvii) through (xx), above, membership on the CAP shall be for a minimum two (2) year term. Said membership cannot be delegated, assigned, or transferred to another person.

6. Termination of membership will automatically occur in the event that three (3) consecutive CAP meetings have been missed without prior notification to and approval by the Chairperson.

7. Membership shall be resigned by writing to the Chairperson of the CAP. The Chairperson shall immediately forward a copy of such resignation letter to the Palisades Government Affairs Department and the represented body.

8. Member vacancies will be filled by the same way they were originally filled. All vacancies must be filled consistent with the criteria for membership stated above. The term of a member filling a vacancy will end at the same time as it would have for the member being replaced. Vacancies created by the expiration of a member's term will be filled as stated in this section.

B. OFFICERS - A Chairperson and Vice-Chairperson shall be selected by the Van Buren County of Board of Commissioners.

C. COMMITTEES - Committees, sub-committees, or similar working groups may be designated by the Chairperson as needed to carry out the work of the CAP. Such committees, subcommittees, or working groups serve at the discretion of the Chairperson.

D. DUTIES

1. Chairperson shall perform the following duties:

i. Call meetings of the CAP. ii. Prepare and/or approve agenda for meetings. iii. Preside at CAP meetings. iv. Appoint Secretary of CAP and provide for the keeping of meeting minutes in the Secretary's absence. v. Certify the accuracy of meeting minutes after approval by CAP membership. vi. Submit to the Palisades Government Affairs Department all recommendations adopted by the CAP. vii. Forward member resignation letters to the Palisades Government Affairs Department and the selecting body.

2. Vice-Chairperson shall perform all the duties of the Chairperson in his/ her absence.

3. Secretary shall perform the following duties:

i. Keep minutes of all CAP meetings including a record of members present and a complete and accurate description of matters discussed, and conclusions reached. ii. Provide the originals of all CAP records to the Palisades Government Affairs Department for retention and public inspection. iii. Work with Palisades to ensure the smooth flow of information to the CAP and public.

III. MEETINGS

A. Frequency - The CAP will meet on an as-needed basis, but no more than four (4) times per calendar year or as called by the Chairperson.

B. Open Meetings - All CAP meetings will be open to the public.

1. All meetings will have a public comment period.

2. Issues brought before the CAP that are not on the meeting agenda will only be added to that meeting's agenda following an affirmative vote of two-thirds of all CAP members. If the vote falls short of the two-thirds majority, the issue will be placed on the agenda of the next CAP meeting.

3. Meetings will be announced a minimum of one (1) week in advance. Meeting agendas and other materials sent to CAP members prior to meetings will be available to the public one (1) week in advance at a designated webpage.

C. Reimbursement - Members of the CAP will not be reimbursed for travel or other expenses incurred by them in the performance of their duties as members.

D. Quorum – Seventeen (17) members will constitute a quorum for a meeting of the CAP at which a vote or other official action is to be taken. In the absence of a quorum, the CAP may convene the meeting and adjourn until such time as a quorum is present. No official action may be undertaken by the CAP at a meeting which lacks a quorum.

E. Majority Vote - Wherever this Charter refers to a "majority vote," it means a simple majority of seventeen (17) members of the CAP. "Majority vote" does not mean a majority of the CAP members present and voting at a particular meeting. If no quorum is present, the CAP cannot vote on any matter, except adjournment, or take any official action of any kind. Minority reports will be part of the CAP record.

F. Rules - Roberts Rules of Order will govern all CAP meetings.

G. Minutes - Minutes shall be kept of all CAP meetings and will include a record of members present, a complete and accurate description of matters discussed and conclusions reached, and copies of all reports received, issued or approved by the CAP.

H. Records - The records of the CAP consist of this Charter, meeting agendas, meeting minutes, reports submitted to or drafted by the CAP, studies made available to or prepared by the CAP, correspondence to or from the CAP. All such records shall be made available to the public. As appropriate, records may also be available on a web site (or portion of a web site) dedicated to the Palisades decommissioning project.

IV. TERM

A. The CAP shall exist and operate for an initial term of six (6) years, beginning June 1, 2021, and ending May 31, 2027. The continuation of the CAP beyond its initial term shall be determined by the CAP at a public meeting convened no earlier than December 31, 2026.



CONFIDENTIAL AND PRIVILEGED INFORMATION

October 12, 2022

Department of Energy
Civil Credit Nuclear Program
1000 Independence Ave SW
Washington, DC 20585

Attention: Mr. Alden Allen
Contract Specialist

Email: allenar@id.doe.gov
Phone: 208-526-4154

References: [1] Holtec International's Application for Federal and State Support to Enable Resurrection of the Palisades Nuclear Generation Station, Submitted July 5th, 2022

[2] Email messages from Alden Allen dated 10/04/2022 and 10/05/2022, "RE: 302850ae Holtec International's Response to DOE RAI#1"

Subject: 302850af Holtec International's Response to NEPA Team's Request for Additional Information

Dear Mr. Allen:

We appreciate the Department of Energy's (DOE) thoughtful consideration and review of our application [1] for state and federal support to enable resurrection of the Palisades Nuclear Generation Station (Palisades). Holtec's responses to the additional information requested by the DOE NEPA team is provided in the attached document labeled as Attachment 1.

We thank you for the opportunity to provide further clarification of our application to the DOE. The Holtec team will continue to be available at your convenience to provide any needed supplemental information that the DOE review team deems necessary to acquire a full understanding of our proposed plan to resurrect Palisades. Please do not hesitate to contact me if you have any questions or require additional information.

Sincerely,

A handwritten signature in black ink, appearing to read "Corey DeWitt".

Corey DeWitt

Business Development Manager, HDI

Office: (856) 797-0900, Ext. 3681 | Mobile: (412) 889-3124

E-mail: c.dewitt@holtec.com

cc: Kelly Trice (k.trice@holtec.com)

Attachment: Holtec International's Response to NEPA-Related RAI

Document ID: 302850adf

Attachment 1: Holtec International's Response to DOE's NEPA-Related Request for Additional Information

Question 1:

Geologic Environment	Description of safe-shutdown earthquake	Description of safe-shutdown earthquake
----------------------	---	---

Holtec Response to Question 1:

[Redacted text block containing the response to Question 1]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Question 2:

Geologic Environment	Description of onsite erosion: description of erosion potential, erosion control, and runoff management practices	Copies and status of: Stormwater Pollution Prevention Plan (SWPPP), Spill Prevention Control and Countermeasure (SPCC) plan, other policies or procedures pertaining to erosion control, shoreline management, coastal zone management plans; existing land disturbance permits, plans, and procedures
----------------------	---	--

Holtec Response to Question 2:

Please see "Erosion Practices" folder in the shared OneDrive location for the following files:

1. SPCC-PIPP File
2. SWPPP File
3. WRP020704 Permit with Approved Plans - Permit and guidance for maintaining security functionality and erosion control along the perimeter
4. Procedure For Environmental Review and Evaluations

Question 3:

Geologic Environment	Geologic environment impact	Copies of and status of: Shoreline management plan, dune stabilization procedures, dune disturbance procedures and permits, site conceptual model with geologic cross sections
----------------------	-----------------------------	--

Holtec Response to Question 3:

Holtec has provided the Dune Permit and Environmental Review and Evaluation procedure and plan and stabilization procedures, which are in accordance with the permit when issued by the State. Please refer to these files in the OneDrive folders "Dune Permitting" and "Geologic Impacts".

Question 4:

Waste Management	Radiological waste management	Identification of any onsite direct radiation sources outside of the reactor (e.g., storage of contaminated equipment, low-level radioactive waste storage, or storage of used steam generators)
------------------	-------------------------------	--

Holtec Response to Question 4:

[Redacted content]

[REDACTED]

[REDACTED]

[REDACTED]

Question 5:

Waste Management	Radiological waste management	Changes in radiological waste generation rate, onsite storage capacity, onsite radiological waste treatment, or offsite treatment and disposal that are expected during the renewal term, if any
------------------	-------------------------------	--

Holtec Response to Question 5:

[REDACTED]

[REDACTED]

[REDACTED]

Question 6:

Water Resources	Stormwater management	Copies and status of: NPDES permits, description of storm drain system, map of permitted outfalls, NOVs for the last five years
-----------------	-----------------------	---

Holtec Response to Question 6:

Please see OneDrive folder "Stormwater Management" for the NPDES Permit, SWPPP (contains maps, layouts, and system drawings), Non-Compliance CR and resolution documents, and NPDES Permit.

Question 7:

Water Resources	Surface and groundwater withdrawals	Annual surface and groundwater usage reports for the last five years, water use data for purposes that aren't associated with reactor operation, including flow rates, average consumption, and maximum consumption
-----------------	-------------------------------------	---

Holtec Response to Question 7:

None, all surface water usage is associated with operation of the reactor and associated cooling systems. Other water usage comes from city municipal water supply.

