Energy Committee Agenda
May 8, 2024

Welcome	Tim Ling, Plaskolite
Public Policy Report • Legislative Outlook	Lindsey Short, OMA staff
Special Guest Remarks	Chair Jenifer French, Public Utilities Commission of Ohio
Energy Engineering Report • PJM's Capacity Auction Changes • The North American Electric Reliability Corporation (NERC's) Reliability Assessment and Recommendations	John Seryak, PE, RunnerStone, LLC OMA Energy Engineer
• Ohio's Electric Utility Load Forecasts • Updates on AEP Ohio BTCR Pilot Program and Interruptible Tariff	Wyatt Elbin, RunnerStone, LLC OMA Energy Engineer
Guest Presentation • Elements of a Modern Energy Strategy	Nitish Saraf, Shell Energy
Guest Presentation	Robert Borkowski, NextEra Energy Resources
Committee Discussion • Energy Siting Amicus Activity	
Energy Counsel's Report • PUCO Case Highlights	Kim Bojko, Carpenter Lipps, LLP Chief OMA Energy Counsel
Market Trends Reports	Susanne Buckley, Scioto Energy Darin King, Columbia Gas of Ohio

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2024 Energy Committee Calendar
Meetings begin at 10 a.m.

September 19, 2024 – Ohio Manufacturers' Energy Conference
November 7, 2024

OMA Energy Committee - May 2024

Name	Company	Location
Mohamed Abaas	Sofidel America Corporation	Circleville, OH
Kevin Abke	Ohio CAT	Perrysburg, OH
Jill Alsip	TT Electronics Integrated Manufacturing Services, Inc.	Perry, OH
Ann K. Aquillo	Ann Aquillo Consulting LLC	
Ryan R. Augsburger	The Ohio Manufacturers' Association	Columbus, OH
Steve Austria	Sugar Creek Packing Company	Dayton, OH
Heidi Bioni	WGL Energy	Vienna, VA
Scot Blommel	Whirlpool Corporation	Washington, DC
Maria Bocanegra	Port of Cleveland	Cleveland, OH
Aaron J. Bohnert	Dynegy Energy Services	Columbus, OH
Kimberly W. Bojko	Carpenter Lipps LLP	Columbus, OH
Mark Bonifas	Verdantas	Dublin, OH
Dylan Borchers	Bricker Graydon LLP	Columbus, OH
George Brown	Waste Management	Canal Winchester, OH
Whitney Byrd Mazzenga	Scioto Energy	COLUMBUS, OH
Joe Clark	Prospira America	Upper Sandusky, OH
Conor Collins	Simon Roofing & Sheet Metal Corporation	Columbus, OH
Amy Cornell	Tyson Foods, Inc.	Springdale, AR
Garrett Cravener	American Honda Motor Company	Marysville, OH
Benjamin Cross	Voinovich School of Leadership & Public Service	Athens, OH
Mickey Croxton	Plaskolite	Columbus, OH
Nicholas D'Angelo	Eaton	Cleveland, OH
Kevin DeWine	Crown Equipment Corporation C/o CBD Advisors	Beavercreek Township, OH
Katie Dimmer	Charter Steel	Cleveland, OH
Steve Dimon	AMG Vanadium LLC C/o 21 Consulting, LLC	Columbus, OH
Noah Dormady	The Ohio State University	Columbus, OH
John Duer	Illuminate USA	Columbus, OH
Jessi Eberly	MEP at CSCC	Columbus, OH
Wyatt Elbin	Go Sustainable Energy, LLC	Worthington, OH
Greg Faith	Summers Rubber Company	Mansfield, OH
Colin Fitzsimmons	Vistra	Irving, TX
Ryan Foster	Premier Power Solutions LLC	Massillon, OH
Scott Frens	Fort Recovery Industries Inc.	Fort Recovery, OH
Danielle Fulton	Millat Industries	Kettering, OH
Allison Glasgow	The Ohio Manufacturers' Association	Columbus, OH
Geoff Greenfield	Kokosing Solar	Athens, OH
Millie Guardiola	Calpine Energy Solutions	Downers Grove, IL
Luke M. Harms	Whirlpool Corporation	Washington, DC
Clark Harvey	Arrowhead Talent Solutions	North Canton, Ohio
Richard Hawk	Hi-Tek Manufacturing, Inc.	Mason, OH
John Holeman	TOSOH SMD, Inc.	Grove City, OH
Lawrence D. Holmes	Fort Recovery Industries Inc..	Greenville, OH
Barb Jacobs	Lightsource Bp	San Francisco, CA
Matthew F. Johnston	Worthington Enterprises	Columbus, OH
Ryan Jones	Brilex Industries, Inc.	Youngstown, OH
Mindy Kairis	Owens Corning	Toledo, OH
Chris Keller	AMG Vanadium LLC	Cambridge, OH
Marc Kogge	American Trim Sidney	Sidney, OH
Matt Koppitch	Bricker Graydon LLP	Columbus, OH
Panayiotis Koutsogeorgas	NextEra Energy	Juno Beach, FL
Ryan Kremer	Goodyear Tire & Rubber Company	Findlay, OH
James Lee	The Ohio Manufacturers' Association	Columbus, OH
Jennifer Lehman	Campbell Soup Company	Camden, NJ
Timothy Ling	Plaskolite, LLC	Columbus, OH
Gregory Long	Cleveland-Cliffs, Inc.	West Chester, OH

OMA Energy Committee - May 2024

Name	Company	Location
Richard Loth	McWane Ductile-Ohio, A Division Of McWane, Inc.	Coshocton, OH
Kenneth D. Magyar	DT Midstream	Canonsburg, PA
Chip Martin	Calpine Energy Solutions	Downers Grove, IL
Nathan Mays	The Ohio Manufacturers' Association	Columbus, OH
Devin McDonald	Sugar Creek Packing Company	Blue Ash, OH
David Moore	TS Tech Americas, Inc.	Reynoldsburg, OH
Lisha Morlan	City of Middletown	Middletown, OH
Jane M. Neal	AMG Vanadium LLC	Cambridge, OH
Tom R. Nelson	Yoder Lumber Company, Inc.	Millersburg, OH
Donald G. Nettis	American Controls, LLC	Wickliffe, OH
Melville Nickerson	NRG Energy, Inc.	Chicago, IL
Michael Oconnor	Smithers-Oasis Company	Kent, OH
Annie Peter	Shell	Houston, TX
John Pintozzi	Nutrien	Deerfield, IL
Kenneth Brice Poland	The Ohio Manufacturers' Association	Columbus, OH
Andy Pollick	Calpine Energy Solutions	Downers Grove, IL
Ryan Preas	MW Metals Group	Dayton, OH
Richard Roberts	Superior Forge & Steel Corporation	Lima, OH
Brent Rosebrook	PRO-TEC Coating Company	Leipsic, OH
Jim Samuel	NRG Energy Inc. C/o Capitol Integrity Group	Columbus, OH
Nitish Saraf	Shell Energy	Houston, TX
Kaitlin Savage	Google	New York, NY
Donald Scarsella	Owens Corning	Granville, OH
Gary Lee Schade	DSV Solutions LLC	Little Hocking, OH
Ryan Schuessler	RunnerStone, LLC	Worthington, OH
Brynnly Schwartz	Shell	Monaca, PA
Jennine Seebach	United Surface Finishing	Canton, OH
Maxim Serezhin	Standard Power Group Ohio	New York, NY
Lindsey Short	The Ohio Manufacturers' Association	Columbus, OH
Tim Shrewsburg	B A S F Coatings Technical Support Center - Whitehouse	Whitehouse, OH
Christopher N. Slagle	Bricker Graydon LLP	Columbus, OH
Steven W. Sohnly	YUSA Corporation	Washington C. H., OH
David Sopko	NRG Energy, Inc.	Dublin, OH
Duane Steelman	Cleveland-Cliffs, Inc.	Cleveland, OH
Jon Stroup	Cenovus Energy	Dublin, OH
Andrew R. Thomas	Levin College of Public Affairs and Education, Cleveland State University	Cleveland, OH
Bernie Tylor	WGL Energy	Vienna, VA
Justin Walder	Nutrien	Deerfield, IL
Steve Walker	The J.M. Smucker Company	Orrville, OH
Milena Walwer	Go Sustainable Energy, LLC	Worthington, OH
Adam Weiser	Advanced Fiber Technology	Bucyrus, OH
Matthew W. White	Edison Welding Institute	Columbus, OH
Peter Worley	Go Sustainable Energy, LLC	Worthington, OH
Thomas Young	Columbia Gas of Ohio	Toledo, OH

Total Participants 99

Jenifer French

Jenifer French was appointed to the Public Utilities Commission of Ohio and named chair by Governor Mike DeWine in 2021. In 2024, she was reappointed by Governor DeWine to serve a five-year term.

Chair French is a member of the Mid-Atlantic Conference of Regulatory Utilities Commissioners (MACRUC) and the National Association of Regulatory Utility Commissioners (NARUC). In 2024, she was appointed to the NARUC Board of Directors. She also serves on the NARUC Committee on Electricity and the Washington Action Program, the committee that primarily discusses NARUC's work in Congress and with other federal stakeholders.

Prior to joining the PUCO, French served as a Franklin County Court of Common Pleas judge from 2015 through 2021, presiding over civil, criminal felony, and administrative matters. While on the court, she was a member of the Court’s Criminal Law and Rules committees and served as a Judicial Board Member for the Franklin County Community Based Correctional Facility. French was named “Highly Recommended” in 2020 by the Columbus Bar Association.

French served as a member of Westerville City Council from 2011-2015. During this time, she served on the Westerville Planning Commission, and as vice mayor from 2013-2015. While serving on city council, French worked collaboratively with citizens and stakeholders on important policy issues involving municipal utilities, zoning, planning and economic growth.

French earned her bachelor’s degree in criminal justice from The Ohio State University, and her law degree from Thomas Jefferson School of Law.

Nitish Saraf

Director of Strategic Accounts, Shell Energy

Nitish Saraf is currently Director of Strategic Accounts for Shell Energy and drives the growth of Shell Energy business of Shell. His expertise lies in guiding strategic customers and partners through energy decarbonization products and solutions. As an Americas Decarbonization & Sustainability Partnership Lead, Nitish helps clients achieve lower emissions on path to Net Zero by leveraging Shell's diverse energy portfolio.

Before Shell, Nitish served as a Global Strategic Account Manager at Honeywell Process Solutions, where he navigated clients through Honeywell's comprehensive suite of solutions, including automation, digitization, and net-zero energy technologies. His background includes roles in business development, sales, and account management across various industries. Nitish started his career as an engineer helping ERCOT implement their nodal market in 2007 and went on to work for Bechtel in engineering large LNG projects. He also brings a depth of knowledge in Power Systems from his engineering background.

Nitish holds an MS in Electrical Engineering from UT Austin. He is a licensed Professional Engineer in Texas. Outside of work, Nitish enjoys traveling, cooking, and following Formula 1 racing. He and his wife, Shruti, have two children: Gia (5) and Yug (1).

Robert Borkowski

Originator, NextEra Energy Resources

Robert is an originator for NEER's distributed generation (DG) projects across the Mid-Atlantic U.S. In this role, he works with clients through the design and development process to contract execution to help ensure they achieve their sustainability and cost-saving goals. Prior to joining NEER in 2022, Robert held sales roles at 174 Power Global, a designer and builder of solar power plant solutions. Previously, he was an account manager at Ampion, Inc, a provider of software solutions for renewable energy management. Other positions have included operation specialist at Enel X, a global leader in demand response, and procurement operations associate at EnerNOC, a provider of cloud-based energy intelligence software for utilities.

He graduated with a BA in sociology from Hartwick College in New York.

To: OMA Energy Committee
From: Lindsey Short
Re: Energy Public Policy Report
Date: May 8, 2024

Overview

One of the OMA's top priorities is the preservation of competitive markets while ensuring that manufacturers have access to affordable, reliable energy. Concern has been expressed by various parties regarding Ohio's future electricity generation needs, largely stemming from a report published by grid operator PJM Interconnect. The OMA has studied the report and found that capacity shortage concerns are overstated, which could lead to anticompetitive market solutions being enacted at the expense of customers. More details are below in the energy reliability section.

The 135th General Assembly continues to move at a slow pace in passing pieces of legislation. House and Senate energy committees are considering various proposals on electricity ratemaking reform, energy efficiency programs, community solar, regulation of carbon capture and storage technologies, and more. While there are many pieces of energy policy pending, just one piece of standalone energy legislation has been enacted into law during this General Assembly. Only a few more session dates remain until the legislature goes on their summer recess prior to the November general election.

House Bill 6 Update

Former PUCO Chairman Sam Randazzo died by apparent suicide in April. He was facing both state and federal charges for the role that he allegedly played in the House Bill 6 scheme. He had pleaded not guilty to all of the charges, most notably the allegation that he accepted a $4.3 million bribe from FirstEnergy in exchange for regulatory favors. State charges remain pending against former FirstEnergy CEO Chuck Jones and former FirstEnergy Senior Vice President Michael Dowling. FirstEnergy has admitted to using dark money groups to fund a $60 million bribery scheme that allowed former Ohio House Speaker Larry Householder to win the speakership and pass a bailout bill for two of its affiliated nuclear plants.

In March, former Speaker Householder was indicted on 10 additional felony charges relating to the ongoing HB 6 scandal, including one that would bar him from holding any public office. These additional charges include alleged misuse of campaign funds, ethics violations, and theft in office.

Meanwhile, the legislature has not passed any campaign finance or ethics reform bills in the three years since the FBI began making arrests in what has been the largest bribery scheme in Ohio's history. There are currently bills pending that would ban utilities from spending ratepayer money on lobbying, fully repeal HB 6, and require "dark money" groups to disclose where their money came from. However, it is unlikely that any of these proposals will see movement towards passage.

Energy Reliability

Grid reliability is critical to the success of Ohio's manufacturing industry, which depends on reliable and affordable energy. Recently, many questions have been raised regarding the reliability of Ohio's power grid and have been further emphasized by PJM Interconnect, the RTO

which services Ohio. PJM has a governmental obligation to manage the flow of electrons across the grid. In a memo published last year, PJM indicated that there may be a lack of peak power by 2027. However, in the same memo PJM also models a successful scenario that meets future power needs. The OMA has determined that PJM's report overstated capacity shortfalls and competitive markets should attract new generation where it is needed.

The OMA has significant concerns that the focus on the worst-case scenario illustrated by PJM will convince policymakers to abandon competitive electric markets to address the perceived shortfall and that PJM is not utilizing the tools currently available to help alleviate reliability risks. As the capacity shortfall narrative continues, other industry groups have identified an opportunity to push re-regulation of power generation.

The OMA has suggested that state executives and the Ohio legislature should hold PJM and others accountable for scaring customers and compel them to use their tools available to maintain reliability. Most importantly, PJM's capacity auctions need to be held on time and without delay. Additionally, the PUCO should investigate grid owners' deployment of supplemental transmission projects and require utilities to provide data on how system reliability was improved with physical capacity increases and electric carrying capacity increases. The state legislature or PUCO should also require utilities to maintain hosting capacity maps detailing grid readiness to aid economic developers, EV chargers, builders, regulators, and all Ohioans. This transparency is common practice in other states. See additional OMA recommendations in Retooling document: Restoring Integrity, Transparency, and Competitiveness to Ohio's Energy Policy.

Re-Regulation Threat

Ohio has operated under a deregulated power generation market since the passage of Senate Bill 3 in 1999. Deregulation has provided significant benefits to customers in Ohio by increasing competition among energy providers, leading to lower prices and offering customers the choice of their own energy provider. Deregulation has also led to innovation in the energy sector.

As the generation shortage scare continues, discussions of re-regulation have surfaced as a threat to energy customers in the state. Re-regulation would be a massive step backward for Ohio's energy landscape that would allow utility companies to re-enter the power generation market, significantly impacting customers.

Runaway Transmission Spending

There have been reports of potential new factories or data centers being turned away from central Ohio, which has been attributed to insufficient transmission infrastructure. Meanwhile, Ohio's utilities continue to collect hundreds of millions of dollars from ratepayers to upgrade the grid, often in the name of reliability. The OMA has asked for transparency and accountability on how these dollars are being spent. Regulators need to closely examine transmission spending to ensure that these dollars are being used effectively where new lines are needed, particularly for supplemental transmission projects. Last year, the OMA supported the complaint filed with federal regulators by the Ohio Consumers' Counsel alleging that local transmission projects lack regulatory oversight. Ohioans have paid nearly $6.5 billion in supplemental transmission projects since 2017 without any oversight of the prudence or cost-effectiveness of the projects.

Legislation Watch List

Details on energy proposals of note below:

- **Electricity Ratemaking**
  Electricity ratemaking reform has been a consistent topic of discussion over the past few General Assemblies. One of the proposals, Senate Bill 102, fails to eliminate electric security plans (ESPs). Rather, SB 102 would replace ESPs with a rate case of another name that would allow utilities to park entirely new categories of costs inside of distribution charges, imposing new costs on manufacturers without offsetting benefits. The OMA is opposing this legislation with significant concerns regarding how consumers' electricity bills will be affected.

  Another bill has been introduced in the House that also fails to eliminate ESPs, HB 260. HB 260 would create new distribution riders, which are referred to as "trackers" in this legislation and would weaken customer protections. This bill has the support of Ohio's electric distribution utilities and is opposed by the OMA. The OMA provided opposition testimony on this proposal today to House Public Utilities Committee.

- **Electric Security Plan Repeal**
  Senator Mark Romanchuk has sponsored an OMA-supported bill, Senate Bill 143, to effectively repeal ESPs. ESPs have served as a mechanism that allows utilities to request the PUCO to approve customer charges that exceed market prices. This has turned into a windfall for regulated industries by allowing utilities to increase profits through numerous above-market charges added to customers' bills.

  SB 143 would push utilities toward Market Rate Offers. which are more favorable to consumers and manufacturers. SB 143 is a win for manufacturers that will help lower costs on energy bills and increase consumer protections.

  The OMA, along with other business groups representing energy customers across a wide variety of sectors, testified in support of the bill during a committee hearing earlier this year.

  OMA Energy Committee Chairman Brad Belden, president of The Belden Brick Company, and Tim Ling, corporate environment director for Plaskolite, testified on behalf of the OMA in support of this legislation.

- **HB 201**
  Several bills and resolutions have been introduced to prohibit local governments from restricting the use or sale of gasoline or diesel-powered motor vehicles. House Bill 201, passed by the legislature in December, would prohibit state agencies from adopting motor vehicle energy standards established by California.

  Prior to its passage by the legislature, the bill was quickly amended with unrelated language to benefit natural gas utilities at the expense of customers. The language added to HB 201 erodes important customer protections and enables natural gas utilities to be fully compensated for potential "economic development" or "infrastructure" projects, regardless of whether the facilities are ever used, or the projects ever come to fruition.

  The OMA supports cost-effective economic development for Ohio which can attract businesses, projects, and investments to our state. However, above-market charges on customers' natural gas bills for undefined, speculative projects are harmful to existing customers who have already invested in the state of Ohio.

- **“Energy Efficiency”**
  Even though Ohio’s electric utilities supported House Bill 6 that eliminated utility-administered energy efficiency programs, some utilities are backing a past legislative concept to reinstate those programs. The OMA supports meaningful energy efficiency, but not utility giveaways. During the last General Assembly, we saw a proposal that would effectively give utilities control of competitively owned renewable energy and partially restore the HB 6 decoupling giveaway with “lost distribution recovery.” This bill was reintroduced as House Bill 79 and has been passed out of House Public Utilities Committee, although it has not yet been voted out of the chamber.

  There have been several recent efforts by House leadership to bring HB 79 to the floor for a vote out of the chamber, however each attempt has come up short of securing the votes necessary for passage.

- **Community Solar**
  The OMA supports state policies that enable customers to obtain a diverse array of generation options under competitive markets. Last session, a bill intending to support solar investment included a concerning “virtual net metering” provision, which OMA engineers estimated would create up to $340 million per year in cost-shifting to non-participating ratepayers, including small and mid-sized manufacturers if the full 3,000 MW of community solar was built.

  This session, similar language was introduced via House Bill 197 to create a community solar program. The most recent substitute bill adopted in committee would result in approximately $110 million per year in cost-shifting and requires the electric distribution utility to purchase community solar output, which is anticompetitive. Another substitute bill is anticipated to be introduced during the House Public Utilities Committee hearing today.