Question 8:

Water Resources	Water use rates, points of consumption, source and discharge locations, maximum and average consumption	Water use diagram and description
-----------------	---	-----------------------------------

Holtec Response to Question 8:

Please see OneDrive folder "Water Use Rates" for DMRs for the last three months of Plant operation provided, which are more representative than the current intake and discharge values.

Question 9:

Water Resources	Water quality	Groundwater quality report with potentiometric surface map within last five years, water quality data from on-site water
-----------------	---------------	--

		supply wells
--	--	--------------

Holtec Response to Question 9:

Please OneDrive folder "Water Quality" for the topic-water resources-groundwater quality report with potentiometric surface map and data from on-site water supply wells.

Question 10:

Water Resources	Water withdrawal permits	Surface and groundwater withdrawal permits and water use registrations, if applicable, and well permits, if applicable
-----------------	--------------------------	--

Holtec Response to Question 10:

None to report.

Question 11:

Water Resources	Sanitary wastewater	Wastewater treatment/septic system operating permits and/or licenses
-----------------	---------------------	--

Holtec Response to Question 11:

None, there is no water or septic treatment on site other than radiological reduction.

Question 12:

Water Resources	Wastewater treatment and management	Wastewater treatment operator certification, description of operation, treatment, and control facilities for wastewater discharges to surface water and/or groundwater
-----------------	-------------------------------------	--

Holtec Response to Question 12:

Please see OneDrive folder "Wastewater Treatment and Management" for procedure DM-OP-046-161O46 and the Wastewater Treatment Operator certification.

Question 13:

Water Resources	Thermal impacts	Thermal studies on the impacts of plant
-----------------	-----------------	---

		discharges
--	--	------------

Holtec Response to Question 13:

Please see OneDrive folder "Wastewater Treatment" for the Environmental Protection Plan Amendment No. 272 (which states on page 2-1 that the NRC will rely upon the NPDES permit to confirm that thermal mixing occurs).

Question 14:

Noise	Noise Studies	Description/existence of past noise studies or surveys
-------	---------------	--

Holtec Response to Question 14:

Please see OneDrive folder PSDAR for 2020 12 23 Holtec Palisades PSDAR and DCE.

Question 15:

Ecological Resources	Site and Vicinity	Detailed water quality and sediment quality reports post 2005
----------------------	-------------------	---

Holtec Response to Question 15:

Please see OneDrive folder "Water Quality".

Question 16:

Ecological Resources	In-scope transmission lines and ROWs	Wetland and ROW management post 2005
----------------------	--------------------------------------	--------------------------------------

Holtec Response to Question 16:

Environmental Review and Impact Program provide, management of wetlands and ROW are in accordance with state of Michigan regulations and compliance with approved issued permits by the State of Michigan.

Question 17:

Ecological Resources	Environment	Documentation (maps, plans, etc.) of any modifications to land/water bodies post 2005
----------------------	-------------	---

Holtec Response to Question 17:

None. Multiple maps included in the provided SPCC and SWPPP plans, located in the OneDrive folder "Erosion Practices".

Question 18:

Ecological Resources	Major Wildlife	Monitoring studies (vegetation, wildlife, etc.) post 2005
----------------------	----------------	---

Holtec Response to Question 18:

Please see OneDrive folder "Wildlife Management" for the Annual Radiological Environmental Operating Report for 2005 – 2021.

Question 19:

Ecological Resources	Special interest in the vicinity of the plant	Wetland monitoring studies (including delineations) and cultural resource studies post 2005
----------------------	---	---

Holtec Response to Question 19:

Not applicable.

Question 20:

Ecological Resources	Invasive species	Documentation of any invasive management activities undertaken by the plant post 2005
----------------------	------------------	---

Holtec Response to Question 20:

Please see OneDrive folder "Invasive Species" for procedure SWSO-4 Molluscicide Treatment of Service Water and Fire Protection Systems.

Question 21:

Ecological Resources	Wildlife management	Documentation of any vegetation and wildlife management plans post 2005
----------------------	---------------------	---

Holtec Response to Question 21:

Please see OneDrive folder "Wildlife Management" procedure EN-CY-130-06 which states to trim trees back to avoid drip line interfering with air sample stations.

Question 22:

Air Quality	Air Emissions	Most recent 5-years of air emission reports
-------------	---------------	---

Holtec Response to Question 22:

Please see OneDrive folder "Air Quality Air Emissions" for the most recent air emission reports.

Question 23:

Land Use	Land Use – Census	Most recent land use census report
----------	-------------------	------------------------------------

Holtec Response to Question 23:

Please see OneDrive folder "Land Census" for the most recent land use census report.

Question 24:

Land Use	On-site Leases	Verify on-site land leases post 2005
----------	----------------	--------------------------------------

Holtec Response to Question 24:

Not applicable; there are no land leases.

Appendix 1

NRC Evaluation of Palisades SPRA Model



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, Dec. 20555-0001

May 8, 2019

Vice President, Operations
Entergy Nuclear Operations, Inc.
Palisades Nuclear Plant 27780
Blue Star Memorial Highway
Covert, MI 490439530

**SUBJECT: PALISADES NUCLEAR PLANT - NRC RESPONSE TO
REQUEST FOR
DEFERRAL OF ACTIONS RELATED TO BEYOND-DESIGN-
BASIS SEISMIC HAZARD REEVALUATIONS (EPID NO. L-
2019-JLD-0000)**

Dear Sir or Madam:

The purpose of this letter is to provide the U.S. Nuclear Regulatory Commission (NRC) staff's response to the letter received from Entergy Nuclear Operations, Inc. (the licensee) on March 20, 2019 (Agencywide Documents Access and Management System (ADAMS) Accession Nos. ML 19079A022). In this letter, the licensee requested deferral of actions related to post Fukushima seismic hazard reevaluations until after the planned permanent shutdown of the Palisades Nuclear Plant (Palisades) on May 31, 2022.

The March 20, 2019, letter relates to commitments associated with post-Fukushima seismic hazard reevaluations and requests deferral of the completion dates of the seismic probabilistic risk assessment (SPRA) and other actions associated with the seismic hazard reevaluations of Palisades until December 31, 2022. As described below, the NRC staff has determined that deferring these actions related to the seismic hazard reevaluations is acceptable and that the deferral poses no immediate safety concern.

BACKGROUND

By letter dated March 12, 2012 (ADAMS Accession No. ML 12053A340), the NRC issued a request for information under Title 10 of the Code of Federal Regulations, Section 50.54(f) (hereafter referred to as the 50.54(f) letter), to all nuclear power reactor licensees and construction permit holders in response to lessons learned from the March 2011 accident at Japan's Fukushima Dai-ichi nuclear power plant. Enclosure 1 of the 50.54(f) letter requested that licensees perform seismic hazard reevaluations using present-day methodologies and guidance, and then assess the impact of the reevaluated hazard on the plant (e.g., through an SPRA). The NRC staff would then review the completed responses to these assessments to determine whether there is a need for any additional regulatory actions, such as a plant-specific backfit.

Concurrent with the reevaluation of seismic hazards, licensees were required to develop and implement mitigating strategies under NRC Order EA-12-049, "Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events" (ADAMS Accession No. ML 12054A735).

By letter dated October 27, 2015 (ADAMS Accession No. ML15194A015), the NRC decided which licensees were to perform: (1) an SPRA; (2) limited scope evaluations; or (3) no further actions based on a comparison of the reevaluated seismic hazard and the site's design-basis earthquake. As documented in that letter, Palisades is expected to complete an SPRA and a limited-scope evaluation for the spent fuel pool (SFP). The SPRA was expected to be submitted to the NRC by September 30, 2019. The SFP evaluation was submitted by the licensee and reviewed by the NRC staff, as documented by letter dated December 14, 2016 (ADAMS Accession No. ML16342C530).

The licensee's requested seismic deferral is based, in part, on the limited remaining operational period for Palisades. By letter dated October 19, 2017 (ADAMS Accession No. MLI 7292A032), the licensee informed the NRC of its intention to shut down Palisades by May 31, 2022.

In its March 20, 2019, letter, the licensee requested deferral of the completion dates for the Palisades SPRA and associated commitments to December 31, 2022. The deferral request letter also asserts that the licensee has completed other subsequent reviews of seismic risk to conclude that pending commitments from previous 50.54(f) seismic evaluations (ADAMS Accession No. ML 17103A007) would not warrant a significant risk reduction. As discussed in the Enclosure, the NRC staff audited supporting documents associated with the subsequent reviews of seismic risk and considered them along with other available information to develop the technical basis to review the requested deferral.

EVALUATION

The staffs evaluation of the licensee's request and commitment changes for the seismic hazard reevaluations is contained in the Enclosure. As described in the enclosure, the staff considered the following factors in its evaluations:

- Palisades has achieved additional defense in depth for coping with an extended loss of alternating current power and loss of normal access to the ultimate heat sink due to external events, including those caused by seismic and flooding events, as a result of the licensee's compliance with Orders EA-12-049 and EA-12-051, "Reliable Spent Fuel Pool Instrumentation" (ADAMS Accession No. ML 12056A044). The NRC verified through inspection (NRC Inspection Report 05000255/2016008, ADAMS Accession No. ML 16337A098) that the mitigation strategies and SFP level instrumentation have been appropriately implemented at Palisades. The NRC inspectors did not identify any findings or violations of more than minor significance.
- For the deferral of the SPRA, the staff considered: (1) the results and pertinent risk insights of previous and current evaluations of seismic risk at Palisades; (2) the additional defense in-depth equipment and capabilities at the site; (3) the seismic design margin existing in nuclear power plants; (4) the documented ability of Palisades to cope with earthquakes larger than their design-basis earthquakes; (5) the remaining operational lifetime of Palisades; and (6) information regarding the seismic capacity of the SFPs.
- Considering the remaining operational period, there is not sufficient time to implement potential changes identified by the SPRA evaluations prior to permanently defueling the plant such that a meaningful, further safety improvement will be achieved. This is because the remaining work would have to be completed, and if changes were identified that would

result in a substantial safety increase, these changes would have to be designed, approved, and scheduled for installation.

- 3 -

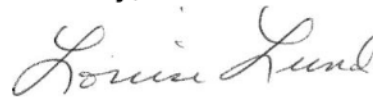
- If the licensee decides to continue to operate the unit beyond 2022, the licensee would need to provide the SPRA associated with the seismic hazard reevaluations at Palisades by December 31, 2022.

CONCLUSION

Based on the staff's evaluations in the Enclosure, and after consultation with the Director of the NRC's Office of Nuclear Reactor Regulation, the NRC is granting the licensee's request to defer the remaining activities related to the 50.54(f) letter request for information for seismic events. Accordingly, the SPRA completion is deferred until December 31, 2022.

If you have any questions, please contact Milton Valentin, Project Manager, at (301) 415-2864 or via e-mail at Milton.Valentin@nrc.gov.

Sincerely,



Louise Lund, Director
Division of Licensing Projects
Office of Nuclear Reactor Regulation

Docket No. 50-255

Enclosure:

Evaluation of Entergy's Seismic Deferral
Request for the Palisades Nuclear Plant
cc w/encl: Distribution via Listserv
Evaluation of Entergy's Seismic Deferral Request for the Palisades Nuclear Plant

By letter dated March 20, 2019 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML 19079A022), Entergy Nuclear Operations, Inc. (Entergy, the licensee) requested deferral of actions related to commitments associated with post-Fukushima seismic hazard reevaluations for the Palisades Nuclear Plant (Palisades) until after its planned permanent shutdown. The licensee requested deferral of the completion dates of the seismic probabilistic risk assessment (SPRA) and other actions associated with the seismic hazard reevaluations until December 31, 2022 (seven months after its planned shutdown). The licensee's deferral request is based on the limited remaining operational period for the plant, which would limit the time available to implement potential changes identified by the SPRA, and the existing capabilities to address a beyond-design-basis seismic event.

BACKGROUND

By letter dated March 12, 2012 (ADAMS Accession No. ML12053A340), the NRC issued a request for information under Title 10 of the Code of Federal Regulations, Section 50.54(f), (hereafter referred to as the 50.54(f) letter), to all nuclear power reactor licensees and construction permit holders in response to lessons learned from the March 2011 accident at Japan's Fukushima Dai-ichi nuclear power plant. The 50.54(f) letter includes information requests related to the NRC's Near-Term Task Force report, "Near-Term Task Force Recommendations for Enhancing Reactor Safety in the 21st Century," issued July 12, 2011 (ADAMS Accession No. ML 11 1861807). Enclosure 1 of the 50.54(f) letter requested that licensees perform seismic hazard reevaluations using present-day methodologies and guidance. Licensees would use the new hazard information to determine the need for, and scope of, plant specific assessments of the response to the reevaluated seismic hazards. The NRC staff would review the completed responses to these assessments to determine if there was a need for any additional regulatory actions, such as plant-specific backfits. The process for this regulatory review is described in a memorandum dated September 21, 2016 (ADAMS Accession No. ML 16237A103).

By letter dated October 27, 2015 (ADAMS Accession No. ML15194A015), the NRC documented its final screening results and informed licensees of the remaining seismic evaluations to be performed. Based on that letter, Palisades was scheduled to perform and submit an SPRA by September 30, 2019. A limited-scope seismic evaluation of the spent fuel pool (SFP) was submitted by the licensee and reviewed by the NRC staff, as documented by letter dated December 14, 2016 (ADAMS Accession No. ML 16342C530). The licensee also completed the Expedited Seismic Evaluation Process (ESEP) (ADAMS Accession No. ML 14357A165). The NRC staff assessment of the ESEP report is documented in letter dated August 25, 2015 (ADAMS Accession No. ML 15233A101). The ESEP report identified commitments that included anchorage modifications of two boric acid storage tanks, seismic walkdowns of inaccessible items listed in Section 7.1 of the ESEP report, modification of the primary makeup storage tank (PMST, also known as T-81) to enhance its seismic capacity, and to submit the fragility values for all tanks and inaccessible items mentioned before. The licensee's deferral of the SPRA submittal also provides the history of revisions made to these commitments.

.....

Enclosure

EVALUATION

By letter dated July 6, 2017 (ADAMS Accession No. ML 17177A446), the NRC entered into the audit process described in Office Instruction LIC-111, "Regulatory Audits," dated December 29, 2008 (ADAMS Accession No. ML082900195), to assist in the timely and efficient closure of activities associated with the March 12, 2012, request for information associated with reevaluation of the seismic hazard at nuclear power plants pursuant to 10 CFR, Section 50.54(f) (ADAMS Accession No. ML 12053A340). Entergy's Palisades was included in the list of applicable licensees. The staff exercised the audit process through an electronic reading room (ePortal).

The staff's evaluation of the licensee's request for deferral of activities and commitments associated with the seismic reevaluations followed the audit process mentioned above and considered several factors including: (1) the results and pertinent risk insights of previous and current evaluations of seismic risk at Palisades; (2) the additional defense-in-depth equipment and capabilities at the site; (3) the seismic design margin existing in nuclear power plants; (4) the documented ability of Palisades to cope with earthquakes larger than their design-basis earthquakes; (5) the remaining operational lifetime of Palisades; and (6) information regarding the seismic capacity of the SFPs. Below is a brief description of each consideration.

Evaluations of Seismic Risk

Previous SPRAs

Palisades has a two-loop Combustion Engineering pressurized water reactor (PWR) in a dry, ambient pressure containment. Its operating license was granted in 1971 and renewed in 2007. In 1996, the licensee submitted an SPRA as part of the individual plant examination of external events¹ (IPEEE). The licensee concluded that the SPRA mean core damage frequency (CDF) was at least an order of magnitude less than the internal events CDF (1 0-5/yr), that the median fragility (capacity) of the plant was 0.488g peak ground acceleration (PGA) and that the high confidence of a low probability of failure (HCLPF) is 0.217g PGA (both of these results are higher than the Palisades safe shutdown earthquake (SSE) design basis of 0.20g PGA). The licensee also concluded that there are no dominant seismic failure modes contributing to the CDF; no accident classes (functional failures) met the screening requirements for reportability; non-seismic failures and operator errors are an important part of the SPRA CDF; and that the engineered safeguards equipment is inherently rugged with no seismic vulnerabilities. No physical modifications were needed for enhanced safety following the IPEEE SPRA. While it is difficult to fully compare the 1996 IPEEE analysis to the SPRA model developed in response to the seismic hazard reevaluation, the IPEEE results showed that Palisades should be capable of withstanding a beyond-design-basis earthquake event.

Risk Evaluations Considering the Reevaluated Hazard

Prior to the decision to commit to a permanent plant shutdown, Entergy developed an SPRA for Palisades. However, following the shutdown decision, Entergy requested a deferral of the formal submittal date and made a subsequent evaluation of seismic risk to assess the significance of a pending action associated with the reevaluated seismic hazard. The staff assessment of the subsequent evaluation is discussed in the section for Consideration of Potential Cost-Justified Substantial Safety Enhancements.

¹ Entergy Document, "Palisades Nuclear Plant Individual Plant Examination of External Events (IPEEE)," Revision 1, May 1996.