- **Utility Related Services After Metered Point of Delivery**
  Senate Bill 123 was introduced to exempt submeterers and billing agents in apartment complexes from being considered a public utility. It also prohibits the PUCO from adopting rules that allow utilities to prevent submetering except for safety and reliability reasons.

- **“Green” Nuclear Energy**
  Bipartisan legislation has been introduced via House Bill 308 to categorize nuclear power as a green energy source. This bill’s introduction comes after Ohio and other states have recently designated natural gas as “green” or “clean” energy. HB 308 recently passed out of House Energy and Natural Resources Committee and has not yet been scheduled for a floor vote.

- **Carbon Capture and Storage**
  A pair of companion bills, House Bill 358 and Senate Bill 200, have been recently introduced declaring the General Assembly’s intent to regulate carbon capture and storage technologies. These bills currently contain placeholder language and are expected to be amended with more substantive language soon.

RUNNERSTONE
INFORMATION IS POWER

MEMORANDUM
October 25, 2023

To: The Ohio Manufacturers' Association (OMA)
From: John A Seryak, PE (Runnerstone, LLC)

PJM's Reliability Report Misses the Mark

Key Points

- PJM did not clearly model market responses to supposed generation shortages. PJM's capacity auction price should send a pricing signal that spurs new investments in generation.
- PJM underplays a successful scenario they modeled that meets future power needs: more renewable energy and 9 Gigawatts of new natural gas generation.
- PJM's low-entry scenario is stacked with worse-case assumptions, leading to scares of a power shortage in 2027 and beyond.
- PJM's report overlooks nuances of challenges from the expansion of renewable energy, namely, that supplemental rapid-response power resources are needed.

Summary

Pennsylvania Jersey Maryland Interconnection (PJM) is a regional transmission operator (RTO) of the bulk electric system. PJM is responsible for coordinating electric power generation in a multistate region which includes Ohio and is regulated by the Federal Energy Regulatory Commission (FERC) and federal laws. PJM is charged with ensuring enough power is always available for their entire geographic area, including for future years. PJM has markets and planning processes in place to ensure it procures enough power generation for the grid's peaks, plus an ample reserve margin. PJM's markets have successfully led to far more generation supply than demand, which in turn has driven down electricity prices and resulted in the retirement of the least economic, unneeded power plants.

On February 24, 2023, PJM issued its report "Energy Transition in PJM: Resource Retirements, Replacements & Risks", the third report in a series.[1] A main finding of the report was that there may be a lack of peak power available by the year 2027 in a "low entry" scenario, due to PJM's forecasted load growth exceeding their estimate of available power supply. Less discussed is that PJM modeled another scenario that showed no shortage in peak power.

In the report, PJM states that the key takeaway of their analysis is the need for their markets to attract new power generation. But PJM's focus on the worst-case scenario may tempt some policymakers to abandon

[1] "Energy Transition in PJM: Resource Retirements, Replacements & Risks", PJM Interconnection, Feb. 24th, 2023, energy-transition-in-pjm-resource-retirements-replacements-and-risks.ashx

competitive electric markets to address a power crisis, even though PJM is also demonstrating that power supply may be fine. State by state action to counter PJM's worst-case scenario could thus create more problems than it solves, as out-of-market subsidies or other non-market solutions may be enacted, an issue PJM has struggled with in the past.[2] Additionally, policymakers may conclude that "baseload" coal and nuclear plants require assistance, whereas in contrast PJM is demonstrating that more renewable energy and natural gas meets the grid's power needs.

PJM's report is thus creating its own systemic reliability risk, as it could encourage a set of policies, rules, and market designs that are dissonant with the successful scenario it modeled. Meanwhile, the reliability challenges emerging from renewable energy expansion are addressed by PJM's prior report in its series, though this report has not received as much public attention.[3]

Finally, PJM's President Manu Asthana says, "The capacity auction continues to be our best tool to ensure reliability at competitive prices in PJM." Thus, any potential shortfall in generation can be addressed by running a capacity auction. PJM has aimed to run the capacity auctions three years ahead of time to ensure reliability. So, real capacity shortages in 2027 would typically be known and addressed by this coming May 2024. Unfortunately, PJM delayed their capacity auction.

PJM Did Not Clearly Model or Account for Market Responses

PJM understates its own role and set of tools to address real and perceived reliability needs. Most obviously, it is unclear if PJM is assuming electricity prices will stay low in a time of resource scarcity, or if it is assuming capacity and electricity prices will rise. PJM says it uses prices from the 2023/24 base residual auction for its forward-looking forecasts. But the capacity price in 2023/24 was very low - $34 /MW-day.[4] Elsewhere, PJM notes that if certain capacity prices are reached in the auction that it "signals that demand is willing to pay for the construction of new supply"[5]. For example, this has happened historically. PJM states that 23 GW of new natural gas generation began service between 2015 and 2018, a period of time that had an average PJM capacity price of $114/MW-day.[6]

It follows to reason that if there is a supply shortage, as PJM modeled in its low-entry scenario, then capacity prices would increase. This price increase would attract new generators into the market, now having sufficient revenue to pay for construction, as well as attract existing load-side customers to participate in PJM's capacity market as a demand response resource.

In other words, PJM's capacity auction should be the means with which to address any perceived or real future supply shortage. Yet, PJM's report is silent on whether their capacity auction would work to procure enough supply in 2027 and beyond, and if not, why not. Table 1 below shows a recent history of PJM

[2] "FERC's December 2019 Order on State Subsidies", https://www.ohiomfg.com/wp-content/uploads/FERC-Order-on-State-Subsidies-Impact-to-Manufacturers-January-2020.pdf; https://www.utilitydive.com/news/pjm-proposes-to-end-ferc-mopr-policy-that-raised-prices-for-state-subsidize/599248/

[3] "Energy Transition in PJM: Emerging Characteristics of a Decarbonizing Grid", https://www.pjm.com/-/media/library/reports-notices/special-reports/2022/20220517-energy-transition-in-pjm-emerging-characteristics-of-a-decarbonizing-grid-white-paper-final.ashx

[4] "2023/2024 RPM Base Residual Auction Results", PJM, https://sdc.pjm.com/-/media/markets-ops/rpm/rpm-auction-info/2023-2024/2023-2024-base-residual-auction-report.ashx

[5] "Energy Transition in PJM: Resource Retirements, Replacements & Risks", page 9.

[6] Calculated capacity price for the 2015-2018 calendar years from PJM base residual auction results.

capacity price and the procured reserve margin. It shows that every year PJM has procured far more power generation than its reliability target of about 15% reserve margin.[7] In other words, there has been a glut of power in PJM for years. PJM aims to conduct their auction three years in advance, to allow enough time to build new generation for future years. However, PJM has been habitually behind in running auctions, exacerbating reliability planning. PJM's surest way to evaluate whether there is a forthcoming power shortage is to run the capacity auction several years ahead of time, which it could do for years it is concerned with.

Table 1: PJM Capacity Price and Reserve Margin

Final Zonal Net			
Capacity Year	Capacity Price		Reserve Margin (%)
2012/2013	$	16.46	20.5%
2013/2014	$	27.73	19.7%
2014/2015	$	125.99	18.8%
2015/2016	$	136.00	19.3%
2016/2017	$	59.37	20.3%
2017/2018	$	120.00	19.7%
2018/2019	$	164.77	19.8%
2019/2020	$	100.00	22.4%
2020/2021	$	76.53	23.3%
2021/2022	$	140.00	21.5%
2022/2023	$	50.00	19.9%
2023/2024	$	34.13	20.3%
2024/2025	$	28.92	20.4%
2025/2026	Auction Not Yet Run		
2026/2027	Auction Not Yet Run		
Total Average	**$**	**83.07**	**20.5%**

To believe PJM's low entry scenario, one would need to believe that PJM's markets don't work, that they don't respond to fundamentals between supply and demand. In reality, if PJM experienced a power shortfall, then capacity prices would increase attracting new generation.

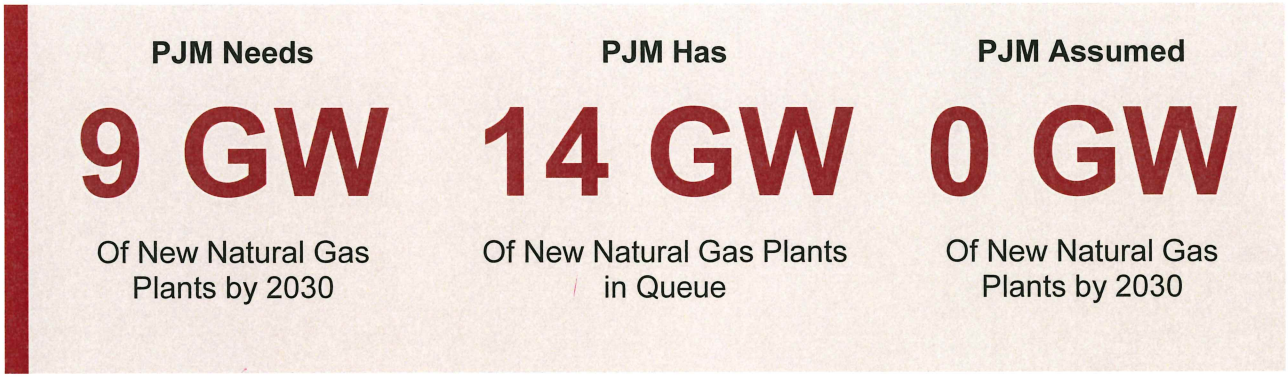
PJM's Success Scenario: More Renewable Energy and Natural Gas Power

PJM's report presents a scenario that successfully meets 2030's power needs: a reasonable amount of additional renewable energy and nine megawatts of additional natural gas power. PJM calls this a "high new entry" scenario, even though its assumptions are reasonable. Interestingly, the report never plainly states that power needs can be met in 2030, though this is indeed the finding in the report for the high new entry scenario. Instead, PJM opaquely states that under this scenario, a "timing mismatch is avoided" and that "resource adequacy would be maintained". Both these statements mean that under this scenario, there will be no power shortages in 2030.

[7] "2022 PJM Reserve Requirement Study: PJM Resource Adequacy Planning", 2022-pjm-reserve-requirement-study.ashx, pg 8 - PJM recommends reserve margin of 14.9% to 14.7% for 2023 through 2027.

How reasonable is this scenario where power needs are met?

First, in PJM's low-entry crisis scenario, PJM assumes no new natural gas power plants will be built after its 2023/24 delivery year, a delivery year we are presently in. In other words, in PJM's crisis scenario, they are assuming no new natural gas plants will come online from today through 2030. To maintain power, PJM estimates that 9 GW of new natural gas is needed by 2030. Much more than this is in PJM's interconnection queue - 13.8 GW. And 12 GW of this already has an interconnection service agreement. Moreover, PJM's own Clean Attribute Procurement Senior Task Force found gas power expansion to be economic and competitive. So more than 9 GW of natural gas power is economic, competitive, and has an interconnection service agreement from PJM. Assuming none of this generation will become available, as PJM does in its low-entry scenario, is an overly conservative assumption.



Secondly, in PJM's low-entry scenario, they assume very little renewable energy will be built after 2026, only that which is in its interconnection queue.[8] However, it is well known that PJM has halted review of renewable energy interconnections for several years.[9] As a result, renewable energy companies have fewer reasons to plan that far out in PJM since they may be waiting for their existing projects to get through PJM's bottlenecked interconnection process. It's likely not realistic of PJM to assume that the rate of renewable energy deployment will slow significantly after 2026. PJM used the S&P forecast of new renewable energy after 2026 in its high-entry scenario where the modeled that power needs can be met.

Given this information, instead of framing PJM's "high new entry" scenario as an extreme, unlikely scenario, PJM could have acknowledged its reasonableness and likelihood of meeting 2030's power needs.

PJM's Low-Entry Scenario is Stacked with Questionable Assumptions

PJM's low-entry scenario is a worst-case scenario. On scrutiny, some of PJM's assumptions seem reasonable, while others seem implausible. Table 2 presents some of the problematic assumptions from the PJM report.

[8] "Energy Transition in PJM: Resource Retirements, Replacements & Risks", page 12.
[9] Renewables backlog plan for PJM region met with mixed reviews - E&E News by POLITICO (eenews.net), https://www.eenews.net/articles/renewables-backlog-plan-for-pjm-region-met-with-mixed-reviews/

Table 2: PJM Reliability Report's Questionable Assumptions

Issue	Low Entry Scenario	High Entry Scenario	Note
New gas generation	0 GW new gas generation	9 GW of new gas generation	13.8 GW in PJM interconnection queue, 12 GW with interconnection service agreement.
New utility scale renewable energy	Very little renewable energy after 2026	S&P forecast	Renewable energy to be built after 2026 would not be in PJM's interconnection queue; S&P forecast is a more reliable estimate.
Capacity price	$34 /MW-day, a 10-year low, for all future years	Same as Low Entry Scenario	PJM is claiming a capacity price due to a power glut would persist in times of scarcity, and new generation would not be attracted to the market. But power scarcity would result in higher capacity prices, attracting new generation.
Demand response resources	No effect	No effect	PJM overlooks demand response resources as a solution to both its supply and demand issues. These resources have a low cost of entry to participate in PJM markets.
Federal spending from IRA and IIJA laws	No effect	No effect	IRA and IIJA spending of $ billions on renewable energy, batteries, and efficiency is likely to create additional generation.
On-line energy-only power plants	Some power plants provide energy, but no capacity	Same as Low Entry Scenario	PJM's assumption that power plants that remain operational for energy markets will not provide capacity, even in a time of critical scarcity, is questionable.
State standards reliability off-ramps	PJM assumes states have no reliability off-ramps, but didn't check	Same as Low Entry Scenario	States may have reliability "off ramps" for requirements for certain plants to close.
EPA Good Neighbor Rule	Plants fail to invest in NOx control, 4,400 MW retires	Same as Low Entry Scenario	PJM did not evaluate whether power scarcity, and thus higher electricity prices, would make NOx control investments economical.

PJM's Report Overlooks Renewable Energy's Need for Supplemental Rapid-Response Power

Policymakers and manufacturers should know that real challenges exist with the rapidly transforming electricity sector. These challenges could grow into reliability issues that have serious consequences. Our critique of PJM's report does not mean all is well, nor is it meant to dismiss reliability concerns. Real challenges to reliability in the electric sector, unaddressed in PJM's report, include:

- Transmission system reliability - Notably, the June 2022 power outage in central Ohio showed that even with sufficient generation available, cascading system outages can still occur. It highlighted multiple planning and operational failures of AEP Ohio, AEP Transmission, and PJM. Yet, there has been no independent investigation or fact-finding from PJM, the PUCO, or the Ohio General Assembly. Policymakers should consider requiring the PUCO to open an independent investigation into the June 2022 outages.

- Winter peak reliability - 2022's Winter Storm Elliot was a near miss for PJM's grid.[10] Electric system failures during times of extreme cold are incredibly dangerous and costly. Extreme weather has impacted all types of generation. Clearly, PJM needs market reforms focused on cold- and extreme-weather performance. Yet, given the chance to reform its capacity market to include pricing for winter peaks, PJM declined.[11] The winter peak problem could worsen - electrification of space heating equipment is well underway and likely to accelerate, which will increase winter peaks.

Key Information

- June 2022 central Ohio power outage should be independently investigated.
- Winter grid peaks need attention.
- Extreme weather needs prepared for.
- Renewable energy requires rapid response supplemental power, not baseload.

- Renewable energy needs rapid-response supplemental power - PJM's reliability report focuses on capacity market needs. However, the capacity market functions to address system peaks, such as hot summer afternoons. But, as renewable energy expands, PJM will begin experiencing the "duck curve" or "canyon curve" effect, which is the need for rapid-response power resources that can ramp down and up in the shoulder hours of renewable energy generation. This likely means that there will be more power resources that are paid through the ancillary service and energy markets, markets designed to address power needs on short time intervals. While PJM's report focuses on the capacity market, ancillary services and energy markets may be where reliability issues are to be addressed in the future. PJM's prior report in its Energy Transition series addresses these issues well.[12]

[10] "Winter Storm Elliot, Event Analysis and Recommendation Report", 20230717-winter-storm-elliott-event-analysis-and-recommendation-report.ashx (pjm.com)
[11] "Overview of PJM Proposals", 20230814-item-03a---cifp---pjm-proposals.ashx; 20231013-pjm-files-changes-to-capacity-market-to-promote-reliability.ashx
[12] "Energy Transition in PJM: Emerging Characteristics of a Decarbonizing Grid", https://www.pjm.com/-/media/library/reports-notices/special-reports/2022/20220517-energy-transition-in-pjm-emerging-characteristics-of-a-decarbonizing-grid-white-paper-final.ashx

The Ohio Manufacturers' Association

Retooling OHIO

OUR TAKE ON ISSUES AFFECTING OHIO'S COMPETITIVENESS

MAY 2024

Restoring Integrity, Transparency, and Competitiveness to Ohio's Energy Policy

Problem or Red Herring?

Amidst a still unfolding criminal investigation of utility corruption of public policy instruments in Ohio, concern is growing that Ohio's future electricity generation needs will outstrip supply and that re-regulation – giving more power to the utilities - is the only solution. To believe this narrative, one would have to question the competency of grid operator, PJM Interconnect, and utility owners of the grid.

A leading customer voice in the energy policy space, The Ohio Manufacturers' Association (OMA) has examined the available evidence and finds that near-term shortages are overstated. Competitive markets should continue to attract new electricity generation when it's needed. In fact, OMA analysts find the PJM reliability report misses the mark as described below.

Real problems stem from when Ohio regulates and intrudes into electric markets, sending unclear signals to would-be investors in Ohio. A better path is to restore integrity and transparency into utility regulation, and maintain and expand competitive markets.

Ohio's Manufacturers Depend on Reliable and Affordable Energy

Modern manufacturing is always innovating both products and processes. New technologies like AI semiconductors and electric vehicles have higher power needs. But, at the same time, manufacturers are offering products that reduce electric needs such as more energy efficient light bulbs and appliances.

Economic development is critical to Ohio's economic prosperity. Ohio has attracted many important high-tech manufacturing projects and services companies. Many other new projects are in the pipeline.

Some of those new projects are reportedly in jeopardy of advancing due to a lack of transmission grid capacity. But this issue was preceded by a utility spending spree on supplemental transmission projects to purportedly upgrade the grid with questionable benefits, resulting in taxing Ohioans with double digit transmission charge hikes year over year. Skyrocketing, uncontrolled transmission costs are a repellant to new energy intensive businesses. And even with these high transmission charges, the utilities are now saying it was not enough or that those charges were for upgrades, not expansion and interconnections of new customers. This is not the path to prosperity. Customers need regulatory certainty that the transmission investments are necessary, useful, and lead to innovation and prosperity in Ohio.

Moreover, tales of new factories or data centers being turned away from central Ohio for a lack of transmission capacity are worrisome. While the culprit in the tales is insufficient transmission (grid) infrastructure, the utilities continue to collect several hundred million dollars from ratepayers to expand the grid. And, remember, the utilities have an obligation to serve new customers. Meanwhile, electric demand is slightly down in other parts of Ohio, with estimates of only slight future increases. Does Ohio have plentiful room on its electrical grid in some areas but not others? Utilities know, but this information is not publicly available.

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Regulators and economic developers must work together to ensure state policy and plans for infrastructure reflect the needs of Ohio as a whole. Available transmission capacity needs to be shared more readily. Regulators need to scrutinize transmission spending so that Ohio's ratepayer dollars are used effectively for new lines where needed, for reliability improvements where needed, and with transparent justification to customers. Without smart regulation, Ohio risks blowing the bank on needless infrastructure that is pursued to pad corporate profits at the expense of Ohio customers, without offsetting benefits.

Ohio has historically been a low energy cost state. That has been a competitive advantage for the Buckeye State. However, today Ohio has largely lost that advantage. Why? Because unwise regulatory decisions and legislation enabling above-market charges, gave our advantage away to utilities in the form of increased wires charges…all this while generation costs were actually on the decline. Some utility observers refer to this trend as *regulatory capture* of monopoly utilities over government, initiated to benefit utilities.

Ohio is at a crossroads. Will Ohio continue on the road of crony capitalism or rebalance energy policy and processes to protect business and residential customers?

How to Foster Economic Growth While Maintaining Reliability?