The NRC staff also indicated that, based on its risk assessment for Generic Issue 199, "Implications of Updated Probabilistic Seismic Hazard Estimates in Central and Eastern United States on Existing Plants," (ADAMS Accession No. ML 100270582), and using the reevaluated hazard, the fleet-wide seismic CDF estimates are at or below 10⁻⁴/year and, therefore, consistent with the Commission Safety Goal Policy Statement. During the audit, the licensee provided supporting information about its seismic risk, which was described to be in the range of 10⁻⁶/year CDF. The NRC staff audit did not identify anything that would contradict the licensee's supporting information.

Additional Defense-in-Depth Mitigation Equipment and Strategies

The NRC staff also considered the additional defense in depth that has been achieved for coping with an extended loss of alternating current power and loss of normal access to the ultimate heat sink due to external events, including those caused by seismic and flooding events, because of Palisades' compliance with Order EA-12-049, "Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events" (ADAMS Accession No. ML 12054A735)," and Order EA-12-051 , "Reliable spent Fuel Pool Instrumentation (ADAMS Accession No. ML 12056A044). The NRC staff issued a joint safety evaluation regarding implementation of these mitigating strategies and the reliable SFP level instrumentation on August 22, 2016 (ADAMS Accession No. ML 16014A318). The same safety evaluation states that the mitigation strategies equipment is stored in two buildings and that both are designed against the beyond-design basis seismic event (in this case, the reevaluated seismic hazard). The safety evaluation concluded that the licensee has developed guidance and proposed strategies that, if implemented appropriately, should adequately address the requirements of the Orders. The NRC staff verified through inspection (Inspection Report 05000255/2016008, ADAMS Accession No. ML16337A098) that the mitigation strategies have been appropriately implemented at Palisades. The completion of this work results in a tangible safety benefit and an enhanced ability to mitigate beyond-design-basis events during the period of deferment. The orders will be codified after the Commission's approval of the rulemaking for Mitigation of Beyond-Design Basis Events (ADAMS Accession No. ML19023A038).

In addition to the safety benefits achieved by compliance with Orders EA-12-049 and EA-12-051, Palisades is also required to comply with the requirements of 10 CFR 50.54(hh)(2). Per this requirement, Palisades is required to implement guidance and strategies intended to maintain or restore core cooling, containment, and SFP cooling capabilities under the circumstances associated with loss of large areas of the plant due to explosions or fire. At Palisades, the 50.54(hh)(2) equipment is stored in different locations than the equipment used for compliance with Order EA-12-049. Therefore, the 50.54(hh)(2) equipment represents an additional beyond-design-basis capability from that provided by the equipment associated with Order EA-12-049.

Seismic Design Margin

Information regarding the seismic design margin in nuclear plants, including NRC and industry studies summarized in the NRC's May 9, 2014 letter (ADAMS Accession No. ML 1411 IAI 47), outlines reasons for continued operation while seismic reevaluations are performed. These reasons include a safety margin in the design such that plants can withstand potential earthquakes exceeding the original design-basis and that the fleet-wide seismic CDF because of the reevaluated hazard did not pose a concern regarding adequate protection of public health and safety. An example of a seismic margin report that demonstrates robustness of nuclear

plants is an Electric Power Research Institute (EPRI) report titled, "EPRI-NP-6041-SL, Revision 1: A Methodology for Assessment of Nuclear Power Plant Seismic Margin, Revision 1," dated August 1991 (ADAMS Accession No. ML16005A625).

The staff's assertions in the May 9, 2014, letter continue to be valid for the U.S. operating fleet, including Palisades, and indicate that the deferral of the remaining evaluations does not pose an unacceptable risk. Therefore, the basis for continued operation at Palisades remains unchanged, and applies throughout the requested deferral period.

As mentioned before, the IPEEE concluded that the median fragility (structural capacity) of the plant was 0.488g PGA and that the HCLPF value is 0.217g PGA. Both results are higher than the Palisades SSE design basis of 0.20g PGA. In its seismic hazard reevaluation report (ADAMS Accession No. ML 14090A069), the licensee stated that the PGA value of the reevaluated seismic hazard is 0.283g, which is below the median fragility of the plant as documented in the IPEEE report. Also, the seismic hazard reevaluation report stated that the peak spectral acceleration (PSA) of the reevaluated seismic hazard is 0.559g at the frequency of 9 hertz (Hz). This is important because structures are most vulnerable around the 5-10 Hz frequency range. To assess if this PSA could add to the seismic CDF, the NRC staff referred to EPRI NP-6041-SL. The staff found that most of the safety related structures in the evaluation documented in Appendix A of EPRI NP-6041-SL should have an estimated HCLPF capacity of at least 0.5g. For this reason, the NRC staff believes that the PSA value should not represent additional risk for Palisades for the limited period of operation before permanent shutdown.

The ability of Palisades to cope with earthquakes larger than their design-basis earthquakes is documented in the ESEP report and additional clarifying information dated December 18, 2014 (ADAMS Accession No. ML 14357A165), and July 2, 2015 (ADAMS Accession No. ML 15183A317). The staff's assessment for the ESEP report can be found in the letter dated August 25, 2015 (ADAMS Accession No. ML 15233A101). The staff's assessment concluded that the licensee demonstrated that a set of mitigation strategies equipment, which could be used to maintain or restore core cooling and containment function, has additional safety margin such that this equipment can cope with an earthquake two times the Palisades SSE.

However, the ESEP report identified commitments to address certain potential defects and to provide fragility information for inaccessible items. The ESEP commitments included anchorage modifications of two boric acid storage tanks (BASTs), perform seismic walkdowns of inaccessible items listed in ESEP Section 7.1, modify the PMST to enhance its seismic capacity, and to submit the fragility values for all items mentioned in the commitments. Regarding the commitment for performing seismic walkdowns to inaccessible items in Section 7.1 of the ESEP, the licensee reported to have completed these walkdowns in its letter dated April 13, 2017 (ADAMS Accession No. ML 17103A007). In the same letter, the licensee reported to have developed fragilities for the same items and that no additional modifications were identified for those items. Also, in the same letter, the licensee changed the commitment associated with the PMS T to use insights for the SPRA in identifying the optimal safety improvements for Palisades. Because of the SPRA deferral, the NRC staff assessed the potential risk of not addressing the commitment associated to the PMST during the remaining operational period of Palisades in the following paragraphs for Consideration of Potential Cost Justified Substantial Safety Enhancements.

Consideration of Potential Cost-Justified Substantial Safety Enhancements

The purpose of the 50.54(f) letter is to gain information to enable the NRC to determine whether nuclear reactor licenses should be modified, suspended, or revoked. One way of assessing the need for modifying, suspending, or revoking a license is by considering potential cost-justified substantial safety enhancements, as defined in NUREG-1409, "Backfitting Guidelines" (ADAMS Accession No. ML032230247). The SPRA is a tool that could help identify potential cost-justified substantial safety enhancements. However, other evaluations could help identify safety enhancements that may be substantial and cost-justified.

In the ESEP report, the licensee identified potential safety enhancements for Palisades and made commitments to address them. The commitments were intended to improve the seismic capacity of the PMST and to enhance the anchorage of the BASTs. Subsequently, Entergy submitted a letter dated April 18, 2016 (ADAMS Accession No. ML 16111B168), which notified the NRC that the modification commitment to enhance the PMST seismic capacity was canceled, and that the risk insights from the SPRA results would be used to determine if this or other modifications would provide the best safety improvement.

In its deferral letter, the licensee reported to have completed the modifications to the BASTs. Also, in its deferral letter, the licensee mentioned that subsequent evaluations of seismic risk were completed to determine the seismic risk significance of the PMST. This subsequent evaluation was made available through an ePortal and the NRC staff reviewed it as part of the audit. Specifically, the licensee stated to have used the SPRA model to perform a sensitivity study by setting the fragility of the PMST to 0.0 g (always failed) instead of the baseline value of 0.48 g. After doing so, the licensee stated that the resulting CDF did not increase. For that reason, the licensee stated that the PMST is not risk significant from a seismic perspective, so enhancing its seismic capacity would not result in a substantial safety gain. After reviewing the supporting documents provided by the licensee, the staff did not identify any issues that would change the response to the deferral request.

In addition, the design of the PMST was reviewed as part of the work done for the mitigation strategies against beyond-design-basis events. The PMST is credited to provide additional makeup inventory for core cooling. The licensee also stated that the PMST was modified to be fully protected from the SSE event. However, the PMST is not the only source for additional core cooling makeup. The licensee stated that, if the PMST were to be compromised, the FLEX Support Guidelines (FSGs) direct operators to align alternate suction inventory from other available water sources to supply the additional makeup needed for core cooling. For this reason, the NRC staff believes that losing the PMST should not result in increased CDF. Further details of this evaluation are provided in the NRC staff safety evaluation of the Palisades mitigation strategies against beyond-design basis events (ADAMS Accession No. ML16014A318).

Remaining Operational Lifetime at Palisades

The licensee has requested to defer the submittal of its SPRA considering the upcoming shutdown scheduled for May 31, 2022. Deferring the submittal of its SPRA should not limit the licensee's ability to comply with regulations or to operate safely. During this period, the licensee shall continue to operate within the safety limits and controls established by its license. By continuing its compliance with existing regulations and its license, the remaining operational lifetime of Palisades should not pose additional risk to the public or the environment.

Spent Fuel Pool

As part of the activities associated with the seismic hazard reevaluation at Palisades, the licensee submitted an evaluation of that concluded that the spent fuel should be adequately protected against seismically induced failures that could drain the SFP. The NRC staff agreed with the licensee's assessment of the Palisades SFP as documented in letter dated December 14, 2016 (ADAMS Accession No. ML 16342C530). In addition, the mitigating strategies implemented as part of Order EA-12-049 include capabilities beyond the installed plant systems to add cooling water to the SFP. The licensee has also installed additional SFP level instrumentation as required by NRC Order EA-12-051. These measures have improved the licensee's ability to address a loss of SFP cooling resulting from either a loss of electrical power or a loss of water inventory from the pool. The NRC staff documented its assessment of regulatory actions going beyond the issued orders in COMSECY-13-0030, "Staff Evaluation and Recommendations for Japan Lessons-Learned Tier 3 Issue on Expedited Transfer of Spent Fuel," dated November 12, 2013 (ADAMS Accession No. ML 13329A918). The assessment was supported by detailed analyses documented in NUREG-2161, "Consequence Study of a Beyond-Design-Basis Earthquake Affecting the Spent Fuel Pool for a U.S. Mark I Boiling Water Reactor" (ADAMS Accession No. ML 14255A365). These recent studies supported the findings in past evaluations that SFPs are robust structures that are likely to withstand severe earthquakes without leaking.

By letter dated February 28, 2017 (ADAMS Accession No. ML 17034A408), the NRC endorsed the Electric Power Research Institute's (EPRI's) Report 3002009564, "Seismic Evaluation Guidance: Spent Fuel Pool Integrity Evaluation" (ADAMS Accession No. ML 17031A176). This report provided guidance for conducting seismic evaluations of SFPs. The methodology of the EPRI report credits screening criteria and seismic capacity calculations based on the accepted methods of assessing seismic capacity shown in EPRI NP-6041-SL. The EPRI NP-6041-SL report forms the basis for the EPRI 3002009564 document's conclusion that SFPs that were designed to a safe shutdown earthquake with a PGA of at least 0.1g have a high confidence of a seismic capacity that exceeds 0.8g. The Palisades SFP was designed to the design basis earthquake with a PGA of 0.2g. As mentioned earlier, the PGA for the reevaluated seismic hazard is less than 0.3g. For these reasons, the NRC staff concludes that the SFP at Palisades should not be compromised by the reevaluated seismic hazard.

REGULATORY COMMITMENTS

In its deferral request letter dated March 20, 2019, the licensee proposed regulatory commitments to complete activities that will inform the SPRA. The NRC staff notes that NEI 9904 "Guidelines for Managing NRC Commitments" (ADAMS Accession No. ML003680088), as endorsed by the NRC in SECY-00-0045, "Acceptance of NEI 99-04, "Guidelines for Managing NRC Commitments"" (ADAMS Accession No. ML003679799), provides an acceptable method to manage commitments. If the licensee were to change these regulatory commitments, the staff expects to be informed in accordance with the process outlined in NEI 99-04, as endorsed by the NRC.

AUDIT REPORT

The July 6, 2017, generic audit plan describes the NRC staff's intention to issue an audit report that summarizes and documents the NRC's regulatory audit of licensee's submittals associated with reevaluated seismic hazard analyses. The NRC staff's Palisades audit was limited to the review of the information above. Because this staff assessment appropriately summarizes the

results of the audit, the NRC staff concludes a separate audit report is not necessary, and that this document serves as the audit report described in the July 6, 2017, letter.

CONCLUSION

In summary, the licensee's deferral request has a technical basis that is supported by the results of the Palisades seismic risk evaluations. Compliance with NRC Orders EA-12-049 and EA-12-051 has provided a safety benefit and an enhanced ability to mitigate beyond-design basis events during the period of deferment. The seismic capacity inherent in the design of nuclear power plants, and the site-specific evaluation of the seismic capacity of safe-shutdown equipment as documented by the ESEP provides additional assurance that Palisades can cope with an earthquake larger than the design-basis earthquake during the period of deferral. A similar conclusion was made for all plants that are developing an SPRA to support continued operation during the period of development.

**SUBJECT: PALISADES NUCLEAR PLANT - NRC RESPONSE TO
REQUEST FOR DEFERRAL OF ACTIONS RELATED TO THE
BEYOND-DESIGN-BASIS
SEISMIC HAZARD REEVALUATION (EPID NO. L-2019-
JLD-0000) . DATED May 8, 2019**

DISTRIBUTION:

PUBLIC MValentin, NRR PBMB R/F
RidsNrrDorLPL3 Resource JBowen, NRR BTitus, NRR
RidsNrrPMPalises Resource RidsNrrLASLent Resource KGreen, NRR RidsAcrsAcnw MailCTR
Resource RidsRgn3MailCenterResource

ADAMS Accession No. ML19115A413

* via e-mail

OFFICE	NRR/DLP/PBMB/PM	NRR/DLP/LA*	NRR/DLP/PBMB/BC*
NAME	MValentin	SLent	JBowen
DATE	4/25/19	4/29/19	4/30/19
OFFICE	OGC (NLO*)	NRR/DLP/D	
NAME	BHarris*	LLund	
DATE	5/3/19	5/8/19	

OFFICIAL RECORD COPY



Krishna P. Singh Technology Campus, 1 Holtec Blvd., Camden, NJ 08104

Telephone (856) 797-0900

Fax (856) 797-0909

CONFIDENTIAL AND PRIVILEGED INFORMATION

October 12, 2022

Department of Energy
Civil Credit Nuclear Program
1000 Independence Ave SW
Washington, DC 20585

Attention: Mr. Alden Allen
Contract Specialist

Email: allenar@id.doe.gov
Phone: 208-526-4154

References: [1] Holtec International's Application for Federal and State Support to Enable Resurrection of the Palisades Nuclear Generation Station, Submitted July 5th, 2022

[2] Email messages from Alden Allen dated 10/04/2022 and 10/05/2022, "RE: 302850ae Holtec International's Response to DOE RAI#1"

Subject: 302850ag Holtec International's Response to RFI-005

Dear Mr. Allen:

We appreciate the Department of Energy's (DOE) thoughtful consideration and review of our application [1] for state and federal support to enable resurrection of the Palisades Nuclear Generation Station (Palisades). Holtec's responses to the Request for Information 005 [2] requested by the DOE is provided in the attached document labeled as Attachment 1.

We thank you for the opportunity to provide further clarification of our application to the DOE. The Holtec team will continue to be available at your convenience to provide any needed supplemental information that the DOE review team deems necessary to acquire a full understanding of our proposed plan to resurrect Palisades. Please do not hesitate to contact me if you have any questions or require additional information.

Sincerely,

A handwritten signature in black ink, appearing to read "Corey DeWitt".

Corey DeWitt
Business Development Manager, HDI
Office: (856) 797-0900, Ext. 3681 | Mobile: (412) 889-3124
E-mail: c.dewitt@holtec.com

cc: Kelly Trice (k.trice@holtec.com)

Attachment: Holtec International's Response to RFI-005

Document ID: 302850ag

Attachment 1: Holtec International's Response to DOE's Request for Information (RFI) 005

Question 1:

Please comment on the status of the LPO Direct Access loan mentioned in Response to RAI #1 on page 3. Please confirm that Holtec intends to seek funds from an LPO Direct Access loan in addition to requested CNCs.

Holtec Response to Question 1:

Holtec submitted the Part I Application on August 22, 2022, to the US DOE Loan Program Office (LPO) to obtain a US Government supported loan for Restoration of Palisades Nuclear Plant for Carbon Free Electrical Generation. The DOE LPO has 60 days to confirm completeness and eligibility of the Part I Application (subject to evaluation by other organizations within the US DOE). We anticipate receiving approval of the Part I Application during the week of October 24th and then receiving the invitation to submit the Part II Application. During these 60 days of evaluation the LPO limits communication with applicants to the following:

1. Communication initiated by LPO;
2. Communications pertaining to purely logistical matters; and
3. Communications occurring at widely attended events.

At this time upon receiving the invitation from the LPO, Holtec intends on submitting the Part II Application for a Direct Access Loan to funds facility improvements in addition to the requested Civil Nuclear Credits.

Question 2:

Please confirm that Consumers Energy was the primary recipient, through a PPA agreement, of Palisades MWh output until the Reactor shutdown in May 2022. Please provide the PPA agreement, including the pricing structure.