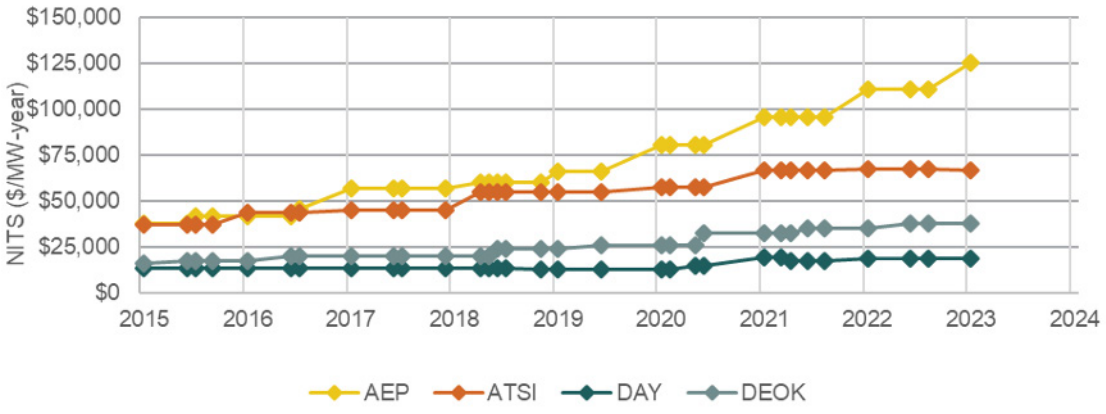
When the power is out, manufacturing stops. Manufacturers need reliable and affordable power. Reliability concerns have been building over the past year, but are the concerns defensible? The OMA believes that some of the concerns expressed by grid operator PJM Interconnect have been overstated (see OMA-commissioned research).

While Ohio manufacturers agree that future shortfall risks should be taken seriously, we believe that PJM's Resource Retirements, Replacement, and Risks, or 4Rs report, overstates the current and near-term situation and only caters to the desires of its utilities members to justify expensive new investments that they will pass on to ratepayers, thus exposing manufacturers and other customers to significant new costs with unclear improvements. The grid operator needs to offer and model market-based solutions to future power needs, while communicating solutions to policymakers in conjunction with recognizing challenges.

Utilities' Track Record is Reason for Concern for Ohio Manufacturers

TRANSMISSION COSTS SKYROCKETING

In Ohio and throughout other states, transmission costs are on the rise, and at a healthy clip. While all customers benefit from useful upgrades to the grid that make it more resilient, there is good reason to question the efficacy of transmission costs. In 2022, Ohioans experienced transmission inadequacy events that have not been investigated for improved performance raising the question of what Ohioans got for the increased charges?



Most of the transmission costs are emanating from new supplemental transmission projects. Supplemental transmission projects presently are exempt from regulatory scrutiny and yield a high return, which makes them appealing to the utilities.

Astoundingly, while Ohioans are paying about $1 billion per year for transmission improvements, often in the name of reliability, the utilities are not required to document the need for the improvement, or that an improvement happened. No regulator is monitoring this utility spending.

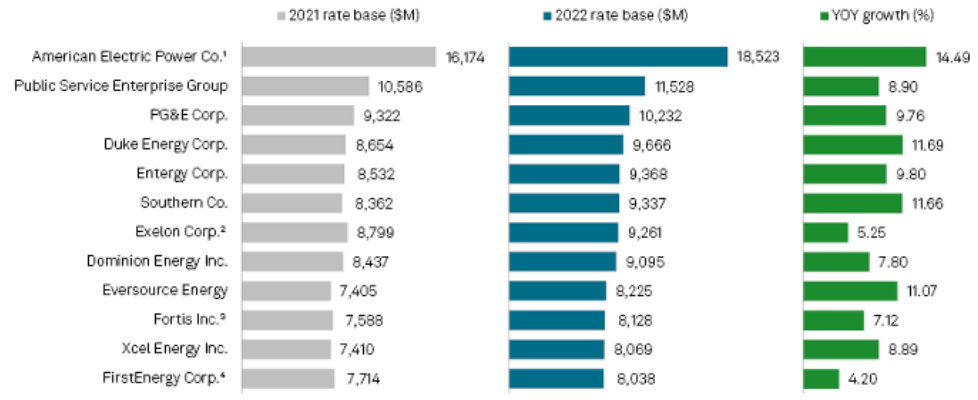
Ohio needs more oversight over transmission projects. In late 2023, OMA supported the Ohio Consumers' Counsel complaint filed with federal regulators. The complaint alleges that local transmission projects lack regulatory oversight and should be reviewed by the Federal Energy Regulatory Commission. The OMA also requested that the Ohio Power Siting Board take basic oversight steps within its current powers to require utilities to document physical improvements to the transmission system when upgrades are made. Transmission utilities should document physical capacity increases and upgrades, electric hosting capacity increases, the need for both, and verify that protective relays are reconfigured. OMA's suggestions were rejected and Ohio's regulators took a hard pass on basic oversight responsibility.

Utility Dive reports that the Ohio customer complaint is tied to electric utilities' nearly $6.5 billion in supplemental transmission projects since 2017. The projects have been completed without any oversight of their need, prudence, or cost-effectiveness, the complaint says — adding that PJM assumes Ohio reviews the projects, but it doesn't.

UTILITIES USE TRANSMISSION TO DRIVE PROFITS

Today, utility companies are intentionally utilizing transmission investment as the leading strategy to drive returns for shareholders. The profit margin on transmission investment is significant. For example, S&P Global reported that AEP referred to its transmission business as the company's "crown jewel." The article goes on to report that, "During an investor presentation, AEP outlined a $40 billion capital plan for 2023 through 2027 with nearly $26 billion funneled to transmission and distribution investments." In fact, it appears AEP leads peers in transmission profit. See below table.

Top parent companies ranked by transmission rate base, 2022



Data compiled Sept. 15, 2023.
[1] Does not include AEP Texas Inc.
[2] Does not include PECO Energy Co.
[3] Does not include Central Hudson Gas & Electric Corp. and Tucson Electric Co.
[4] Does not include Pennsylvania Power Co., Potomac Edison Co., West Penn Power Co. and Monongahela Power Co.
Sources: Regulatory Research Associates, a group within S&P Global Commodity Insights; Federal Energy Regulatory Commission.

Generation Capacity vs Grid Capacity

The term *generation capacity* is not the same as *transmission capacity* or *grid capacity*. Power generation, once a regulated business activity in Ohio was intentionally deregulated via Senate Bill 3 in 1999. Since that time, generation is procured and dispatched throughout the grid by a regional transmission organization. That organization, PJM Interconnection, holds competitive auctions to attract needed generation capacity. Competitive bids determine the electricity price. Inefficient or poorly run generation that cannot compete with other power generators eventually retires and closes. The closure of costly power plants is not regrettable, it is a sign of markets working to deliver just the power we need at the least cost.

For over a decade, the PJM grid has enjoyed an average 20% extra reserve capacity, buoyed by new, lower-cost generation replacing old, expensive generation. Customers pay for that extra reserve capacity. Today's market price for power on the PJM grid is near historic lows.

Final Zonal Net			
Capacity Year	Capacity Price		Reserve Margin (%)
2012/2013	$	16.46	20.5%
2013/2014	$	27.73	19.7%
2014/2015	$	125.99	18.8%
2015/2016	$	136.00	19.3%
2016/2017	$	59.37	20.3%
2017/2018	$	120.00	19.7%
2018/2019	$	164.77	19.8%
2019/2020	$	100.00	22.4%
2020/2021	$	76.53	23.3%
2021/2022	$	140.00	21.5%
2022/2023	$	50.00	19.9%
2023/2024	$	34.13	20.3%
2024/2025	$	28.92	20.4%
2025/2026		Auction Not Yet Run	
2026/2027		Auction Not Yet Run	
Total Average	$	83.07	20.5%

The regional transmission organization has many different tools to ensure adequate power will be on grid when customers flip the switch. Recognizing load growth is occurring in part due to more energy intensive data centers, state policymakers must hold PJM and transmission utilities accountable to respond to demand growth.

Recent public statements by certain lawmakers suggest that new economic development projects are being denied due to a shortage of generation capacity when in reality, it is not the generation that is inadequate, but transmission infrastructure that may be needed in parts of the state.

Utility's Master Plan Still Operating

Utility executives authored public policy plans in early 2019, the first year of Larry Householder's speakership. Some lawmakers continue to advance these same plans of the utilities, even though utility corruption of the statehouse and PUCO has been thoroughly exposed.

Newly obtained documents released in the HB 6 corruption investigation reveal that Ohio utilities produced a wish list of reforms, many of which were included in HB 6, and many that have been the subject of legislative or PUCO proposals since HB 6.

The March 19, 2019 email that originated from an AEP executive to FirstEnergy Senior Vice President Mike Dowling, who was indicted under state corruption charges in February, suggests that utilities assembled a master plan to redistribute funds from customers to regulated monopoly utilities.

The AEP email that appears to have been used for a meeting with Larry Householder and FirstEnergy in April 2019 makes numerous suggestions for customer-funded subsidies for new utility-owned generation. The plan also schemes ways and charts out methods to further pillage customers to fund infrastructure beyond traditional ratemaking processes. Finally, the plan allows utilities to own and control behind-the-meter technologies and rate base EV charging stations, serve as energy managers and consultants to businesses, authorize utilities to operate broadband networks, and pursue formula rates, known as alternative rate mechanisms, a concept contained in Senate Bill 102 now pending in the Ohio Senate.

Proposed Utility Solutions to Address Reliability Concerns

Two solutions to the spurious reliability scare have been proffered by utilities who stand to benefit if lawmakers act. The first is to allow utility companies to re-enter the power generation market, an activity that has been deregulated and competitive following the landmark deregulation bill (Senate Bill 3 enacted in 1999). Such a law change would put monopolies over markets to meet our future power needs.

A second "solution" advanced by utilities would facilitate even more transmission buildout. While transmission investments can be imperative to economic development, billions of dollars have been collected from captive Ohio customers over the past decade without clear customer benefits or a demonstration of need in many cases. As explained above, over the past decade, customers in Ohio have been exposed to a proliferation of unnecessary grid investments. Customers' **pain** has resulted in transmission companies' **gain**, sending a boon to their bottom line.

When reliability concerns are twisted to justify utility-favorable policies, attention to real problems drops, which is itself creating reliability risks. Three reliability risks are not receiving the attention that they deserve.

- First, the cascading power failure of June 2022 in central Ohio showed that both AEP and PJM failed core duties of analyzing their own system for overloads and did not conduct a root-cause analysis. Worse, a transparent investigation was not conducted. Without this analysis, high-tech manufacturing operations are at risk for another power failure in central Ohio.
- Second, Winter Storm Elliot exposed serious vulnerabilities with all types of power generation during extreme weather events. More actions can be taken to reinforce generators.
- Finally, the rapid proliferation of renewable energy, battery storage systems, and electrification is changing how the electric grid operates, which inherently brings a learning curve and potential for costly mistakes and failures. The answer is not to deny this new technology a chance to compete, nor to deny how the electric system must change to accommodate increasing amounts of renewables. Electric reliability must be valued at all times, at all locations.

OMA Seeks Market Solutions and Utility Transparency & Accountability

Where markets exist, competitive forces produce accountability. Where there are not competitive markets, such as monopoly transmission and distribution utilities, transparency is key to supporting accountability through regulation. Monopolies should not have blank checks, be able to withhold data and information, or have undue influence over regulators. The function of regulators of electric monopolies is to protect customers. A key principle to good regulation is transparency, a principle which some regulators have at times failed to follow.

For example, in recent years, Ohio has experienced several high-profile electricity failures and near catastrophes which have not received an open, transparent investigation wherein customers can ask critical questions. Another example – Ohio's current Electric Security Plan (ESP) process for utilities allows utilities to collect additional money from ratepayers without fully opening their books so that their expenses can be reviewed – a type of blank check.

Additionally, Ohioans annually pay $1 billion to AEP Transmission for transmission upgrades with no evidence of system improvement and with worsening transmission system performance. This is a recipe for disaster as significant problems can fester and grow from the lack of transparency.

Grid operators and regulators have significant tools to ensure our grid is adequately energized. Given the ensuing confusion over who has jurisdiction over certain facilities, the OMA recommends several policy and regulatory improvements to safeguard current and future customers.

Transparent Customer Interconnection Process

A utility's delay in providing interconnection to new customers, or new generation, is a reason for regulatory oversight. For example, if a utility is saying infrastructure will require seven years, then the reasons for the delay need to be transparently documented and communicated. There may be understandable reasons, such as supply chain delays. But there also could be poor reasons, such as a utility backlog of unneeded transmission projects.

Economic developers in Ohio have been especially effective, but they will be hamstrung if the grid is inadequate to deliver power to new businesses. A clear first step is that since the bulk of Ohio is not experiencing significant electric load growth, the unconstrained transmission regions need to be identified and shared with the economic development community. Site selection could alleviate the need for certain infrastructure upgrades.

Inaction on grid investment oversight is the same as if state utility regulators and economic development agencies abdicated their roles to an electric utility who caters to its top shareholders, not to Ohio's economy or ratepayers. The consequence is delayed or scuttled economic development, higher utility costs, and worsening reliability. We must give economic developers and regulators better tools to aid in new load needs. See the list of tools below.

Local Generation Resources

The construction of new transmission lines is not the only technical solution to localized grid constraints, assuming they exist. Distributed generation and energy management techniques could be less costly solutions to alleviate grid constraints. This includes localized battery storage systems, solar, wind, and combined heat-and-power, price-responsive technology such as smart electric vehicle charging, peak load management programs and interruptible loads, and even energy efficiency upgrades. Behind-the-meter and distributed technologies are increasingly being adopted by manufacturers and other customers and should be part of the solution to reliability concerns and local transmission constraints.

Distributed power resources can thus make our electric system more reliable and less costly, if done correctly and with market principles. This should include statewide market-based transmission pricing tariffs, an approach being adopted by

AES Ohio, FirstEnergy, and Duke. It should also include a functional use of interruptible load customers, services that are paid for by ratepayers but which the utilities have not processed for localized use. And, the state needs to contemplate competitive aggregation of these resources to participate in PJM's markets, a newly created ability resulting from FERC's Order 2222.

OMA Proposes Additional Solutions

Ohio has been suffering systematic and management failures that jeopardize future competitiveness and economic development. The OMA offers the below suggested improvements:

- State executives and legislature should hold PJM and others accountable for reckless scare campaign and compel them to use tools to maintain reliability or insist on new management. Most importantly, PJM's capacity auctions need to be held on time and without delay.
- State executives and legislature should hold grid owners and RTOs accountable for central Ohio outages in 2022 that have not been adequately investigated. Electric system physical faults and operator response contributed to the failure that were not part of the storm or heat. A formal investigation of the June 2022 outages and December 2022 near outages should be conducted by the PUCO, such that customer groups can participate and ask critical questions.
- PUCO should investigate grid owners' deployment of supplemental transmission projects and require utilities to provide data on how system reliability was improved with physical capacity increases and electric carrying capacity increases, why these increases were needed, and how relay settings were updated appropriately.
- State legislature should repeal Electric Security Plans (ESPs) and reform PUCO processes to mitigate runaway customer above-market costs and to improve transparency. Senate Bill 143 would repeal Ohio's Electric Security Plans (ESPs), thereby creating more transparency and accountability by requiring utilities to fully open their books to ensure that electric distribution costs are actually spent on providing and improving electric service.
- State legislature or PUCO should require utilities to maintain hosting capacity maps detailing grid readiness to aid economic developers, EV chargers, builders, regulators, and all Ohioans. This transparency is common practice in other states.
- State legislature should repeal subsidies for two uneconomic coal power plants including one power plant in Indiana. Known as OVEC, the customer-funded subsidies were a quid pro quo in the scandal tainted House Bill 6.
- PUCO or legislature should compel accountability and consequences for the illegal $460 million FirstEnergy collected for its Distribution Modernization Rider (DMR). Now publicly available text messages show that a former PUCO Chair acknowledged that he knowingly approved an improper charge that could not be refunded to customers if found unlawful.
- PUCO and PJM should include customer-sited power resources as a tool for maintaining electric transmission system reliability, as recommended by the OMA in recent electric rate cases before the PUCO. This should include competitive implementation of distributed energy resource aggregation for FERC Order 2222 compliance, functional use of interruptible load, and statewide peak power billing tariffs for transmission costs.
- US EPA should delay proposed regulations that send mixed signals to natural gas power generation owners.

CONCLUSION

Ohio has suffered enough from monopoly utilities getting their way at the expense of ratepayers, manufacturers, our economy, and the law. More thoughtful analysis and solutions are needed to ensure that the balance of power swings back toward Ohioans and the businesses that make our state successful. The OMA looks forward to working with leaders to purge the rigged system and advance Ohio's energy competitiveness.

April 2 - Household meeting

From: Lisa M Barton lmbarton@aep.com
Subject: [EXTERNAL] Legislative follow up.
Date: Mar 18, 2019 at 5:39:24 PM
To: Dowling, Michael J. dowlingm@firstenergycorp.com
Cc: Lisa M Barton lmbarton@aep.com, Raja Sundararajan rsundararajan@aep.com

Hi Mike

Good seeing you as well and looking forward to working with you more in my new role. Please see edits below. I also cross referenced my notes on who was supportive of what initiatives. All told I believe most, if not all of us are on the same page and would agree to what is noted below, the difference perhaps being the weight each would give to the overall importance.

I think it's important to start that the possibility of ZEC legislation provides a unique opportunity to move legislation forward and would enable the utilities to come together to support a broader legislative platform.

I took the liberty of framing the issues into natural groupings for ease of future edits/ comments. Please let me know if you have any questions. Either Raja or I would be happy to start fleshing out some of what is listed below.

Lisa

Generation Stabilization-Goal is to ensure there is generation available within the state of Ohio. Through the creation of a Ohio based allocation, create fund certain investments to stabilize existing generation and encourage limited utility owned generation.

Components:

-Nuclear ZEC statewide [this is here simply because it is the ZEC legislation that creates the opportunity for us to come together to determine how we can support one piece of legislation]

-Ability to build renewable generation - specific legislation to address definition of "need" (AEP Duke AES) (As contemplated, this generation would receive the same clean energy attributes as nuclear if any legislation is passed and in exchange agree to repeal of renewable energy mandates)

-OVEC certainty (AEP & Duke; believe AES). This particular issue is tied to a proposed ZEC. To the extent ZEC charges are applied statewide; stability for OVEC and OVEC production receiving charges to offset future costs similar to ZEC's is essential to ensure support for legislation.

-Ability to build generation - (particularly natural gas) again with specific legislation to address definitions of "need" (AEP); [Chuck also mentioned getting back into IRP business which perhaps is the way to address this topic]

Economic Development

-Line extension - socializing cost of new construction

-Substation - socializing cost of new construction

Infrastructure - "build it and they will come" approach/shovel ready sites to promote and enhance ED within the state. [might also tie in well with utility owned generation as we hear customers would like to at least have a utility option, particularly for renewables]

Customer based products/services

-Products & Services - ability to sell customer-focused energy services (ALL)

-Ability to provide behind the meter solutions to a customer or set of customers (battery, solar etc) through the regulated utility as long as they have no direct financial impact to other customers.

Regulatory Reform

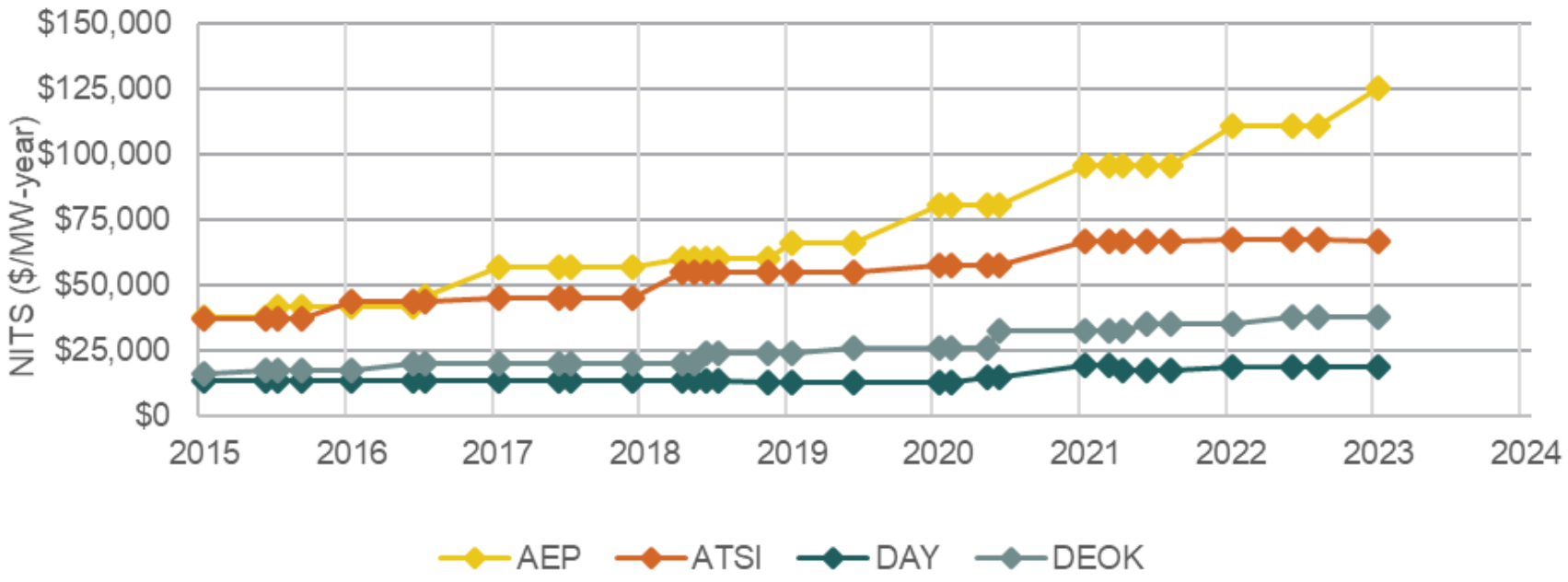
-Energy Storage - ability to use energy storage as distribution asset (FE; AEP would agree)

-Electric Vehicle Charging- ability for EDUs to participate in this space (ALL)

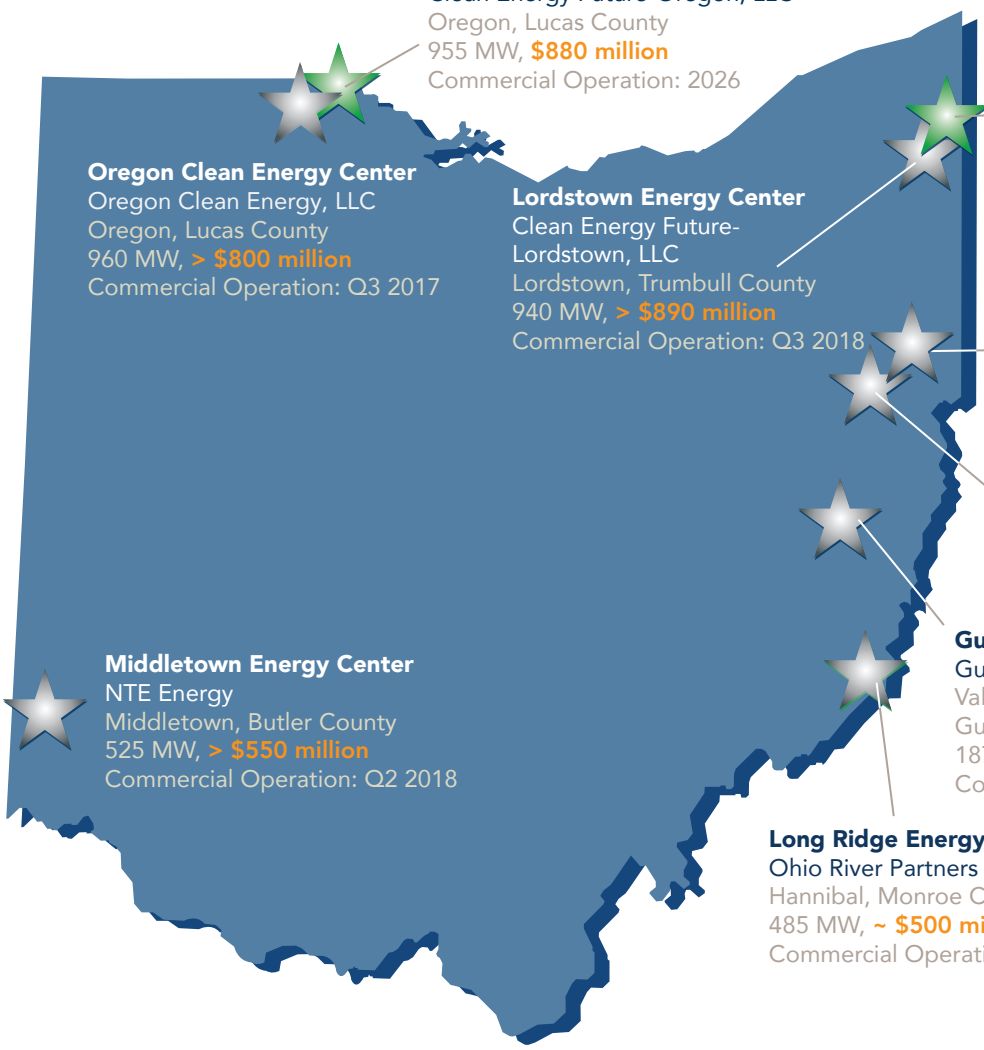
-Demand Response (this was raised by Duke (and later by AES)) (need some clarity on what this means);

-Alternative rate mechanisms (formula rates) (FE)

-BroadbandDeployment - similar to AEP's WV legislation? (No would expect Ohio to be more expansive). Broadband development to focus on expanding BB opportunities to rural underserved communities where there are synergies with our own needed investments, potentially expanding into middle mile and not retail. (AEP) [may require separate legislation?]


$150,000
$125,000
$100,000
$75,000
$50,000
$25,000
$0
NITS ($/MW-year)
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
AEP
ATSI
DAY
DEOK

MODERN COMBINED CYCLE NATURAL GAS ENERGY CENTERS IN OHIO



Oregon Energy Center
Clean Energy Future-Oregon, LLC
Oregon, Lucas County
955 MW, **$880 million**
Commercial Operation: 2026

Oregon Clean Energy Center
Oregon Clean Energy, LLC
Oregon, Lucas County
960 MW, **> $800 million**
Commercial Operation: Q3 2017

Lordstown Energy Center
Clean Energy Future-Lordstown, LLC
Lordstown, Trumbull County
940 MW, **> $890 million**
Commercial Operation: Q3 2018

Trumbull Energy Center
Clean Energy Future-Trumbull LLC
Lordstown, Trumbull County
940 MW, **$925 million**
Commercial Operation: 2025

South Field Energy
Advanced Power
Yellow Creek Township,
Columbiana County
1,105 MW, **> $1.3 billion**
Commercial Operation: Q3 2021

Carroll County Energy
Advanced Power
Washington Township,
Carroll County
742 MW, **~$899 million**
Commercial Operation: Q1 2018

Guernsey Power Station
Guernsey Power Station, LLC
Valley Township,
Guernsey County
1875 MW, **~ $1.6 billion**
Commercial Operation: Q2 2023

Middletown Energy Center
NTE Energy
Middletown, Butler County
525 MW, **> $550 million**
Commercial Operation: Q2 2018

Long Ridge Energy Generation Project
Ohio River Partners Shareholder LLC
Hannibal, Monroe County
485 MW, **~ $500 million**
Commercial Operation: Q3 2021

Commercially operational

Approved by OPSB and/or under construction

Natural Gas-Fired Power Plant Map and Statistics.

Bricker Graydon

Compiled by Bricker Graydon LLP

Ohio Can Again Allow Utility Ownership Of Generation, Or Utility Purchase Power Agreements For New Generation, For Enhanced Reliability Without Re-Regulation Or Limiting Governmental Aggregation. Ohio's electric power deregulation law (SB 3 in 1999) for investor-owned electric utilities (not customer-owned cooperative utilities or municipal utilities) required generation divestiture or corporate separation. Through a legislative change, to enhance reliability, Ohio can again authorize investor-owned utility ownership of generation, and/or utility purchase power agreements for new generation.

This can be done without re-regulation. All individual shopping rights for competitive retail generation can be maintained, and competitive SSO auctions for non-shoppers can also be maintained. In order to preserve shopping in Ohio's competitive retail market and prevent re-regulation, utility-controlled generation should only be sold in the wholesale market. Also, the existing governmental aggregation programs can and should continue to operate as they currently do.

In addition to enhanced reliability, new generation can reduce future transmission expenses. New generation in Ohio also supports the local tax base and creates construction and permanent jobs.

UTILITY DIVE

DIVE BRIEF

EPA finalizes power plant emission rules, but utilities balk at expected need for carbon capture

Beginning in 2032, baseload coal and new gas plants will be required to meet an emissions standard equal to installing a carbon capture and sequestration system and running it at 90% efficiency.

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Robert Walton
Senior Reporter

The new rules governing power plant emissions put the electricity sector on track to cut emissions by 75% in 2035, relative to their peak 30 years prior, according to the Natural Resources Defense Council. *Nick van Bree via Getty Images*

Dive Brief:

- The U.S. Environmental Protection Agency on Thursday finalized four rules to reduce pollution from fossil-fueled power plants, requiring certain baseload coal and gas plants to limit emissions — possibly through the use of carbon capture and sequestration technologies — beginning in 2032.
- Environmental and consumer advocates say the new power plant rules will reduce pollution while incentivizing clean energy investment. Utilities, however, warn the rules are “unlawful,” rely on unproven technology for compliance and will threaten grid reliability and affordability.

- Meeting EPA's emission standards is expected to require the use of CCS, but the technology is "not yet ready for full-scale, economy-wide deployment," Edison Electric Institute President and CEO Dan Brouillette said in a statement.

Dive Insight:

Senior administration officials say the power plant rules finalized today are in some ways more strict than what was initially proposed last year — though EPA determined in February that the new regulations would not cover emissions from existing gas-fired plants.

"What we're finalizing is equally as stringent, if not more," EPA Administrator Michael Regan said Wednesday in a call with reporters.

For new natural gas plants, the final rule expands the definition of baseload plants to those operating above a 40% capacity factor, as opposed to the 50% initially proposed. While it allows an additional two years for power plants to comply with emissions restrictions, the final rule also contains changes to which plants are required to comply.

New gas plants and coal plants planning to operate past 2039 — as opposed to 2040 under the original proposal — will be required to meet a carbon dioxide emission standard equal to installing a carbon capture and sequestration system and running it at 90% efficiency, officials said. Compliance starts in 2032.

EPA also said it finalized a rule strengthening and updating the Mercury and Air Toxics Standards for coal-fired plants, which tightens the emissions standard for toxic metals by 67% and includes a 70% percent reduction in the emissions standard for mercury from existing lignite-fired sources.

Two other rules will impact coal operations. EPA said it finalized a rule to reduce wastewater pollution by more than 660 million pounds per year, and another governing coal ash management that will expand oversight to some storage sites that were previously outside federal regulation.

“By developing these standards in a clear, transparent, inclusive manner, EPA is cutting pollution while ensuring that power companies can make smart investments and continue to deliver reliable electricity,” Regan said.

The new rules put the power sector on track to cut emissions by 75% in 2035, relative to their peak 30 years prior, according to the Natural Resources Defense Council.

Utilities warned of the rules’ potential impacts, in part because they say CCS is not ready for widespread deployment.

“The path outlined by the EPA today is unlawful, unrealistic and unachievable,” Jim Matheson, CEO of the National Rural Electric Cooperative Association, said in a statement. “It undermines electric reliability and poses grave consequences for an already stressed electric grid.”

NRECA said the rules violate the law, exceed EPA’s authority and mandate “the widespread adoption of technologies that are promising, but not ready for prime time.” Timelines are also unrealistic, the group said. “The rule gives neither existing coal units nor new gas units enough time to reach compliance.”

“This barrage of new EPA rules ignores our nation’s ongoing electric reliability challenges and is the wrong approach at a critical time for our nation’s energy future,” Matheson said.

Duke Energy, which serves about 8.4 million customers, said in a statement that the new power plant rules present “significant

challenges to customer reliability and affordability – as well as limits the potential of our ability to be a global leader in chips, artificial intelligence and advanced manufacturing."

The Edison Electric Institute, which represents investor-owned utilities, said it appreciated EPA's work to align compliance deadlines in order to help power companies minimize costs, but has doubts about the timeline for using CCS for compliance.

"CCS is not yet ready for full-scale, economy-wide deployment, nor is there sufficient time to permit, finance, and build the CCS infrastructure needed for compliance by 2032," EEI's Brouillette said. "While CCS and other 24/7 clean energy technologies could be important tools for reducing emissions in the future, EPA's record does not support a finding that CCS is demonstrated today."

But EPA officials said the agency believes the technology is viable, particularly when considering incentives contained in the Inflation Reduction Act.

"We have engaged extensively with the industry and representatives from multiple power companies that have indicated that CCS is a viable technology for the power sector today," Regan said.

The new rules for power plants "fit hand-in-glove with the clean energy incentives in the Inflation Reduction Act to make sure we cut our carbon footprint," NRDC President and CEO Manish Bapna said in a statement. "The age of unbridled climate pollution from power plants is over. These standards cut carbon emissions, at last, from the single largest industrial source."

RUNNERSTONE
INFORMATION IS POWER

MEMORANDUM

May 6, 2024

To: The Ohio Manufacturers' Association

From: John A Seryak, PE, Marah Halper

PJM Claims Its Generation Capacity Market Changes Ensure Reliability

Key Points

- FERC approved PJM's capacity auction modeling and generation technology accreditation changes, which PJM states will maintain reliability during extreme weather events and with increased renewable energy resources on the grid.
- PJM now accredits most generation technologies' capacity eligibility based on their historical hourly availability during high-risk hours, which now includes winter hours. Solar power has dropped 21 - 30% accreditation with the new modeling system. Coal is credited at 85% of its nameplate capacity.
- PJM modeled its changes would have increased costs to consumers from $2.2 billion to $2.4 billion for the 2024/25 delivery year.
- PJM's Independent Market Monitor has significantly critiqued the changes, including that resource accreditation is heavily tied to past-performance.

Summary

On January 30th, 2024 the Federal Energy Regulatory Commission (FERC) approved PJM's proposed changes to their annual Base Residual Auction, more commonly known as the BRA or capacity market auction. "The capacity auction continues to be our best tool to ensure reliability at competitive prices in PJM" said PJM President Manu Asthana in 2023, after procuring plentiful generation capacity at low prices.[1] PJM's changes to their generally successful capacity auction were prompted by near shortfalls in generation during Winter Storm Elliot in December 2022, failures of generation technologies of all types during extreme cold, and the growing variation of generation capacity technologies coming onto the electricity network.[2]

[1] "PJM Capacity Auction Procures Adequate Resources", PJM Inside Lines, February 27th, 2023, https://insidelines.pjm.com/pjm-capacity-auction-procures-adequate-resources/

[2] "When examined over the entire generation fleet, gas generators accounted for 70% of the outages on Dec. 24. Most outages were caused by equipment failure likely resulting from the extreme cold, though broader issues of gas availability also contributed to the outages.", Winter Sorm Elliot: Event Analysis and Recommendation Report, PJM,

The approved changes will begin for the 2025/26 electricity delivery year, and consist of changes to system resource adequacy modeling, generation technology accreditation, testing requirements and the stop-loss limit of financial penalties on underperforming generators. These changes are a result of recent extreme weather events that have put the reliability of the electricity network at risk. This memorandum will explain the approved changes and how the capacity market could function with their implementation. In summary:

- Electric system modeling will take a more granular, hourly approach so PJM can identify times that the network is at risk, and plan accordingly. This shift will allow PJM to better identify winter and swing season generation resource risks.
- Most technologies have reduced accreditation ratings and will not be able to commit as much capacity as before into the capacity market. Solar has the steepest reduction in capacity accreditation. Taken together, changes to technology capacity accreditation likely will result in proportionally more capacity revenue to thermal generation over solar energy.
- PJM estimates that costs to consumers for capacity will increase from $2.2 billion to $2.4 billion.
- Generators will be required to test and prove the capability of their generating unit more frequently than before, and the stop-loss limit for non-performance penalty charges have changed in accordance with capacity market price, a lower penalty than previously.

Background

PJM's capacity market has two objectives; one being to procure a sufficient amount of generation capacity for each year through a competitive auction and the other being to provide resource adequacy and reliability on a long-term basis at a reasonable cost. In the past, fossil fuels dominated the generation landscape of PJM's network region. Having fossil fuels provide the majority of generation on the capacity market made the market relatively simple to model and evaluate on an annual basis. In more recent years, renewable energy projects have begun to make up a bigger proportion of the generation mix. This trend is continuing and will likely result in significant replacement of thermal generation, especially fossil fuels, with renewable energy. For example, according to PJM, 97% of their current interconnection queue is standalone renewable or hybrid (renewable energy paired with on-site energy storage) resources[3]. This changing generation mix in combination with the rise of extreme weather events such as Winter Storm Elliot in 2022 have underscored the desire to change the way PJM runs their capacity market.

Accordingly, on October 13th, 2023 PJM submitted a proposal to the Federal Energy Regulatory Commission (FERC) to propose changes to their Reliability Pricing Model including modeling, accreditation, testing requirements and stop-loss limits for generation capacity in their future capacity market auctions. The proposal in FERC docket ER24-99 titled Capacity Market Reforms to

July 17, 2023, https://pjm.com/-/media/library/reports-notices/special-reports/2023/20230717-winter-storm-elliott-event-analysis-and-recommendation-report.ashx

[3] "Capacity Market Reforms to Accommodate the Energy Transition While Maintaining Resource Adequacy", ER24-99, page 11. https://www2.pjm.com/-/media/documents/ferc/filings/2023/20231221-er24-99-000.ashx

Accommodate the Energy Transition While Maintaining Resource Adequacy was approved by FERC on January 30th, 2024. The changes will first be applied in PJM's 2025/26 Base Residual Auction, more commonly known as the capacity auction. The 2025/26 Base Residual Auction is scheduled to occur on July 17th, 2024.

Changes in Risk and Accreditation Modeling

One of the biggest changes in PJM's approved proposal is the way they will model risk and accreditation of generation resources on the transmission network. PJM is required by FERC to ensure enough power generation resources are available to reliably meet future years' electric demand. PJM meets this requirement with competitive capacity auctions. To ensure they've procured sufficient power, PJM models each resource's performance that is entering the capacity auction throughout the year and determines when the most risk is present on the network, such as times that extreme weather typically occurs. They will essentially reward resources that show they can perform during these times of risk by giving them higher accreditation in the capacity auction. In the past, only renewable energy and hybrid resources were modeled and rated in this way. The new changes state that now all resources will be modeled in this way and are assigned an Effective Load Carrying Capacity (ELCC) Class which reflects the resources' ability to deliver power at all times of the year.