Holtec Response to Question 2:

Consumers Energy was the primary purchaser of Palisades MWh output until the reactor shutdown in May 2022 as evidenced by "Exhibit B" attached to the PPA.

Palisades has a copy of the PPA which will be released pending resolution of document confidentiality agreement between Consumers Energy and Entergy.

Question 3:

Was the Consumers PPA pricing structure used to generate the [Energy & PPA Rates], [Revenue], and Revenue data on [Sheet1] in the "5yr Historical Financials.xlsx" spreadsheet?

Holtec Response to Question 3:

The annual rates in "Exhibit A" of the PPA for the periods 2018 – 2022 were used in calculation to generate annual revenue in the "5yr Historical Financials" spreadsheet.

Question 4:

Please provide any additional historical revenue streams for Palisades plant (Capacity, etc.). Please provide the corresponding revenues, PPAs, and pricing structures.

Holtec Response to Question 4:

There are no additional historical revenue streams for Palisades were available at this time.

Question 5:

In RAI #4 Holtec states: "A Power Purchase Agreement (PPA) with Michigan will be required to participate in the power generation and to sell the capacity on the grid. The Michigan Public Service Commission (MPSC) issues the PPA. Holtec is pursuing a long term (>20 year) agreement to stabilize projected revenue."

- a) Has the MPSC ever entered into other PPAs? Are there any regulatory hurdles for the MPSC to enter into a PPA?
- b) Please comment on the status of said PPA – is Holtec currently in the process of negotiating with the MPSC or with any other entities?
- c) Please explain the intended pricing structure in the PPA. Is it consistent with the pricing on [Revenue Calc] in "Palisades Pro Forma Cost Estimate.xlsx" spreadsheet? Does the pricing on the [Revenue Calc] sheet represent the value of the output? Is it simply an extension of the pricing structure of the PPA that was in place with Consumers?

Holtec Response to Question 5:

- a) Yes. From 2007 to 2022, Palisades operated under a power purchase agreement (PPA) that was approved by the Michigan Public Service Commission (MPSC). That 15-year agreement existed between the plant's prior owner and operator Entergy Corporation and the state investor owned utility Consumers Energy, the primary subsidiary of CMS Energy. That PPA was a condition of the plant's sale by Consumers to Entergy in 2007. Under the original terms of the PPA, that agreement was scheduled to expire in April 2022 but was extended by the MPSC to coincide with the plant's shutdown at the end of May 2022.

On December 21, 2016, Public Act 341 of 2016, an amendment to Public Act 3 of 1939 and Public Act 286 of 2008, (also known as 2016 Clean and Renewable Energy and Energy Waste Reduction Act) was signed into Michigan law and became effective April 20, 2017. The law provides for a certificate of necessity (CON) request that the MPSC acknowledge and agree to the need for a large investment in an electric generation or PPA, the preapproval of which allows utility recovery of the investment through subsequent regulatory rate case recovery processes. CON applications may request preapproval of PPAs between a utility and an independent electric supplier for projects costing \$100 million or more for a period of six years or more with costs allocated to Michigan retail customers. As recently as October 5, 2022, the MPSC approved a PPA between Michigan utility Consumers Energy and STS Hydropower LLC for the output of the 1,400 KW Ada Hydro Plant, as well as 25-year PPAs between Consumers Energy and Heartwood Solar

LLC for two 150-MW solar projects. Earlier this year, the MPSC approved new PPAs between Consumers and sPower Development Co. for the 75 MW output of four solar projects. Consumers currently has a PPA with the 1,560-MW Midland Cogeneration Venture (MCV) natural gas-fired plant.

- b) The Michigan Public Service Commission (MPSC) has been included in a number of those discussions between Holtec and the State of Michigan concerning the future operation of Palisades, both prior to and following the ownership transfer of site. In a September 9, 2022, letter to Energy Secretary Jennifer Granholm concerning the repowering of Palisades, Michigan Governor Gretchen Whitmer writes, "We are ready to do our part should they [Holtec] receive funding through the CNC program, including identifying state funding and facilitating a power purchase agreement." Holtec is committed to working with the Governor and MPSC to facilitate a successful PPA.
- c) For modeling purposes and until Holtec has further definitive discussions surrounding the PPA with the MPSC and the State of Michigan, an extension of the former PPA was projected over the award period.

Question 6:

In RAI #4 Holtec briefly discusses the "Preservation of the Interconnect Rights to the Switchyard," and that a "replacement generation agreement will be required to bring the Palisades generation capacity back on the grid." Please summarize the status of this project and summarize the expected corresponding costs.

Holtec Response to Question 6:

The replacement generation agreement would govern the interface requirements between Palisades nuclear plant and the nearby 345kV switchyard, for example the operational parameters such as acceptable voltage levels, acceptable equipment configurations, and coordination of equipment outage schedules. This agreement would be made between Holtec (Interconnection Customer), METC (Transmission Owner), and MISO (Transmission Provider) at such time that it was needed to support placing Palisades generation capacity back on the grid. Holtec's expected corresponding costs would be associated with restoring the interconnection point between Palisades' main generator/step-up transformer and the nearby 345kV switchyard by installing a new main disconnect switch and the associated line protection relaying. It is expected that the cost for this installation would not exceed \$100,000.

Question 7:

Is the 97% capacity factor assumed in the [Revenue Calc] sheet, used in projected generation and revenue, representative of historical output? Does this include planned outages? Please provide the annual historical MWh output of the plant from 2017 to date of plant closing.

Holtec Response to Question 7:

The 97% capacity factor assumed in the {Revenue Calc} sheet is after taking into consideration planned and forced outage generation losses. The 97% takes into account other generation losses such as downpowers for equipment testing, unfavorable ambient and lake temperature changes. Below is a historical graph and table of annual MWh output of the plant from 2017 – 2022 closing.

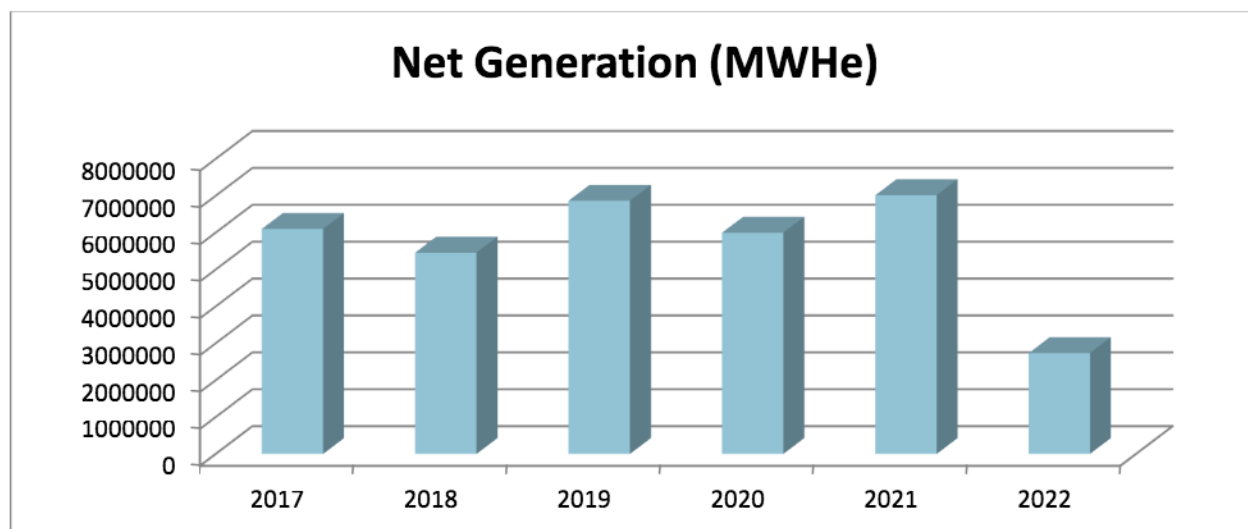


Figure 1: Historical Graph of Annual MWh Output from 2017 – 2022

Max	7014805	7356857	22354886	8760.0	8760.0	
Year	Net Generation (MWh)	Gross Generation (MWh)	Thermal Generation (MWhth)	Hours Critical	Hours On-line	Rank Production Run
2017	6097497	6475287	19575092	8001.5	7968.6	3
2018	5455944	5689056	17389801	6906.4	6863.2	5
2019	6864419	7198811	21611498	8605.5	8586.3	2
2020	5995241	6287700	19120481	7557.1	7540.8	4
2021	7014805	7356857	22354886	8760.0	8760.0	1
2022	2730230	2859468	8586770	3351.0	3351.0	6

Figure 2: Historical Table of Annual MWh Output from 2017 - 2022

Question 8:

Please explain how Palisades can become operational given the permanent nature of the shutdown and removal of spent nuclear fuel.