Hourly Risk Modeling

Currently, PJM measures risk of power supply shortfalls only during times of expected peak loads. Risk to the system is when PJM is concerned demand will outweigh available supply of power. For example, historically peak loads have occurred during the summer when many people are using air conditioning units. Peak loads are a spike in electricity demand, which the transmission network must be ready to accommodate, and for which there must be available power generation. If the transmission network cannot accommodate the load, intentional load-shedding - wherein the utility shuts off power to certain customers - or power outages may occur. PJM currently assumes that outside of the established peak load periods, the transmission network is not at risk. However, many of the transmission system and power generation failures or near-failures in recent history did not occur during peak load periods. With the approved changes, PJM acknowledges that risk does exist outside of established peak loads such as the unanticipated strains on the network caused by Winter Storm Elliot[4]. Their findings show that 35% of the chances of electric demand exceeding supply, which PJM calls loss of load expectation, happens during the winter, when previously it was thought that winter's loss of load expectation was negligible[5]. PJM will now model risk on an hourly basis for the entire year, taking past weather data into account. This new modeling method will allow PJM to observe when extreme weather typically occurs and how reliable generators are when these weather-related events occur. Also, with more renewable energy connecting to the network, the modeling method will take into

[4] Id, page 16.
[5] Affidavit of Dr. Patricio Rocha-Garrido on Behalf of PJM Interconnection, L.L.C., "Capacity Market Reforms to Accommodate the Energy Transition While Maintaining Resource Adequacy", ER24-99, page 704. https://www2.pjm.com/-/media/documents/ferc/filings/2023/20231221-er24-99-000.ashx

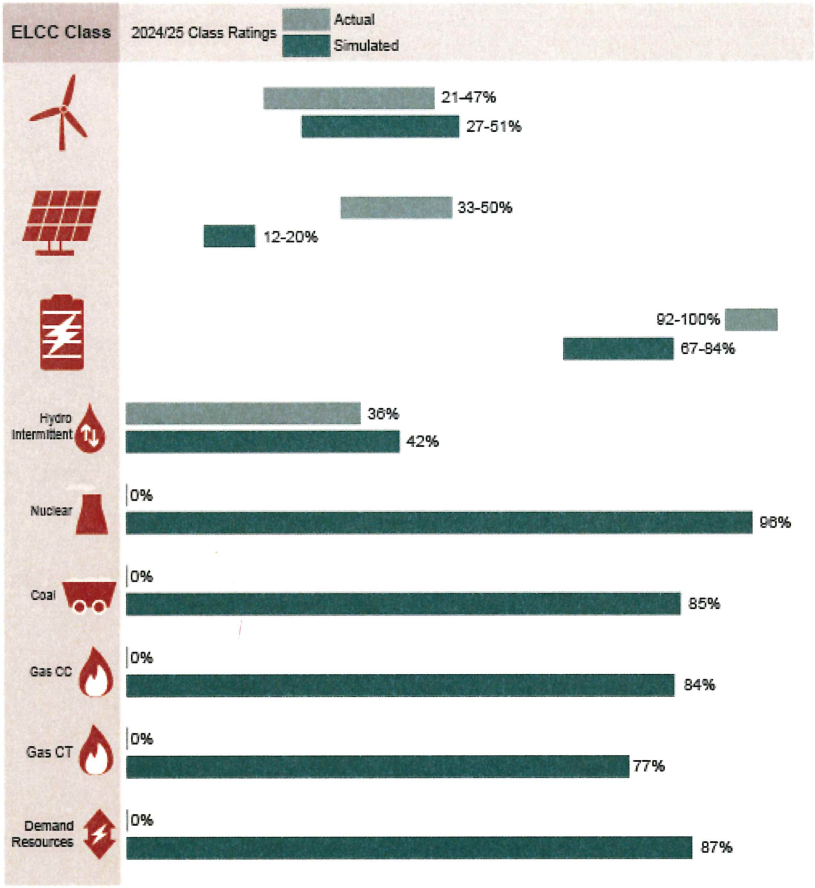
account their intermittency such as 'shoulder-hours', times of day when demand is steadily increasing or decreasing but solar is not generating (typically around sunrise and sunset).

Generation Technology ELCC Class Ratings - Then vs. Now

In previous capacity market auctions, renewable and hybrid resources have had ELCC Classes and ratings. This was used to determine how much of their nameplate capacity was eligible to be accredited and entered into the auction. For example, if a 100 MW nameplate capacity solar tracking farm entered into the capacity auction and their ELCC Class Rating was 50%, only 50 MW of capacity would be eligible for the auction. Previously, thermal generation such as natural gas, coal and nuclear did not have ELCC Classes and ratings, therefore approximately 100% of their nameplate capacities were eligible for the auction. Under the new changes, all resources will have ELCC Classes and ratings with few exceptions, such as energy efficiency resources and hydropower with non-pumped storage.

Figure 1 compares the past and future ELCC Classes and ratings. It shows the actual 2024/25 PJM capacity market auction classes and ratings and also the simulation results of the 2024/25 capacity market auction ELCC Class ratings under the new changes conducted by PJM. There are now new ELCC Classes for thermal generation resources, and all class ratings have changed. Some class ratings have seen a slight increase such as wind and intermittent hydro. Most classes see a decrease in rating, one of the most significant being solar power dropping 21-30% depending on the specific technology. Coal-fired power received a rating of 85%, while fixed-tilt solar received a rating of 12%.

Figure 1: Comparison of ELCC Class Ratings before and after approved changes[6]



PJM intends to change ELCC Class Ratings every year as new weather and resource performance data is gained and added to the model. Class ratings will be found by overlaying the specific resource's past generation performance since 2012[7] onto the hourly model and calculating how reliable the resource has been during previous times of risk such as weather events, shoulder hours, or correlated past forced outages. The resources that present more reliability during these events will be given a higher accreditation and therefore a better class rating and vice versa. The model will not have any mechanisms to predict or model climate change, only past weather patterns since 1993[8]. This new modeling method seeks to standardize the capacity market auction's modeling procedures and factor in previously unaccounted winter weather events and correlated forced outages of all resources.

[6] Id, page 706.
[7] "Capacity Market Reforms to Accommodate the Energy Transition While Maintaining Resource Adequacy", ER24-99, page 45. https://www2.pjm.com/-/media/documents/ferc/filings/2023/20231221-er24-99-000.ashx
[8] Id, page 63.

Cost

Along with a simulation for the performance of the new model, PJM also conducted a cost simulation of the new modeling method. It was estimated that costs to consumers will increase from $2.2 billion to $2.4 billion.[9]

Changes to Testing Requirements and Stop-Loss Limit

PJM is also implementing changes to current generator testing requirements as well as changing the way stop-loss limits are calculated to cap non-performance penalty charges.

Testing Requirements

Following the discovery that substantial risk occurs in the winter season as well as summer, PJM will now require generator capability tests to be conducted in both summer and winter. This rule excludes variable resources such as solar and wind since they have predictable seasonal variation. The purpose of these testing requirements is to verify that generators can generate their committed installed capacity. Due to this, PJM will allow the generators an unlimited number of tests or use unlimited operational data that is consistent with these rules in order to prove capacity capability[10]. Part of these changes includes the ability for these tests to be random at PJM's request, up to twice a season. Random tests will ensure generators are able to supply committed capacity and address problems before actual emergencies occur such as extreme weather like Winter Storm Elliot[11]. If a generator fails one of these tests, PJM may issue a re-test at the expense of the generator's owner[12]. If the generator continues to fail beyond the re-test, they will be subject to fines. If these failures are due to operating parameters, PJM may request re-tests until the generator proves its ability to operate within provided parameters[13]. In terms of Demand Resources, such as demand response, PJM has the ability to schedule a two-hour test at any point of the delivery year unless there was a recent event that required the Demand Resource to respond and perform successfully[14].

Stop-loss Limit

The stop-loss limit caps the penalty amount generators can be charged for issues related to non-performance throughout the year. The way the limit is determined will now be a function of the price generators are guaranteed through the capacity market auction. This will drop the stop-loss limit in years when the clearing price is less than the net CONE, which has been the case in recent

[9] Affidavit of Dr. Walter Graf on Behalf of PJM Interconnection, L.L.C., "Capacity Market Reforms to Accommodate the Energy Transition While Maintaining Resource Adequacy", ER24-99, page 643. https://www2.pjm.com/-/media/documents/ferc/filings/2023/20231221-er24-99-000.ashx
[10] "Capacity Market Reforms to Accommodate the Energy Transition While Maintaining Resource Adequacy", ER24-99, page 83. https://www2.pjm.com/-/media/documents/ferc/filings/2023/20231221-er24-99-000.ashx
[11] Id, page 86.
[12] Id, page 87.
[13] Id, page 88
[14] Id, page 90.

years. For example, as shown below, the penalty for non-performance in the 2024/25 would have dropped from ~$440 /MW-day to ~$58 /MW-day.[15].

$$Function\ of\ net\ CONE\ stop\ loss\ limit\ =$$
$$1.5\ x\ net\ CONE = 1.5\ x\ 293.19 \frac{\$}{MW\ day} = \frac{\$439.79}{MW\ day}$$

$$Function\ of\ BRA\ clearing\ price\ stop\ loss\ limit =$$
$$1.5\ x\ BRA\ clearing\ price = 1.5\ x\ 28.92 \frac{\$}{MW\ day} = \frac{\$57.84}{MW\ day}$$

PJM shares that the reasoning behind this change is to make non-performance charges more proportional to revenue and not to make generators economically infeasible from one failed reliability event[16]. PJM believes this change will make generators more willing to accept the obligations and risks of participating in the yearly capacity market auction.

Critiques of PJM's Capacity Market Changes

PJM's changes from an average ELCC Class approach to a marginal ELCC Class approach has been critiqued as over-simplifying a complex market and may not send the correct market signals prior to capacity auctions. A generation resource's capacity is now accredited based on a few hours throughout the year when PJM determines there may be a reliability event or a demand peak. However, by the nature of extreme weather events, most are unforeseen and cannot be predicted. Therefore, the fact that resource class accreditation is based on a few hours out of the entire year disregards the implications of unforeseen reliability events and how resources perform on a year-round basis. For example, in PJM's map of hourly risk the month of December shows very little risk to the system[17], although this is when Winter Storm Elliot occurred in 2022. Through this method, resources are no longer accredited based on the amount of energy a resource delivers throughout the year, which may provide inaccuracies in the amount of procured capacity in the capacity auction.

PJM's new capacity accreditation approach could penalize new and improved generation technologies. This is because class ratings will be based on resource performance since 2012, which is likely not representative of future performance. This could penalize resources whose efficiencies and performance have greatly improved in recent years. This could stunt funding and growth for these technologies from distorted market signals that PJM initiates through the capacity market. As the Independent Market Monitor states, "...the PJM approach fails to provide

[15] Affidavit of Dr. Walter Graf on Behalf of PJM Interconnection, L.L.C., "Capacity Market Reforms to Accommodate the Energy Transition While Maintaining Resource Adequacy", ER24-99, page 646. https://www2.pjm.com/-/media/documents/ferc/filings/2023/20231221-er24-99-000.ashx
[16] "Capacity Market Reforms to Accommodate the Energy Transition While Maintaining Resource Adequacy", ER24-99, page 93. https://www2.pjm.com/-/media/documents/ferc/filings/2023/20231221-er24-99-000.ashx
[17] Affidavit of Dr. Patricio Rocha-Garrido on Behalf of PJM Interconnection, L.L.C., "Capacity Market Reforms to Accommodate the Energy Transition While Maintaining Resource Adequacy", ER24-99, page 706. https://www2.pjm.com/-/media/documents/ferc/filings/2023/20231221-er24-99-000.ashx

either new resources or resources with new investments with the ability to improve their ELCC ratings."[18]

In terms of new testing requirements, PJM fails to establish that all resources must perform to their committed performance whenever required. According to PJM, capacity resources will be allowed an unlimited number of tests or provide unlimited operational data to prove performance capability[19]. During a reliability event, resources will not have an unlimited number of chances to provide the capacity that they have committed to the grid. Furthermore, in cases such as in Winter Storm Elliot equipment failures were substantial in the reasons why a reliability event occurred. PJM does not detail whether these tests will involve an in-person inspection of the necessary mechanical equipment. PJM also states that variable resources such as solar and wind technologies are exempt from these testing requirements[20]. All generation resources are subject to mechanical equipment failures and could have non-performance issues in a reliability event due to it. The language PJM provides about new testing requirements is vague and does not include all performance parameters resources need to meet to provide reliable capacity to the grid.

[18] "Monitoring Analytics, LLC submits Request for Rehearing of the January 30, 2024 Order under ER24-99", page 3.
[19] "Capacity Market Reforms to Accommodate the Energy Transition While Maintaining Resource Adequacy", ER24-99, page 83. https://www2.pjm.com/-/media/documents/ferc/filings/2023/20231221-er24-99-000.ashx
[20] Id.

House Public Utilities Committee
House Bill 260
Written Opponent Testimony
Kim Bojko
May 8, 2024

My name is Kim Bojko and I am a partner with Carpenter Lipps LLP. I have been practicing energy and utilities law for over 25 years and serve as the chief energy counsel for the Ohio Manufacturers' Association (OMA). Unfortunately, I could not be with you in person today, but I appreciate the opportunity to provide written opponent testimony on House Bill 260 (HB 260), as amended, on behalf of the OMA.

The OMA is a mission-driven organization comprised of Ohio's manufacturing leaders, many of which are Ohio's largest energy consumers. The OMA adopts public policy positions on legislation as a community of manufacturers. Our positions are based on guiding principles, data-driven research and analysis, and member input.

Anti-competitive, utility-driven policy reached a new low in Ohio with House Bill 6 (HB 6), which collapsed on the weakness of its own corruption. HB 6's political coalition has roots in the abusive Electric Security Plan (ESP) ratemaking process and increased profits to utilities.

Since its creation, the ESP process has turned into a windfall for regulated utilities. The utilities use the ESP mechanism to increase profits through numerous above-market charges added to customers' bills. Along with the notorious *Keco* precedent, which prevents customer refunds in many cases, ESPs stack the deck in favor of monopoly utilities at customers' expense.

Lawmakers now propose to stack the deck in the utilities' favor even more by limiting customers' rights and further increasing customers' costs. HB 260 proposes to add more above-market charges to customers' bills through new distribution riders while thwarting challenges to rate increases.

Although HB 260 is pending before the Ohio House under the guise of improving the rate case process and reinstating full rate cases every five years, the bill would do quite the contrary. Not only will HB 260 not allow for a full and complete rate case record and improved process, HB 260 completely upends the traditional ratemaking process for all regulated utilities, not just electric utilities, in favor of the utilities and at the expense of customers. HB 260 also does not return to the days of traditional rate cases where complete and full rate cases were the mechanism by which the PUCO and stakeholders reviewed the propriety of the rates being charged to customers by utilities and established the totality of a utility's rates that were authorized to be collected from customers going forward.

Rather, HB 260 retains ESPs and above-market charges, continues OVEC subsidies, and

increases distribution costs by authorizing four new distribution riders, which are in addition to the establishment of distribution rates by a new ratemaking process that limits customers' and other stakeholders' due process rights. Although one of the sponsors of the bill stated that the four new distribution riders "should minimize the high-stakes nature of the ESP for utilities," there is no requirement to do so in this bill, nor does the bill incentivize any such action. The electric utilities can continue to obtain significant above-market charges through the ESP proceedings when the utilities' books are not open and will be allowed to charge more through the four new riders on an expedited basis.

Importantly, although the sponsors of the bill only reference electric utilities and seem to imply that this bill only affects electric utilities, it does not. The changes to the traditional ratemaking statutes proposed in the bill will also apply to natural gas, water, and sewer utilities.

Instead of improving the rate case process and protecting customers, HB 260:

- Increases customers' distribution costs by authorizing four new distribution riders (called Investment Trackers) plus a return:
    - Distribution Investment Tracker (4% cap of an electric utility's base distribution revenue);
    - Storm Response Investment Tracker (No cap—unlimited);
    - Cybersecurity Investment Tracker (2% cap of an electric utility's base distribution revenue); and
    - Regulatory Investment Tracker (2% cap of an electric utility's base distribution revenue).
- Mandates that any amounts that remain in three of the four new trackers that are not collected under the cap or otherwise not collected be deferred for later recovery through another tracker or future base rates.
- Mandates that carrying costs be accrued for all deferrals until the entire regulatory asset and carrying costs are collected from customers.
- Significantly alters the traditional ratemaking process for all regulated utilities.
    - Authorizes fully forecasted test periods and allows utilities to collect money for facilities and investments that are not used and useful to customers.
    - Modifies property valuations for utility property.
    - Modifies date certain valuation for electric utilities.
    - Authorizes utilities to collect costs for software as a service.
    - Requires PUCO to include in payroll costs the cost for labor, benefits, taxes, and incentive compensation, and to consider whether such costs together are reasonable when compared to market rates (currently incentive compensation is excluded).

- Requires PUCO Staff to issue its Staff Report within 150 days of the filing of the application, regardless of whether the investigation is complete and regardless of whether the utility thwarted the investigation.
- Requires intervenors that file objections to also file testimony within 45 days of Staff Report.
- Requires Staff to file testimony within 75 days of Staff Report.
- Authorizes the utilities to file rebuttal testimony within 90 days of Staff Report.
- Mandates that the PUCO schedule a hearing not later than 120 days after Staff Report.
- Gives the PUCO more time to issue a decision (allows 365 days; currently 275 days).
- Gives the PUCO more time to issue a ruling on rehearing (allows 150 days; currently 30 days).

- Eliminates due process rights for parties.
  - Limits the number of intervenors in rate cases (changes who has standing in cases).
  - Limits discovery and parties' participation in rate cases.
  - Limits notice to customers of rate case filings.
- Weakens customer protections and eliminates important checks and balances.
  - Eliminates used and useful standard, allowing utilities to collect costs from customers for property that is projected to be used and useful to customers (i.e., allows cost recovery from customers for infrastructure development to prospective sites without known customers and regardless of whether the facilities are ever used).
  - Prohibits the PUCO from deeming prior investments to be imprudent if they were previously deemed prudent.
  - Eliminates the requirement for the attorney examiner to make a full and complete record of the proceeding.
  - Eliminates requirement of the PUCO to consider the case in an open and public proceeding.
  - Allows utilities to put rates into effect without a refund and without a bond if PUCO does not timely act.
- Does not fully address *Keco* and resolve the refund issue (codifies current practice).
- Modifies PUCO process and methodology for setting annual reliability performance standards, which will weaken standards.

    - Mandates that the PUCO exclude *any* outages from the reliability indices (this modification will weaken the standards and performance of the utility).

- Creates a new requirement to file a rate case every five years (it is not a reinstatement of an old requirement as some have stated).
- Allows the PUCO to approve programs for only industrial customers to implement economic development, job retention, or interruptible rate programs that enhance grid reliability. The term "industrial" is not defined in the bill, but this could result in discriminatory treatment among businesses.
- Allows the PUCO to approve mandatory energy efficiency and weatherization programs for residential customers.

Although the new Investment Trackers are touted to be better than those allowed in ESPs for capital investments, the bill does not eliminate or limit ESPs or the similar capital investment riders already approved through ESPs. The bill also does not eliminate or prevent future capital investment riders through ESPs, and does not limit the amounts that can be collected from customers.

Moreover, the bill contains cost-cap loopholes. The new provision for a forecasted test year is one for which regulated utilities have lobbied hard – and commercial and industrial groups have called bad policy that would result in increased utility rates to customers.

Bottom line, HB 260 would be a bad deal for Ohio manufacturers and an unwise policy for the state. It is another windfall for Ohio utilities. Thank you for the opportunity to submit this written testimony.

The Columbus Dispatch

Unanswered questions: How Ohio's top utility regulator got caught up in pay-to-play scandal

Jessie Balmert **Laura A. Bischoff**

Cincinnati Enquirer

Updated 10:20 p.m. April 20, 2024

Editor's note: This story includes a discussion of suicide. If you or someone you know needs help, the national suicide and crisis lifeline in the U.S. is available by calling or texting 988. There is also an online chat at 988lifeline.org.

In the early hours of Nov. 16, 2020, FBI agents wearing navy blue jackets and COVID-19 masks removed box after box from the Columbus condominium of Ohio's top utility regulator, Sam Randazzo.

It was the first time Randazzo, then chairman of the Public Utilities Commission of Ohio, was implicated in a pay-for-play scandal at the Ohio Statehouse. Randazzo resigned days later and began waiting for the other shoe to drop.

Randazzo pleaded not guilty to federal and state charges, but he will never see the inside of a courtroom to prove it. On April 9, Randazzo was found dead of a suspected suicide in a Columbus warehouse he owned.

The bribery scheme involved a desperate utility, Akron-based FirstEnergy, paying politicians and the politically connected for favors: legislation to bail out two nuclear plants, a way to recession-proof its profits and a delayed rate case that saved the company money.

The fallout has been wide-reaching. One of Ohio's top politicians, former House Speaker Larry Householder, was sentenced to 20 years in prison and former Ohio Republican Party chairman Matt Borges is serving five years in prison. FirstEnergy has fired top executives and paid a $230 million fine.

In December 2023, federal prosecutors charged Randazzo with bribery and fraud. The case centered on $4.3 million that FirstEnergy paid Randazzo shortly before Ohio Gov. Mike DeWine appointed him as the state's top utility regulator; Ohio Attorney General Dave Yost filed state charges in February.

Randazzo's death is the final chapter in the story of a man at the pinnacle of his profession brought down by accusations that he was swindling clients and selling his integrity to the highest bidder: FirstEnergy.

Randazzo's attorney Richard Blake said his client "was tarred and feathered in the media by the prosecutors in this case before having an opportunity to address the charges."

Too close to FirstEnergy?

Randazzo, 74, was the smartest man in every energy policy room. He could be a polarizing figure, beloved by those he advocated for and despised by those he fought against in the cutthroat world of utility regulation.

"You'll find no one, no one in Columbus who will say he was not a smart guy. He was a very smart guy," said Rep. Bill Seitz, R-Green Township, who said he relied on Randazzo's expertise, among others, when crafting legislation.

Randazzo had decades of experience, starting in the 1970s as a staff member at the PUCO and later as an attorney helping large industrial energy users negotiate deals with utilities such as FirstEnergy, Duke Energy and American Electric Power. Randazzo was consistently ranked among the nation's top utility lawyers.

Randazzo had a hand in much of Ohio's energy law, including eliminating energy efficiency mandates on large energy users; axing renewable energy standard requirements; and charging consumers for two coal plants owned by the Ohio Valley Electric Corporation.

So, it wasn't shocking when DeWine named Randazzo to serve as PUCO chairman in February 2019 – a role that acts like a referee between utilities and Ohioans paying electric bills. Randazzo told lawmakers he planned to retire to Naples, Florida. Instead, the DeWine administration recruited him to forgo retirement and serve at the PUCO.

At the time of his appointment, Randazzo's most vocal opponents were environmental activists wary of his anti-renewable energy stances.

But behind the scenes, fellow Republicans had warned DeWine that Randazzo was too close to FirstEnergy. DeWine didn't listen, a decision he now calls a mistake.

It would take years and several indictments to reveal how close Randazzo was to FirstEnergy.

A $4.3 million payment from 'Hurricane Chuck'

FirstEnergy paid Randazzo's companies $22 million between 2010 and 2019, including a $4.3 million payment weeks before DeWine picked Randazzo to lead the PUCO, according to FirstEnergy's deferred prosecution agreement. In July 2021, FirstEnergy admitted it bribed Randazzo and Householder.

FirstEnergy paid Randazzo the $4.3 million after a meeting at his German Village condo in on Dec. 18, 2018. Then-FirstEnergy CEO Chuck Jones and then-senior Vice President Michael Dowling stopped by after a dinner at The Athletic Club of Columbus with DeWine, Lt. Gov.-elect Jon Husted and lobbyist Josh Rubin.

"We're going to get this handled, paid in full, no discount," Jones texted Randazzo after leaving the condo. "Don't forget about us or Hurricane Chuck may show up on your doorstep! Of course, no guarantee he won't show up anyway."

Jones then sent an image of a snake emerging from a hurricane.

"Made me laugh – you guys are welcome anytime and anywhere I can open a door," Randazzo replied. "I think I said this last night but just in case – if asked by the administration to go for the Chair spot, I would say yes."

If Randazzo's case had gone to trial, his attorneys would have argued that the $4.3 million was a legitimate payment for the remainder of a consulting agreement – not a bribe. "It's just as plausible that it was a legitimate buyout as that it was a bribe," Seitz said. "We don't know. I guess you'll never know."

The snake meme wasn't the only text message that revealed a casual relationship between Randazzo and FirstEnergy executives. Randazzo once texted them an image of himself dressed as a superhero and surrounded by terms like "Randazzler" and "Poppa Dazzo." He also dressed as Rudolph in a group picture with FirstEnergy leaders wearing Santa suits.

Passing House Bill 6

Once Randazzo was installed as chairman of the PUCO, prosecutors say he worked diligently on House Bill 6, an energy overhaul that included a $1 billion bailout for two nuclear plants owned by a FirstEnergy subsidiary. The company was "bleeding cash" over the plants and needed a fix from lawmakers in Columbus or Washington D.C., one executive testified in a federal trial.

Behind the scenes, Randazzo advocated for a larger subsidy, opposed an audit of the bailout and crafted language to recession-proof some of FirstEnergy's profits, according to court documents. Ohio lawmakers passed House Bill 6 in July 2019, and DeWine signed it the day it hit his desk.

That same day, Jones sent Randazzo a picture of Mount Rushmore that substituted the faces of Randazzo, Dowling, Boich Companies' Matt Evans and FirstEnergy lobbyist Ty Pine for the American presidents. It included the phrase: "HB6 F--- ANYBODY WHO AIN'T US."

“Ha – I get the small space again," Randazzo texted Jones, who replied: "Not in my book – your the only one without a big head."

Seitz said there's nothing wrong with Randazzo working on House Bill 6 while chairman of the PUCO. It makes sense to consult the DeWine administration on pending legislation. "To the extent (that) Sam informed the decisions around House Bill 6, I don't consider that suspect in any way shape or form because that's what they should be doing."

A few months later, prosecutors say Randazzo delayed a rate case that would have hurt FirstEnergy financially. After the PUCO scrapped the filings, Jones texted Randazzo an image of FirstEnergy's stock increasing and wrote: "My Mom taught me to say Thank you.”

A slow trickle builds and Randazzo resigns

FirstEnergy celebrated its victories in 2019. But in July 2020, federal prosecutors arrested Householder, Borges and three others connected to House Bill 6. The feds described the scandal as the biggest pay-to-play scheme in the state's history. "This case is in a league of its own," one FBI special agent said.

In October 2020, FirstEnergy fired Jones, Dowling and a third executive following an internal review. More details trickled out the following month. The FBI searched Randazzo's home. A business filing revealed the executives paid a state utility regulator more than $4 million in early 2019. Randazzo resigned from the PUCO.

Randazzo's resignation letter detailed his accomplishments at the PUCO. He advocated for eliminating the "too-utility-friendly" electric security plans and accompanying riders that charge "captive customers" for businesses' expenses.

"He has done very, very good work as chair," DeWine said when Randazzo resigned to avoid being a distraction. "(Randazzo) felt that this was the best thing for him to do.”

'Well-lawyered theft'

It would take prosecutors three years to charge Randazzo with any crime. When they finally did, the indictment would accuse Randazzo of cheating Ohio consumers and his clients.

Prosecutors allege Randazzo brokered deals between his client, the Industrial Energy Users-Ohio, and utilities for discounts that the average Ohioan couldn't access.

IEU-Ohio, a trade group of large industrial energy users, would drop its opposition to the utilities' proposed rate hikes, and the utility would offer the companies a refund or discount. Side deals are legal if disclosed but remain controversial.

Prosecutors accused Randazzo of skimming millions from a side deal between FirstEnergy and IEU-Ohio by working for both sides of the arrangement.

In a different side deal with American Electric Power in 2016, Randazzo was accused of stealing $1.2 million from his IEU-Ohio clients by listing one of his shell companies as an IEU-Ohio member. State prosecutors called it "a well-lawyered theft."

Cases closed

While awaiting criminal charges, Randazzo waged a legal battle over access to his money and property. Yost, the state's attorney general, argued that Randazzo shouldn't be able to sell off or transfer houses as the former utility regulator did in early 2021. The Ohio Supreme Court agreed with Yost in early 2024.

Court records offer a glimpse into the weight that lengthy litigation and criminal charges had placed on a once well-respected attorney. However, suicide is a complicated decision that is only understood by the individual and sometimes those closest to them.

Randazzo appeared before a Summit County judge in February along with Jones and Dowling, two former FirstEnergy executives also accused of bribery. The judge ordered all three to wear ankle monitors, something Randazzo's attorney called “downright mean,” according to a Cleveland.com report.

In mid-March, Randazzo's attorney wanted to file medical records about why his client shouldn't have to wear an ankle monitor. The state disclosed that "a mental health professional has opined that the GPS monitor that Randazzo is required to wear as a condition of his bond has negative health consequences."

The judge never had a chance to decide on that request. Randazzo was found dead on April 9.

Randazzo is the second person accused in the pay-to-play scandal to die by suicide. Longtime lobbyist Neil Clark, who had also pleaded not guilty to the charges against him, died in Florida in March 2021.

After years of accusations and waiting, prosecutors will dismiss the criminal charges against Randazzo. The cases will be closed without convictions for the investigators or vindication for Randazzo.

"(Randazzo) was a brilliant guy. Very few people in Ohio knew more about utility law than him," Seitz said. "I believe this is all a great, great tragedy for him and for his family."

Jessie Balmert and Laura Bischoff are reporters for the USA TODAY Network Ohio Bureau, which serves the Columbus Dispatch, Cincinnati Enquirer, Akron Beacon Journal and 18 other affiliated news organizations across Ohio.

PolicyGoal:

Access to Reliable, Economical, Competitive Energy Resources

Energy policy can either enhance or hinder Ohio's ability to attract business investment, stimulate economic growth, and spur job creation – especially in manufacturing. State and federal energy policies must 1.) ensure access to reliable, economical, competitive sources of energy; and 2.) promote policies, regulations, and tariff designs that encourage and allow manufacturers to lower costs through energy management, including efficiency, load management, and behind-the-meter generation.

The OMA's energy policy advocacy efforts are guided by these principles:

- Energy markets free from market manipulation allow consumers to access the cost and innovation benefits of competition.
- Ohio's traditional industrial capabilities enable global leadership in energy product innovation and manufacturing.
- Sustainable energy systems support the long-term viability of Ohio manufacturing.
- Effective government regulation recognizes technical and economic realities.

Shaping energy policy in Ohio that aligns with these principles will support manufacturing competitiveness, stimulate economic expansion and job creation, and foster environmental stewardship.

ENERGY POLICY PRIORITIES ARE:

- Protect customers and markets by repealing House Bill 6 subsidies for coal power plants (OVEC).
- Ensure an open and fair electricity generation marketplace in which competition enables consumer choice, which drives innovation.
- Reform Public Utilities Commission of Ohio (PUCO) rate-making processes by eliminating electric security plans (ESPs) to protect manufacturers from above-market generation charges.
- Correct Ohio case law that denies electric customers refunds from electric utilities for charges that are later determined to be improper by the Supreme Court of Ohio.
- Design an economically sound policy framework for discounted rates for energy-intensive manufacturers.
- Oppose legislation and regulation that force customers to subsidize uneconomical generation, including certain coal-fired power plants.
- Encourage electric tariff and rate designs that encourage and allow for manufacturers to lower costs through energy management, including efficiency, load management, and behind-the-meter generation.
- Encourage fair and reasonable power siting regulations that allow new Ohio generation facilities.
- Support deployment of customer-sited generation technologies, such as co-generation, energy efficiency, and demand-side management, to achieve least-cost and sustainable energy resources.
- Restrict unfettered supplemental transmission investments with new riders.

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OHIO MANUFACTURERS' ENERGY CONFERENCE 2024

A forum for manufacturers and energy professionals

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Ohio Manufacturers' Energy Conference, an in-person event.

WHEN:
Thursday, September 19, 2024

WHERE:
Quest Conference Center
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Westerville, Ohio 43082

WHO:
Energy supply managers, category managers, utility engineers, sustainability specialists, policy experts, company executives, suppliers, consultants, regulators, and more.

HIGHLIGHTS:
With energy at the forefront of economic concerns, this event will showcase state and national experts who will share insights, best practices, and industry trends in energy management, efficiency, and procurement; generation, distribution, and transmission; policy and regulatory developments; and sustainability, ESG, and behind-the-meter opportunities. This in-person event will also provide networking opportunities for professionals as they enhance their competitiveness.

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USA TODAY

POLITICS U.S. Department of Energy Add Topic

Department of Energy announces largest-ever investment to decarbonize industry

Swapna Venugopal Ramaswamy
USA TODAY

Published 5:16 a.m. ET March 25, 2024 | **Updated 1:00 p.m. ET March 25, 2024**

WASHINGTON – The Energy Department announced up to $6 billion Monday for 33 projects across more than 20 states to decarbonize energy-intensive industries and reduce industrial greenhouse gas emissions.

Energy Secretary Jennifer M. Granholm told reporters in a call ahead of the announcement that when factoring in the companies' share in the projects, the initiative's total investment would amount to $20 billion.

"These projects offer solutions to slash emissions in some of the highest-emitting sectors of our economy, including iron and steel and aluminum, cement, concrete chemicals, food and beverages, pulp and paper," she said. "And together these industries make up roughly a third of our CO2 emissions of our carbon footprint."

Billed as the 'largest-ever investment' in decarbonizing industry, the projects, funded by the Bipartisan Infrastructure Law and Inflation Reduction Act, will eliminate 14 million metric tons of pollution each year, according to the Department of Energy.

"That's equivalent to taking about 3 million gas-powered cars off the road," Granholm said.

Prep for the polls: See who is running for president and compare where they stand on key issues in our Voter Guide

In Ravenswood, West Virginia, for instance, Constellium, a manufacturer of aluminum products, will deploy a first-of-its-kind zero-carbon aluminum casting plant and could get up

to $75 million in federal funding. The aluminum rolling facility, which is one of the largest in the world, supplies material to the aerospace, defense, marine and transportation sectors.

Kraft Heinz, the multinational food company that makes Mac and Cheese, will get up to $170.9 million to upgrade and electrify and decarbonize food production at 10 facilities nationwide, including in Holland, Michigan.

“It takes a whole lot of heat to dry all that macaroni, which produces a whole lot of emissions,” Granholm said. “And so this project is going to deploy clean tech like heat pumps and electric heaters and electric boilers to slash those emissions by 99%.”

The energy secretary will be traveling to Middletown, Ohio, to make the announcement on Monday. She’ll visit Cleveland-Cliffs Steel Corp., America’s largest flat-rolled-steel producer, where the company will be retiring a blast furnace and install two electric furnaces. The project will receive up to $500 million in federal funding.

“This will slash emissions at the facility by 1 million tons of greenhouse gases each year, which means cleaner water, cleaner air for the Middletown community,” she said.

Nearly 80% of the projects are located in a disadvantaged community, as defined by President Joe Biden’s Justice40 Initiative, offering a significant opportunity to invest in good jobs and clean air in communities that have experienced years of divestment, the department notes.

For instance the Cleveland-Cliffs project anticipates creating 170 permanent jobs and 1,200 temporary union construction jobs while preserving the site’s existing 2,500 jobs – including 2,000 International Association of Machinists and Aerospace workers.

Swapna Venugopal Ramaswamy is a White House Correspondent for USA TODAY. You can follow her on X @SwapnaVenugopal

Energy Legislation

Prepared by: The Ohio Manufacturers' Association
Report created on May 7, 2024

HB16 **ETHICS, FINANCIAL DISCLOSURE REFORM** (MERRIN D) To enact the Ethics and Financial Disclosure Reform Act to revise the law governing ethics and lobbying.

Current Status: 3/28/2023 - House Government Oversight, (Second Hearing)

State Bill Page: https://www.legislature.ohio.gov/legislation/legislation-summary?id=GA135-HB-16

HB41 **UTILITY BILLING TRANSPARENCY** (SKINDELL M) To enact "The Consumer Utility Billing Transparency Act" requiring the itemization of all riders, taxes, and other costs on certain utility bills.

Current Status: 4/24/2024 - House Public Utilities, (First Hearing)

State Bill Page: https://www.legislature.ohio.gov/legislation/legislation-summary?id=GA135-HB-41

HB79 **ELECTRIC DISTRIBUTION UTILITIES** (SEITZ B, SWEENEY B) To permit electric distribution utilities to establish energy efficiency and demand reduction portfolios.

Current Status: 6/21/2023 - **SUBSTITUTE BILL ACCEPTED & REPORTED OUT**, House Public Utilities, (Fourth Hearing)

State Bill Page: https://www.legislature.ohio.gov/legislation/legislation-summary?id=GA135-HB-79

HB120 **REPEAL 133-HB6** (WEINSTEIN C, BRENNAN S) To repeal the legacy generation resource provisions of H.B. 6 of the 133rd General Assembly and provide customers refunds.

Current Status: 6/20/2023 - Re-Referred to Committee

State Bill Page: https://www.legislature.ohio.gov/legislation/legislation-summary?id=GA135-HB-120

HB197 **SOLAR PROGRAMS** (HOOPS J, RAY S) To establish the community solar pilot program and the solar development program.

Current Status: 5/8/2024 - House Public Utilities, (Sixth Hearing)

State Bill Page: https://www.legislature.ohio.gov/legislation/legislation-summary?id=GA135-HB-197

HB201 **PROHIBIT CALIFORNIA EMISSIONS STANDARDS FOR MOTOR VEHICLES** (HILLYER B, DEMETRIOU S) To prohibit a state agency, county, or township from restricting the sale or use of a motor vehicle based on the energy source used to power the motor vehicle; to prohibit a state agency from adopting the California emissions standards for motor vehicles; and to change the requirements for natural gas company infrastructure development riders and economic development projects.

Current Status: 12/28/2023 - **SIGNED BY GOVERNOR**; eff. 90 days

State Bill Page: https://www.legislature.ohio.gov/legislation/legislation-summary?id=GA135-HB-201

HB226 **CUSTOMER-OWNED WATER SERVICE LINES** (ROBB BLASDEL M, JARRELLS D) To permit water-works companies to bear the costs for replacing certain customer-owned water service lines.

Current Status: 5/7/2024 - Senate Energy and Public Utilities, (Second Hearing)

State Bill Page: https://www.legislature.ohio.gov/legislation/legislation-summary?id=GA135-HB-226

HB260 **COMPETITIVE RETAIL ELECTRIC SERVICE** (SEITZ B, ROBB BLASDEL M) Regarding public utilities and competitive retail electric service.

Current Status: 5/8/2024 - House Public Utilities, (Third Hearing)

State Bill Page: https://www.legislature.ohio.gov/legislation/legislation-summary?id=GA135-HB-260

HB264 **WASTE ENERGY RECOVERY SYSTEMS** (PIZZULLI J, JOHNSON M) To make certain steam-producing facilities waste energy recovery systems for purposes of the state's energy efficiency laws.

Current Status: 12/13/2023 - **REPORTED OUT**, House Energy and Natural Resources, (Fifth Hearing)

State Bill Page: https://www.legislature.ohio.gov/legislation/legislation-summary?id=GA135-HB-264

HB308 **INCLUDE NUCLEAR REACTION ENERGY AS GREEN ENERGY** (STEIN D, BRENNAN S) To include energy generated by nuclear reaction as green energy.

Current Status: 4/24/2024 - **REPORTED OUT**, House Energy and Natural Resources, (Fourth Hearing)

State Bill Page: https://www.legislature.ohio.gov/legislation/legislation-summary?id=GA135-HB-308

HB358 **CARBON CAPTURE** (ROBB BLASDEL M) To declare the General Assembly's intent to regulate carbon capture and storage technologies and the geologic sequestration of carbon dioxide for long-term storage.

Current Status: 12/12/2023 - Referred to Committee House Energy and Natural Resources

State Bill Page: https://www.legislature.ohio.gov/legislation/legislation-summary?id=GA135-HB-358

HB363 **PUCO NOMINATING PROCESS CHANGES** (TROY D) To make various changes to the Public Utilities Commission nominating council and nomination process.

Current Status: 1/9/2024 - Referred to Committee House Public Utilities

State Bill Page: https://www.legislature.ohio.gov/legislation/legislation-summary?id=GA135-HB-363

HB393 **REFUNDS FOR UNLAWFUL UTILITY CHARGES** (BAKER R) To require refunds for utility customers when a utility charge was determined to be unlawful.

Current Status: 2/6/2024 - Referred to Committee House Public Utilities

State Bill Page: https://www.legislature.ohio.gov/legislation/legislation-summary?id=GA135-HB-393

HB444 **PUBLIC UTILITIES - POLITICAL EXPENDITURES** (MIRANDA J, MCNALLY L) To prohibit certain public utilities from recovering political expenditure costs from their customers.

Current Status: 4/23/2024 - House Government Oversight, (First Hearing)

State Bill Page: https://www.legislature.ohio.gov/legislation/legislation-summary?id=GA135-HB-444

SB6 **ESG POLICIES-STATE ENTITIES** (SCHURING K) Regarding environmental, social, and corporate governance policies with respect to the state retirement systems, Bureau of Workers' Compensation, and state institutions of higher education.

Current Status: 5/23/2023 - Referred to Committee House Financial Institutions

State Bill Page: https://www.legislature.ohio.gov/legislation/legislation-summary?id=GA135-SB-6

SB72 **PUBLIC UTILITIES-SUBSTATION SECURITY** (JOHNSON T) To require public utilities to provide twenty-four hour security systems at substations.

Current Status: 3/28/2023 - Senate Energy and Public Utilities, (Second Hearing)

State Bill Page: https://www.legislature.ohio.gov/legislation/legislation-summary?id=GA135-SB-72

SB102 **ELECTRIC, NATURAL GAS SERVICES** (WILKIN S) Regarding public utilities and competitive retail electric and natural gas services.