Holtec Response to Question 8:

The physical shutdown of the plant and transfer of fuel from the reactor vessel to the spent fuel pool were performed in accordance with routine operational practices. No permanent changes were made to the plant systems, structures, or components which would render them un-usable now or in the future. It is anticipated that a future core design would utilize a combination of partially burned fuel assemblies

currently stored in the spent fuel pool and newly manufactured assemblies. All primary and secondary support systems have the ability to be placed back in service to support future plant operation.

Question 9:

Will Palisades request an extension to its previous NRC license or apply for a new license? What entity will make such request and hold the NRC license?

Holtec Response to Question 9:

Palisades will work with the NRC to reinstate its former license, valid through the year 2031. Following reinstatement of the original license, Palisades would pursue a 20 year license extension in accordance with current industry practices.

Holtec plans to partner with an established U.S. Nuclear Plant Operating company that currently is the holder of NRC facility operating licenses at United States Nuclear Power Plants. It is expected that this entity will submit a request for subsequent license renewal to the NRC for the Palisades Nuclear Plant.

Question 10:

What are the key steps and a realistic timeline to obtain a new license or extension? Is this timeline consistent with the operating assumptions in Holtec's CNC Application, i.e., commercial operation commencing 01/01/2025?

Holtec Response to Question 10:

The NRC will dictate the process, within current regulations, for reinstating the previous Palisades operating license and coordination with a subsequent application to extend the reinstated operating license. This will include a yet to be established review period. For project planning purposes it is assumed that the NRC review process to reinstate the Palisades operating license would take a minimum of two years once the application was submitted to the NRC. The subsequent submittal to extend the reinstated operating license, based on industry precedent, varies between 2 to 5 years once submitted to the NRC which will support NRC approval prior to the reinstated license expiration in 2031.

Question 11:

Would the PPA counterparty retain those power products for its customer base or market them? If retained, would Palisades meet the DOE Guidance Criterion "The Applicant must demonstrate that the Nuclear Reactor competes in a competitive electricity market during the Award Period. An Applicant can do so by showing that the Nuclear Reactor will receive a material amount of its total revenue from sources that are exposed to electricity market competition." If marketed, into which market would those power products be sold?

Holtec Response to Question 11:

The new PPA is intended to model the previous agreement. The details of counterparty disposition to customer base or market were not disclosed. The previous PPA counterparty operated within a regulated market.

Question 12:

Please provide the basis and supporting calculations for each of the estimated pro forma operating and capital cost categories. Would Palisades be on an 18 month or 24 month refueling cycle?

Holtec Response to Question 12:

The basis and calculations for the operating and cost categories were predicated upon reconstituting human capital (re-certification of training programs, hiring over 400 permanent personnel, training craft, licensing operators) re-licensing efforts, and refurbishment of the plant to current industry operating standards.

Site managers and subject matter experts outside of the organization were engaged to provide estimates and timelines required to accomplish those activities. Based upon the size of the recovery efforts there are significant incremental costs and investments required prior to startup in years 2023-2024. Beginning in years 2025 the plant operating costs are projected to return to a steadier state.

It is currently forecasted that Palisades would remain on a 18 month refueling cycle.

Question 13:

Please explain your assumption of 3% cost escalations in the "Palisades Pro Forma Cost Estimate.xlsx" spreadsheet for projected years.

Holtec Response to Question 13:

The current forecasted Consumer Price Index through year 2026 indicated an average annualized inflation rate of ~2.4%. Given current economic conditions and uncertainty we modeled in a less optimistic rate of inflation (3%).

Question 14:

Please confirm Palisades will not be able to resume operations (i.e., generate electricity) until at least January 2025. Please explain your expected funding source for costs incurred prior to the resumption of Palisades commercial operation. Given the timing of expenditures and potential CNC recovery through restored operation at Palisades, how would CNC funds contribute to the restoration project?

Holtec Response to Question 14:

Based on input from current site managers and outside industry experts, 2 years is the expected timeline to manufacture and deliver new fuel, fill necessary staffing needs, train and license operators, and perform necessary restart testing on dormant systems. Holtec will work with its state partners to procure funding to support O&M costs during this two- year restart period.



Darrell W. Corbin
Site Vice President
Palisades Nuclear Plant
269-764-2000

PNP 2022-010

10 CFR 50.82(a)(1)

June 13, 2022

ATTN: Document Control Desk
U. S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Subject: Certifications of Permanent Cessation of Power Operations and Permanent
Removal of Fuel from the Reactor Vessel

Palisades Nuclear Plant
NRC Docket No. 50-255
Renewed Facility Operating License No. DPR-20

Reference: Entergy Nuclear Operations, Inc. letter to U.S. Nuclear
Regulatory Commission, Supplement to Certification of Permanent
Cessation of Power Operations, (ADAMS Accession No. ML17292A032),
dated October 19, 2017

In the referenced letter, in accordance with Title 10 of the Code of Federal Regulations, Part 50, Section 82 (10 CFR 50.82), Termination of license, subparagraph 50.82(a)(1)(i), Entergy Nuclear Operations, Inc. (Entergy) certified to the U.S. Nuclear Regulatory Commission (NRC) that it had decided to permanently cease power operations at Palisades Nuclear Plant (PNP) no later than May 31, 2022.

In this letter Entergy hereby certifies to the NRC in accordance with 10 CFR 50.82(a)(1)(i) that power operations ceased at PNP on May 20, 2022. In addition, in accordance with 10 CFR 50.82(a)(1)(ii), Entergy also certifies that the fuel was permanently removed from the PNP reactor vessel and placed in the PNP spent fuel pool on June 10, 2022. Entergy understands and acknowledges that upon docketing of these certifications, the PNP 10 CFR Part 50 license no longer authorizes operation of the reactor or emplacement or retention of fuel in the reactor vessel.

This letter contains no new commitments and no revised commitments.

Should you have any questions or require additional information, please contact Jim Miksa, regulatory assurance engineer at (269) 764-2945.

From: [Cook, Kara](#)
To: [Peretick, Katherine \(LARA\)](#); [Scripps, Daniel \(LARA\)](#)
Subject: Fw: 302850ac Holtec International's Response to DOE RAI #1 (Second Set of Responses)
Date: Tuesday, October 11, 2022 3:24:28 PM
Attachments: [302850ac Holtec Response to RAI # 1.pdf](#)
[302850 Holtec RAI Response Tracking Table.docx](#)

Kara Cook (she/her)

Senior Advisor | Energy and Environment
Executive Office of Governor Whitmer
Michigan.gov/Whitmer

***This email and any associated documents may contain information that is privileged, confidential, and exempt from disclosure. It is intended for use only by the person to whom it is addressed. If you have received this in error, please (1) do not forward or use this information in any way; and (2) contact me immediately.*

From: Kelly Trice <k.trice@holtec.com>
Sent: Monday, September 26, 2022 3:54 PM
To: Cook, Kara <CookK14@michigan.gov>; Kudelko, Karen <KudelkoK@michigan.gov>
Subject: FW: 302850ac Holtec International's Response to DOE RAI #1 (Second Set of Responses)

CAUTION: This is an External email. Please send suspicious emails to abuse@michigan.gov

Kara, Karen,

Here are the RAI responses from today and last Friday. No need to read but wanted you to see that we have responded to 6 of the questions of approximately 24. Thanks for the call today.

Best regards,

Kelly

From: Kaylyn Rocher <K.Rocher@holtec.com>
Sent: Monday, September 26, 2022 3:35 PM
To: allenar@id.doe.gov
Cc: Corey DeWitt <c.dewitt@holtec.com>; Kelly Trice <k.trice@holtec.com>
Subject: 302850ac Holtec International's Response to DOE RAI #1 (Second Set of Responses)

Good afternoon Alden,

Hope you had a great weekend. Please see attached for Holtec's second set of responses to the DOE's Request for Additional Information (RAI #1). I have also attached a table to assist our teams in keeping track of Holtec's responses.

Thank you,
Kaylyn

Kaylyn Rocher
Business Development Engineer
Office: (856)797-0900, x3781
Cell: (724)612-3643



1 Holtec Blvd.
Camden, NJ 08104
www.holtecinternational.com

The information contained herein is intended only for the person or entity to which it is addressed and may contain confidential and/or privileged material from Holtec International. If you are not the intended recipient, you must not keep, use, disclose, copy or distribute this email without the author's prior permission. Further, review, retransmission, dissemination, or other use of this information in whole or part for any other purpose by persons outside the recipient's organization is strictly prohibited unless explicit authorization to such effect has been issued by the sender of this message. Holtec International policies expressly prohibit employees from making defamatory or offensive statements and infringing any copyright or any other legal right by Email communication. Holtec International will not accept any liability in respect of such communications. Holtec International has taken precautions to minimize the risk of transmitting software viruses, but we advise you to carry out your own virus checks on any attachment to this message. Holtec International cannot accept liability for any loss or damage caused by software viruses. If you are the intended recipient and you do not wish to receive similar electronic messages from us in the future then please respond to the sender to this effect.