Current Status: 12/5/2023 - **BILL AMENDED**, Senate Energy and Public Utilities, (Fifth Hearing)

State Bill Page: https://www.legislature.ohio.gov/legislation/legislation-summary?id=GA135-SB-102

SB121 **NATURAL GAS INFRASTRUCTURE RIDER CHANGES** (ROMANCHUK M) To make changes to the natural gas infrastructure development rider.

Current Status: 5/17/2023 - Referred to Committee Senate Energy and Public Utilities

State Bill Page: https://www.legislature.ohio.gov/legislation/legislation-summary?id=GA135-SB-121

SB123 **PUBLIC UTILITY REGULATION EXEMPTIONS** (BRENNER A) To exempt from regulation as a public utility certain persons or entities providing utility related services after the metered point of delivery.

Current Status: 6/20/2023 - Senate Energy and Public Utilities, (First Hearing)

State Bill Page: https://www.legislature.ohio.gov/legislation/legislation-summary?id=GA135-SB-123

SB143 **ELIMINATING ELECTRIC SECURITY PLANS** (ROMANCHUK M) To eliminate electric security plans and require all electric standard service offers to be delivered through market-rate offers, and to strengthen corporate separation requirements.

Current Status: 1/23/2024 - Senate Energy and Public Utilities, (Second Hearing)

State Bill Page: https://www.legislature.ohio.gov/legislation/legislation-summary?id=GA135-SB-143

SB149 **PUBLIC UTILITIES - POLITICAL EXPENDITURES** (SMITH K) To prohibit certain public utilities from recovering political expenditure costs from their customers.

Current Status: 9/20/2023 - Senate Energy and Public Utilities, (First Hearing)

State Bill Page: https://www.legislature.ohio.gov/legislation/legislation-summary?id=GA135-SB-149

SB150 **PROHIBIT TERMINATING ELECTRIC, GAS SERVICE** (SMITH K) To prohibit terminating electric or gas service to certain households and establish a payment plan for these services.

Current Status: 9/20/2023 - Senate Energy and Public Utilities, (First Hearing)

State Bill Page: https://www.legislature.ohio.gov/legislation/legislation-summary?id=GA135-SB-150

SB151 **REPEAL 133-HB6 PROVISIONS** (SMITH K) To repeal the legacy generation resource provisions of H.B. 6 of the 133rd General Assembly and provide customers refunds.

Current Status: 9/20/2023 - Senate Energy and Public Utilities, (First Hearing)

State Bill Page: https://www.legislature.ohio.gov/legislation/legislation-summary?id=GA135-SB-151

SB174 **NATURAL GAS-OFFERING CARBON OFFSETS** (WILKIN S, LANG G) To allow for competitive retail natural gas service suppliers to offer carbon offsets to customers.

Current Status: 5/7/2024 - Senate Energy and Public Utilities, (Second Hearing)

State Bill Page: https://www.legislature.ohio.gov/legislation/legislation-summary?id=GA135-SB-174

SB200 **LEGISLATIVE INTENT-CARBON CAPTURE** (SCHAFFER T, LANDIS A) To declare the General Assembly's intent to regulate carbon capture and storage technologies and the geologic sequestration of carbon dioxide for long-term storage.

Current Status: 4/9/2024 - Senate Energy and Public Utilities, (First Hearing)

State Bill Page: https://www.legislature.ohio.gov/legislation/legislation-summary?id=GA135-SB-200

SB227 **CONSUMER UTILITY BILLING TRANSPARENCY** (SMITH K) To enact "The Consumer Utility Billing Transparency Act" requiring the itemization of all riders, taxes, and other costs on certain utility bills.

Current Status: 2/28/2024 - Referred to Committee Senate Energy and Public Utilities

State Bill Page: https://www.legislature.ohio.gov/legislation/legislation-summary?id=GA135-SB-227

SB228 **UTILITY CUSTOMERS-UNLAWFUL CHARGE REFUND** (SMITH K) To require refunds for utility customers when a utility charge was determined to be unlawful.

Current Status: 2/28/2024 - Referred to Committee Senate Energy and Public Utilities

State Bill Page: https://www.legislature.ohio.gov/legislation/legislation-summary?id=GA135-SB-228

SB229 **CHANGE PUCO NOMINATING COUNCIL PROCESS** (DEMORA B, HICKS-HUDSON P) To make various changes to the Public Utilities Commission nominating council and nomination process.

Current Status: 2/28/2024 - Referred to Committee Senate Energy and Public Utilities

State Bill Page: https://www.legislature.ohio.gov/legislation/legislation-summary?id=GA135-SB-229

SB247 **ESTABLISH COMMUNITY SOLAR PILOT PROGRAM** (LANG G) To establish the community solar pilot program.

Current Status: 4/24/2024 - Referred to Committee Senate Energy and Public Utilities

State Bill Page: https://www.legislature.ohio.gov/legislation/legislation-summary?id=GA135-SB-247

SB251 **PUBLIC UTILITIES RATE CASE TIMELINE** (SMITH K) To require public utilities that serve more than 250,000 Ohio residents to file a rate case application with the Public Utilities Commission at least every four years.

Current Status: 4/24/2024 - Referred to Committee Senate Energy and Public Utilities

State Bill Page: https://www.legislature.ohio.gov/legislation/legislation-summary?id=GA135-SB-251

SCR3 **FEDERAL FUNDING-HYDROGEN HUBS** (DOLAN M) Urging President Biden, the United States Department of Energy, and the Congress of the United States to designate federal funding for hydrogen hubs in Ohio.

Current Status: 3/8/2023 - Referred to Committee Senate Energy and Public Utilities

State Bill Page: https://www.legislature.ohio.gov/legislation/legislation-summary?id=GA135-SCR-3

SR121 **URGE CONTINUED INVESTMENT-NATURAL GAS** (RULLI M) To recognize that natural gas and its production industry are vital to Ohio's economic future and to urge continued investment in natural gas infrastructure to make affordable energy available to every Ohioan.

Current Status: 4/24/2024 - **ADOPTED BY SENATE**; Amended on Floor, Vote 32-0

State Bill Page: https://www.legislature.ohio.gov/legislation/legislation-summary?id=GA135-SR-121

SR296 **URGE USEPA WITHDRAW PROPOSED REGULATIONS** (REINEKE W, MCCOLLEY R) To urge the U.S. Environmental Protection Agency to withdraw its proposed regulations on greenhouse gas emissions and to urge the United States Congress to take action to prevent the regulations from taking effect.

Current Status: 5/7/2024 - Senate Energy and Public Utilities, (Third Hearing)

State Bill Page: https://www.legislature.ohio.gov/legislation/legislation-summary?id=GA135-SR-296

Energy

Emails Indicate FirstEnergy Paid $300k to a Dark Money Org Tied to Senate President
April 26, 2024

Additional details continue to emerge about the extent of FirstEnergy's strategic monetary contributions during the time period that House Bill 6 was being debated by the legislature. It has been discovered that in spring 2019, a 501(c)(4) nonprofit funded and controlled by FirstEnergy secretly paid $300,000 to a dark money nonprofit a lobbyist associated with now-Senate President Matt Huffman.
Huffman's spokesman has stated that he has never created, controlled, or coordinated any 501(c)(4). 4*/23/2024*

Sam Randazzo: A Complete Timeline
April 19, 2024

The Columbus Dispatch recently published an article detailing the full timeline of events surrounding the career and downfall of former PUCO Chair Sam Randazzo following his suicide earlier this month.

While the House Bill 6 investigation is still ongoing, federal prosecutors will dismiss the case against Randazzo following his suicide. The case against Randazzo from the state of Ohio is still ongoing. 4*/17/2024*

Lawmakers Propose Natural Gas Infrastructure Incentives
April 19, 2024

A plan to establish loans for local governments and a tax break for natural gas companies to extend the fossil fuel to more Ohio communities is currently under consideration in the Ohio House.
House Bill 349, sponsored by State Reps. Tim Barhorst (R-Fort Loramie) and Don Jones (R-Freeport) would allocate $20 million for a revolving loan program to aid local governments with acquiring natural gas pipeline easements in such zones. 4*/17/2024*

Former PUCO Chairman Sam Randazzo Found Dead
April 12, 2024

On Tuesday, Apr. 9, former Public Utilities Commission of Ohio (PUCO) Chairman Sam Randazzo was found dead from apparent suicide.
Randazzo had been indicted in both federal and state courts for taking bribes from FirstEnergy while serving as PUCO Chair. FirstEnergy had admitted to the bribe during a deferred prosecution agreement.

This is the second suicide to follow the ongoing House Bill 6 investigation. Neil Clark, a longtime Columbus lobbyist, was found dead by a self-inflicted gunshot wound in 2021 at his home in Florida.
Former Speaker of the Ohio House Larry Householder was also convicted in June and is currently serving a 20 year sentence. *4/09/2024*

Investigation Sheds Further Light on Cozy Relationship Between Sam Randazzo, First Energy
April 5, 2024

The ongoing investigation of House Bill 6 and trial of former Public Utilities Commission of Ohio (PUCO) chairman Sam Randazzo has shed new light on the cozy relationship between the former regulator and First Energy.
Court records filed last Friday show the close relationship the former PUCO chair had with executives at First Energy. This includes attending Christmas parties with FirstEnergy executives, sending memes celebrating the passage of bills benefiting the energy company, and most infamously, Randazzo dressing as a superhero (pictured above) and texting the picture to FirstEnergy's then-senior Vice President of External Affairs Michael Dowling among others.

Randazzo is accused of being paid $4.3 million to work on FirstEnergy's behalf to save the utility money and pass House Bill 6, which bailed out two FirstEnergy-owned nuclear power plants.

Randazzo is also accused of skimming money off side deals he crafted between utilities, including FirstEnergy and American Electric Power, and his large industrial user clients. *4/02/2024*

PUCO Authorizes AEP Electric Security Plan
April 5, 2024

The Public Utilities Commission of Ohio (PUCO) this week approved a settlement agreement authorizing AEP Ohio to implement a 4-year electric security plan (ESP), beginning Jun. 1, 2024.
According to the PUCO release, AEP Ohio will, under the new agreement, continue to source electricity for its customers through a competitive bidding process.

In addition to significantly reducing the over $4 billion in new and increased charges to customers that AEP initially proposed, the settlement expands participation for both the Basic Transmission Cost Rider (BTCR) Pilot and the interruptible program.

The OMA Energy Group's successful negotiations ensured continued Pilot participation for members that participated during ESP IV or under a reasonable arrangement at all sites, with an opt-out option in the ESP's second year and the ability to replace members who opt out with different members. The negotiations also secured continued interruptible program participation for members who participated during ESP IV.

The OMA will be discussing the settlement at the next Energy Group Committee on May 8. *4/03/2024*

OPSB Approves Largest Solar Power Project in Ohio
April 5, 2024

The Ohio Power Sitting Board recently approved Oak Run Solar's proposal despite heavy local government pushback.
The 800-megawatt facility and an accompanying 300-megawatt battery energy storage system in Madison County is the largest solar project approved in Ohio to date and represents the nation's largest agrivoltaics project. *4/03/2024*

Former Speaker Larry Householder Indicted on 10 Additional Charges
March 29, 2024
Former Ohio Speaker of the House Larry Householder was indicted this week on 10 additional felony charges relating to the ongoing HB 6 scandal, including one that would bar him from holding any public office.
On Monday, a Cuyahoga County grand jury indicted Householder on additional charges, which include alleged misuse of campaign funds, ethics violations, and theft in office.

Householder served two separate terms as speaker, in addition to holding county office. *3/25/2024*

Former PUCU Chair Sam Randazzo Could Lose Law License
March 22, 2024

The former chair of Ohio's Public Utilities Commission (PUCO) could be stripped of his license after a complaint was filed by the Office of Disciplinary Counsel regarding his connection to the ongoing House Bill 6 scandal.
The OMA is continuing to monitor the HB6 scandal and fallout as the investigation proceeds. *3/20/2024*

OMA Preparing for Annual Energy Conference in September
March 15, 2024

The OMA is preparing for its 2024 Ohio Manufacturers' Energy Conference on September 19th located at the Quest Conference Center.
Sponsorship packages are available for the conference. Contact Nick Miller for more information. *3/13/2024*

Utility Master Plan Reveals Schemes to Fleece Ohio Customers
March 15, 2024

Newly obtained documents released in the HB 6 corruption investigation reveal that Ohio utilities produced a wish list of reforms, many of which were included in HB 6, and many that have been the subject of legislative or PUCO proposals since HB 6. The March 19, 2019 email that originated from an AEP executive to FirstEnergy Senior Vice President Mike Dowling, who was indicted under state corruption charges in February, suggests that utilities assembled a master plan to redistribute funds from customers to regulated monopoly utilities.

The AEP email that appears to have been used for a meeting with Larry Householder and FirstEnergy in April 2019 makes numerous suggestions for customer-funded subsidies for new utility-owned generation. The plan also schemes ways and charts out methods to further pillage customers to fund infrastructure beyond traditional ratemaking models. Finally, the plan allows utilities to own and control behind-the-meter technologies and rate base EV charging stations, authorize utilities to operate broadband networks, and pursue formula rates, known as alternative rate mechanisms, a concept contained in Senate Bill 102 (Wilkin) now pending in the Ohio Senate. The document begs many questions and connects the dots on why all Ohio utilities supported HB 6. The OMA has obtained other related emails that will be included and discussed at the upcoming OMA Energy Committee on May 8. *3/7/2024*

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Engineering Report

OMA Energy Committee

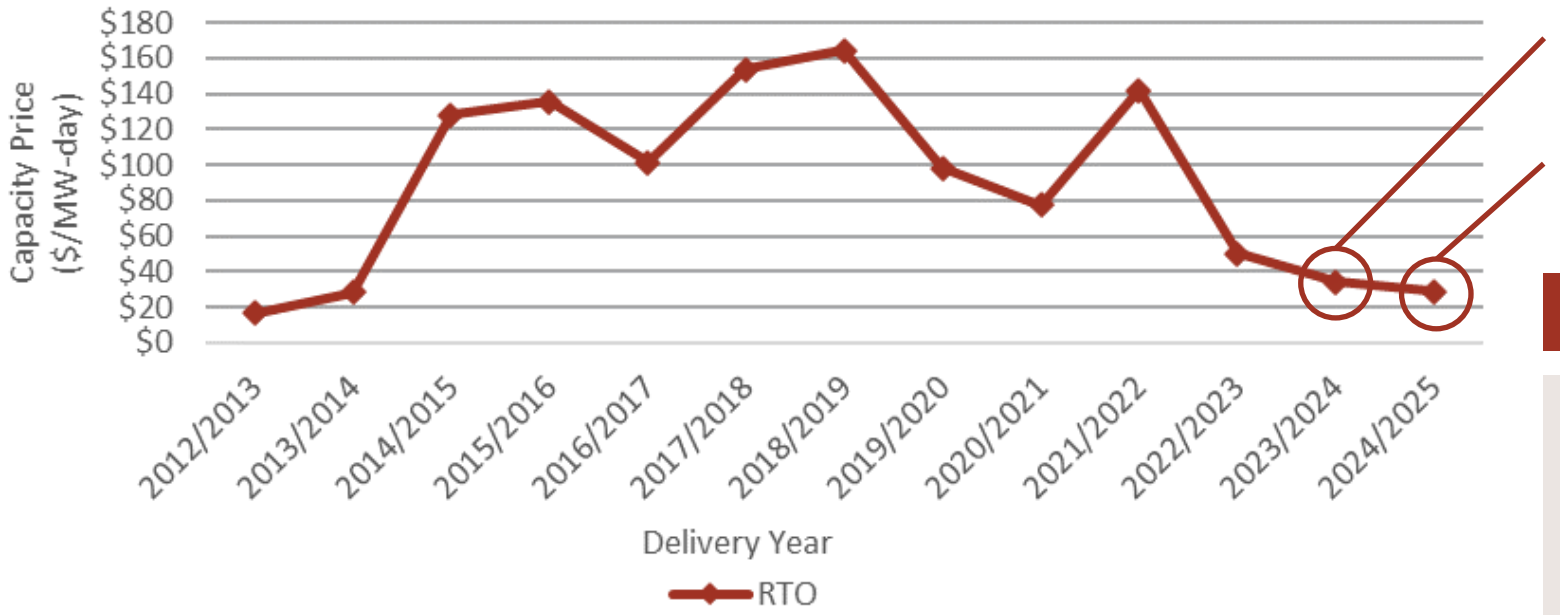
Wyatt Elbin and John Seryak

May 8, 2024

Agenda

1. Capacity market changes
2. Utility load forecast
3. Reliability and re-reg
4. Community solar
5. Ohio utility-scale solar
6. Transmission cost control (BTCR/IRP)

PJM Capacity Market Prices



$34.20

$28.92 (*$96.24 - Duke)

- Auction supposed to take place 3 years in advance of delivery year.
- Operating on condensed timeline due to previous regulatory delays. (MOPR)

Low Pricing Concerns

For PJM
Reflects over-supply, does not signal new investment

For Generators
May cover marginal costs, but not all risks

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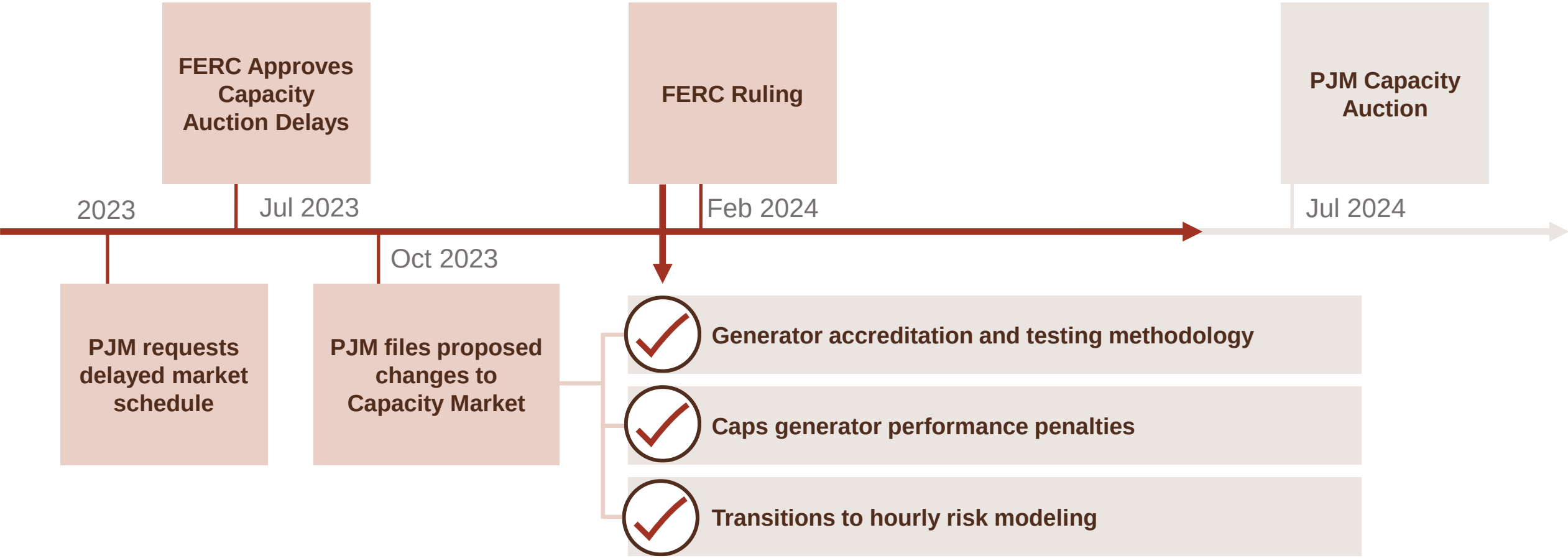
PJM Capacity Market Reforms



Capacity Market Reforms

Risk Modeling	Generator Accreditation	Testing Requirements	Generator Penalties
Analyzes risk for every hour of the year	Expands Effective load carrying capacity (ELCC) to all generators	PJM can randomly test generators any time of year	Limits penalties generators face for non-performance
Shift from a model that assumed risk specific periods	Generators rated based on historical performance data	Renewables and hydro excluded	Maximum penalty now a function of generator's guaranteed revenue
Winter risk is now 35%	No longer just renewables and hydro	Demand response must perform a 2-hour test, any time	PJM wants to ensure generators aren't crippled from one non-performance event
Considers renewable shoulder hours	Chart in memo		

Runnerstone memo detailing reforms attached to meeting materials.

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Capacity Market: What's next?