From: [Cook, Kara](#)
To: [Peretick, Katherine \(LARA\)](#); [Scripps, Daniel \(LARA\)](#)
Cc: [Kudelko, Karen](#)
Subject: Fw: Holtec Responses to NEPA RAI and RFI-005
Date: Friday, October 14, 2022 12:32:23 PM
Attachments: [302850af_Holtec_Response_to_NEPA_RAI.pdf](#)
[302850ag_Holtec_Response_to_RFI-005.pdf](#)
[Certs_Perm_Defuel - PALISADES.pdf](#)

Hi Katherine and Dan,

I'll give you both a call to update you on the conversation with Kelly from yesterday. Here's some more RAIs.

Kara Cook (she/her)

Senior Advisor | Energy and Environment
Executive Office of Governor Whitmer
Michigan.gov/Whitmer

***This email and any associated documents may contain information that is privileged, confidential, and exempt from disclosure. It is intended for use only by the person to whom it is addressed. If you have received this in error, please (1) do not forward or use this information in any way; and (2) contact me immediately.*

From: Kelly Trice <k.trice@holtec.com>
Sent: Thursday, October 13, 2022 2:00 PM
To: Kudelko, Karen <KudelkoK@michigan.gov>; Cook, Kara <CookK14@michigan.gov>
Subject: FW: Holtec Responses to NEPA RAI and RFI-005

CAUTION: This is an External email. Please send suspicious emails to abuse@michigan.gov

Karen, Kara,

Here are the most recent RAIs which we sent to DOE as discussed.

Best regards,

Kelly

From: Kaylyn Rocher <K.Rocher@holtec.com>
Sent: Wednesday, October 12, 2022 1:04 PM
To: Allen, Alden R <allenar@id.doe.gov>
Cc: Corey DeWitt <c.dewitt@holtec.com>; Kelly Trice <k.trice@holtec.com>
Subject: Holtec Responses to NEPA RAI and RFI-005

Good afternoon Alden,

Please see attached for Holtec's responses to the NEPA-related request for additional information and RFI-005. Holtec has created a OneDrive folder (linked below) to share documents requested by the NEPA team as well as additional documentation to support the DOE's review. The folder is password protected (password is [REDACTED]).

Also attached is the requested letter "Certifications of Permanent Cessation of Power Operations and Permanent Removal of Fuel from the Reactor Vessel".

[REDACTED]

Thank you,

Kaylyn

Kaylyn Rocher

Business Development Engineer

Office: (856)797-0900, x3781

Cell: (724) [REDACTED]



1 Holtec Blvd.

Camden, NJ 08104

www.holtecinternational.com

The information contained herein is intended only for the person or entity to which it is addressed and may contain confidential and/or privileged material from Holtec International. If you are not the intended recipient, you must not keep, use, disclose, copy or distribute this email without the author's prior permission. Further, review, retransmission, dissemination, or other use of this information in whole or part for any other purpose by persons outside the recipient's organization is strictly prohibited unless explicit authorization to such effect has been issued by the sender of this message. Holtec International policies expressly prohibit employees from making defamatory or offensive statements and infringing any copyright or any other legal right by Email communication. Holtec International will not accept any liability in respect of such communications. Holtec International has taken precautions to minimize the risk of transmitting software viruses, but we advise you to carry out your own virus checks on any attachment to this message. Holtec International cannot accept liability for any loss or damage caused by software viruses. If you are the intended recipient and you do not wish to receive similar electronic messages from us in the future then please respond to the sender to this effect.

From: [Helms, Matt \(LARA\)](#)
To: [Peretick, Katherine \(LARA\)](#)
Subject: FW: Palisades and nuclear study
Date: Friday, September 30, 2022 9:56:59 AM

Hi, Katherine,

Got these questions from Kelly House at Bridge Michigan. Would you want to do an interview with her today on this?

From: Kelly House <khouse@bridgemi.com>
Sent: Friday, September 30, 2022 9:51 AM
To: Helms, Matt (LARA) <HelmsM@michigan.gov>
Subject: Palisades and nuclear study

CAUTION: This is an External email. Please send suspicious emails to abuse@michigan.gov

Hi Matt,

I'll follow up with a phone call, but I'm doing a short update on Palisades and the forthcoming nuclear study and just wanted to touch base with MPSC about it. A couple of questions:

- What is MPSC's timeline for hiring a contractor for the study?
- Is the study something MPSC supported? Something MPSC finds useful and/or necessary?
- What is the status of the Palisades conversation? I know it's mostly in Department of Energy's hands right now, but Michigan would also need to take some steps in order to make reopening possible. Is the state in any talks with Holtec or others about finding a third-party operator for the plant, finding state-level funding to aid in reopening, or taking other steps in preparation for a possible reopening?
- Some environmental groups have pushed back against the concept of reopening Palisades, citing safety concerns and technicalities about Palisades' eligibility for funds. Does MPSC have any doubt that the plant qualifies for the federal credit program? Does MPSC have any concerns about whether Palisades could safely reopen?

Thanks so much, Matt! Will call you shortly. I'm on a daily deadline, so any comments you can give me by 3:30 would be great (though as always, sooner is even more helpful).

Best,

Kelly House

Environment Reporter | [Bridge Michigan](#)
600 W. St. Joseph St., Suite #200, Lansing, MI 48933
Cell: 989-████████

Email: khouse@bridgemi.com

Twitter: [@Kelly_M_House](https://twitter.com/Kelly_M_House)

From: [Helms, Matt \(LARA\)](#)
To: [Peretick, Katherine \(LARA\)](#)
Subject: RE: Palisades and nuclear study
Date: Friday, September 30, 2022 10:31:02 AM
Attachments: [image004.png](#)

That would be great. Her cell is 989-██████████.

From: Peretick, Katherine (LARA) <PeretickK@michigan.gov>
Sent: Friday, September 30, 2022 10:17 AM
To: Helms, Matt (LARA) <HelmsM@michigan.gov>
Subject: RE: Palisades and nuclear study

Sure, would be happy to do an interview with Kelly. I can call her at 11:30 if that works?

Katherine L. Peretick, Commissioner
Michigan Public Service Commission
7109 W. Saginaw
Lansing, MI 48917

PeretickK@michigan.gov



From: Helms, Matt (LARA) <HelmsM@michigan.gov>
Sent: Friday, September 30, 2022 9:57 AM
To: Peretick, Katherine (LARA) <PeretickK@michigan.gov>
Subject: FW: Palisades and nuclear study

Hi, Katherine,

Got these questions from Kelly House at Bridge Michigan. Would you want to do an interview with her today on this?

From: Kelly House <khouse@bridgemi.com>
Sent: Friday, September 30, 2022 9:51 AM
To: Helms, Matt (LARA) <HelmsM@michigan.gov>
Subject: Palisades and nuclear study

CAUTION: This is an External email. Please send suspicious emails to abuse@michigan.gov

Hi Matt,

I'll follow up with a phone call, but I'm doing a short update on Palisades and the forthcoming nuclear study and just wanted to touch base with MPSC about it. A couple of questions:

- What is MPSC's timeline for hiring a contractor for the study?
- Is the study something MPSC supported? Something MPSC finds useful and/or necessary?
- What is the status of the Palisades conversation? I know it's mostly in Department of Energy's hands right now, but Michigan would also need to take some steps in order to make reopening possible. Is the state in any talks with Holtec or others about finding a third-party operator for the plant, finding state-level funding to aid in reopening, or taking other steps in preparation for a possible reopening?
- Some environmental groups have pushed back against the concept of reopening Palisades, citing safety concerns and technicalities about Palisades' eligibility for funds. Does MPSC have any doubt that the plant qualifies for the federal credit program? Does MPSC have any concerns about whether Palisades could safely reopen?

Thanks so much, Matt! Will call you shortly. I'm on a daily deadline, so any comments you can give me by 3:30 would be great (though as always, sooner is even more helpful).

Best,

Kelly House

Environment Reporter | [Bridge Michigan](#)

600 W. St. Joseph St., Suite #200, Lansing, MI 48933

Cell: 989-387-3507

Email: khouse@bridgemi.com

Twitter: [@Kelly_M_House](#)

I declare under penalty of perjury; the foregoing is true and correct. Executed on June 13, 2022.

Respectfully,

A handwritten signature in black ink, appearing to read 'DW. Corbin', with a large, stylized flourish at the end.

Darrell W. Corbin

DWC/jpm

cc: NRC Region III Regional Administrator
NRC Senior Resident Inspector – Palisades Nuclear Plant
NRC Project Manager – Palisades Nuclear Plant
State of Michigan