- Reforms expected to cost customers an additional ~$200M
- Next auction will be critical price signal for investors
- Entering series of quick auctions to get caught up to 3-year schedule
- Auction results will impact reliability narrative

Delivery Year	Base Residual Auction (BRA) Timeline	
	Current	Proposed
2025/26	Jun. 2023	**Jul. 2024**
2026/27	Nov. 2023	**Dec. 2024**
2027/28	May 2024	**Jun. 2025**
2028/29	May 2025	**Dec. 2025**
2029/30	May 2026	**May 2026**

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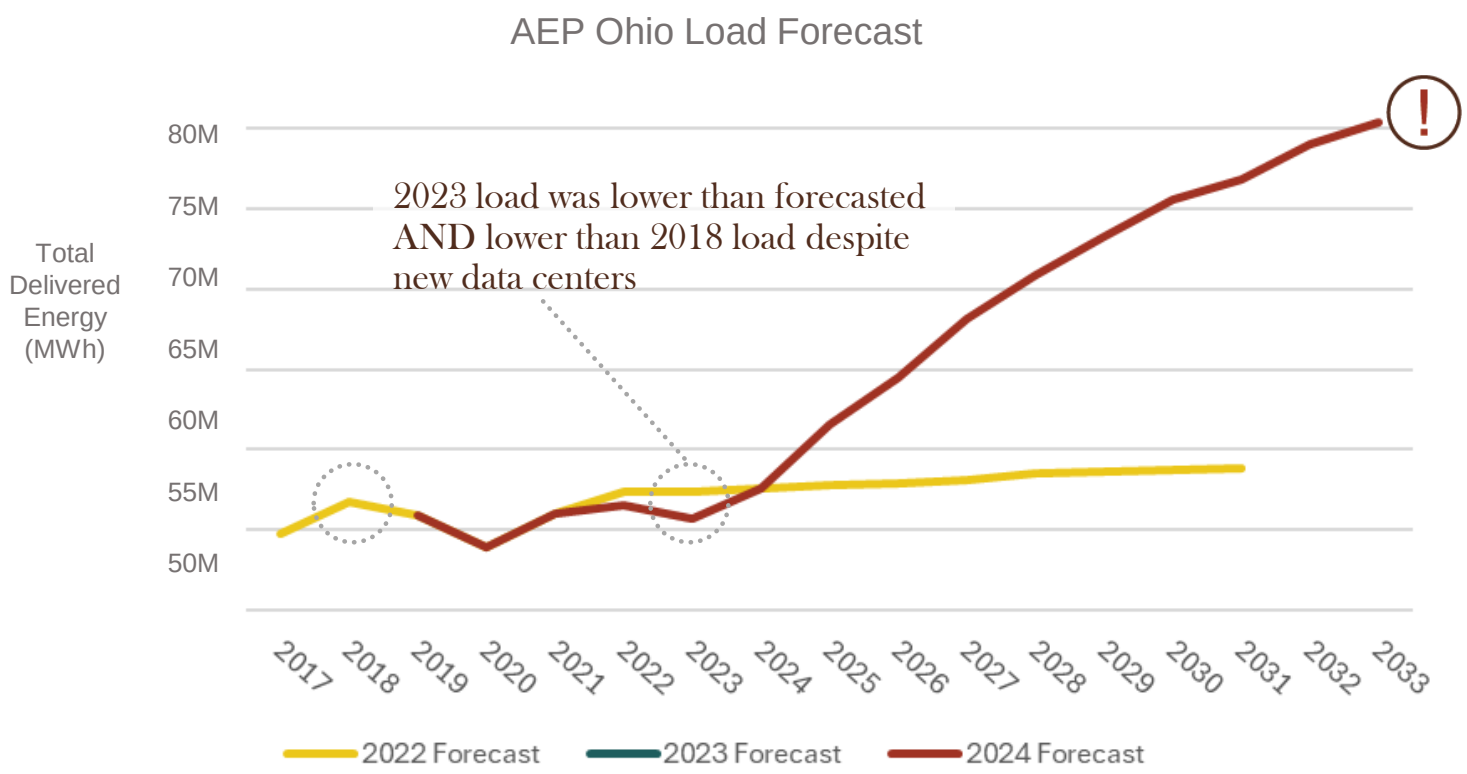
Utility load forecast



Dramatically different from 2022 – why?
No transparency of data and method
(likelihood of getting built, how many projects, what assumptions for it continuing to grow, etc)

Potential Fixes

- Hosting capacity maps
- Utilize less constrained parts of state
- Bolster programs that reduce peak loads

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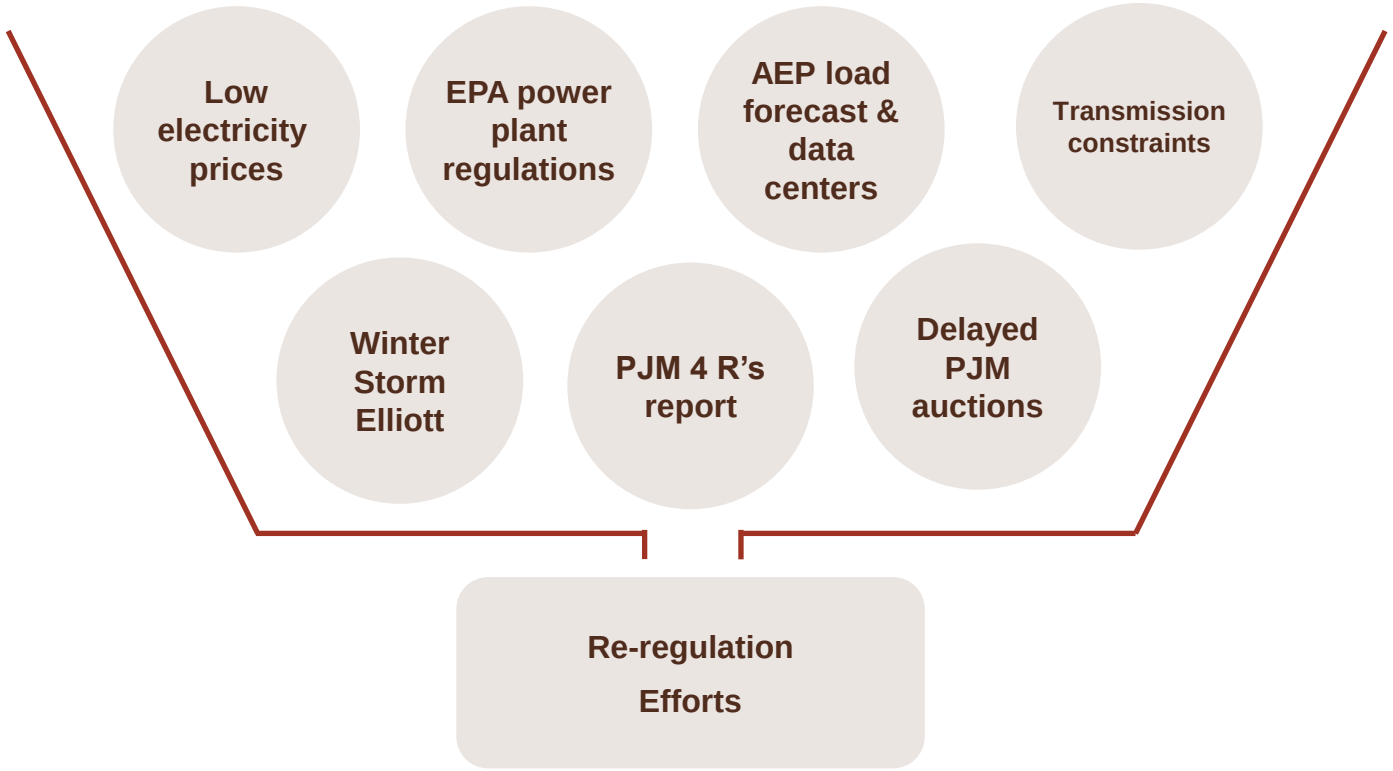
Grid reliability and re-reg efforts



AEP

"I think that would take legislation … so that we'd be assured of good [cost] recovery and potentially any kind of stranded cost risk"

- Ben Fowke, AEP interim president and CEO

FirstEnergy

"I don't think we'd ever be interested in owning generation in those states on a merchant basis but if a state were to come to us and ask us to build on a regulated basis … I think that's something that we'd consider,"

- Brian Tierney, FirstEnergy president and CEO

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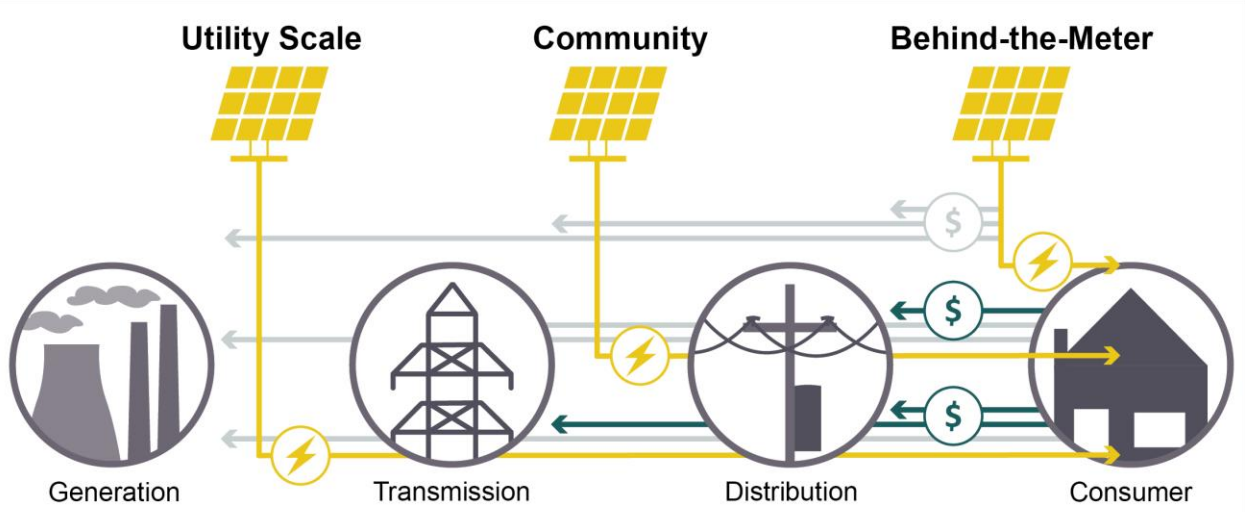
Community Solar in Ohio

- Creates “virtual net metering”
- All versions of legislation cause cost shifting
- Current version:
  - Potential for $110M/yr of cost shifting
  - Cuts out large industrial participation
  - Requires utilities to purchase the electricity
- Unclear where legislation is headed, but advocates continue working

Comparing Community Solar



See RunnerStone memo. “Update: Community Solar Bill Creates $110 Million in Annual Cost-Shifting and Still Lacks Community Protections” https://www.ohiomfg.com/wp-content/uploads/HB197-Community-Solar-1.22.24.pdf

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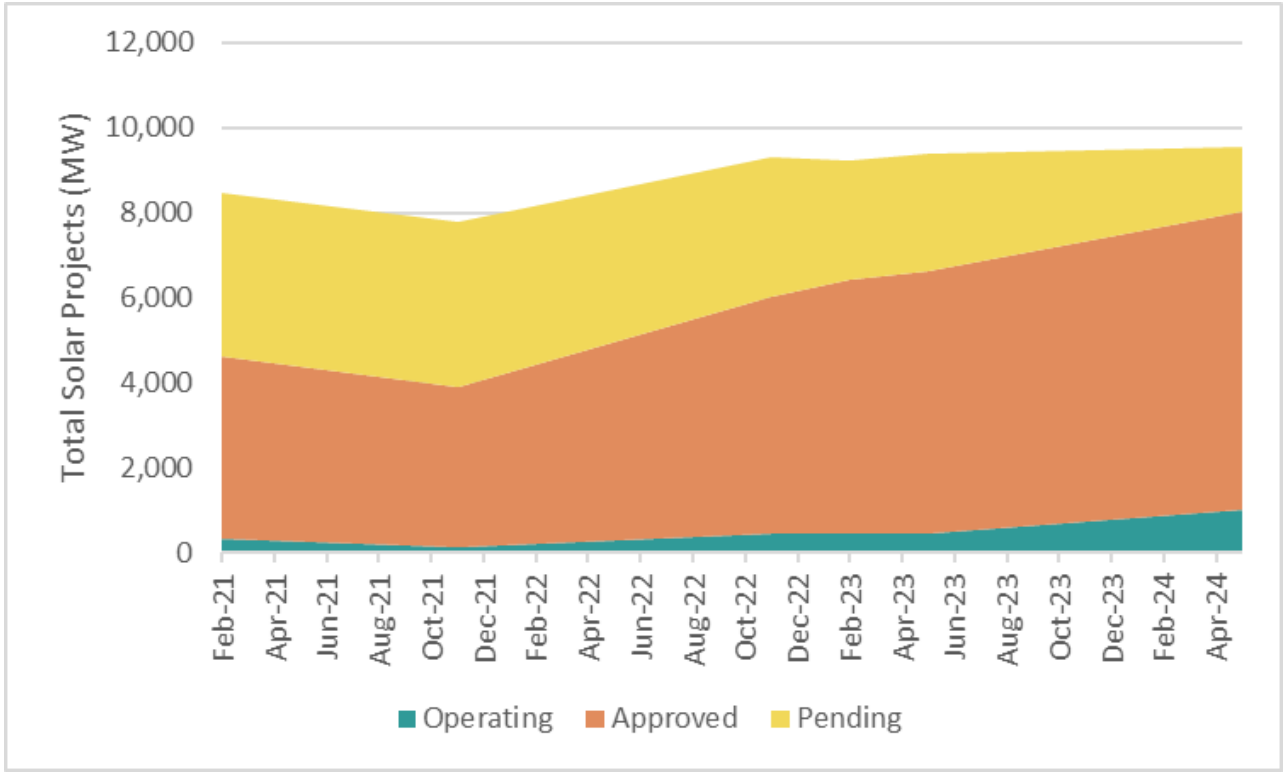
Ohio Utility-Scale Solar Projects

Under Construction

12 Projects

New Applications

3 In 2024



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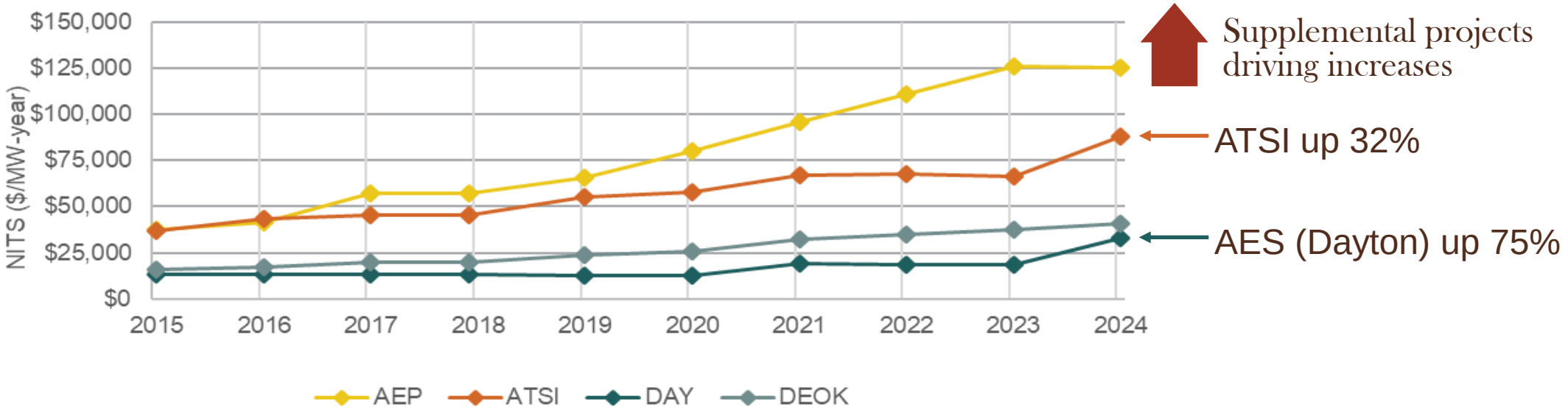
Transmission Cost Control



OMAEG successful in getting rebate for AEP Ohio BTCR pilot customers

OMAEG continues to advocate for increased regulation and better transmission rate design

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May 2024
Ohio Manufacturers' Association
Solar Energy Solutions
NEXTera ENERGY RESOURCES

NextEra Energy is a clean energy leader

Composed of two primary businesses

NextEra Energy, Inc.

- Fortune 200 company[1]
- 95-year track record
- $28 B operating revenue 2023[2]
- $118 B market cap[3]
- NYSE: NEE

NextEra Energy Resources, LLC

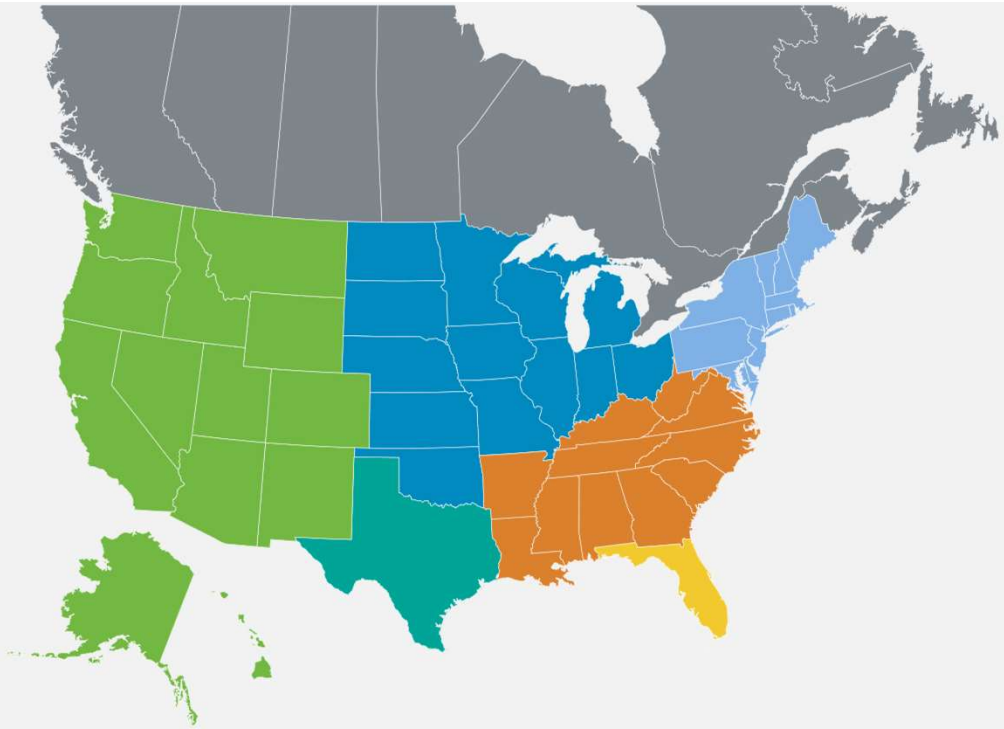
- World's largest generator of renewable energy from the wind and sun
- 37 GW total generating capacity[4]
- Operating in 41 states & Canada[4]

Florida Power and Light (FPL)

- One of the largest US electric utilities[4]
- 5.9 MM customer accounts[4]
- 33 GW net generating capacity[4]

1. Fortune's 2024 Rankings 2/1/24
2. Investor Report Dec 2023. as of 1/25/24.
3. FactSet as of 1/25/2024
4. As of 12/31/23 Annual Report 2023 Form 10-K

Grid scale and DG portfolio



8.8 GW	Wind **5,362 MW**	Solar **2,498 MW**	Battery Storage **931 MW**
7.1 GW	Wind **6,923 MW**	Solar **162 MW**	Battery Storage **35 MW**
5.1 GW	Wind **3,641 MW**	Solar **1,192 MW**	Battery Storage **290 MW**
7.5 GW	Wind **7,270 MW**	Solar **156 MW**	Battery Storage **30 MW**
3.2 GW		Solar **3,611 MW**	Battery Storage **469 MW**
0.3 GW	Wind **99 MW**	Solar **177 MW**	Battery Storage **39 MW**
578 MW	Wind **574 MW**		Battery Storage **4 MW**

Overview of our work

Core Renewable Businesses
Grid-Scale Renewables • Distributed Generation

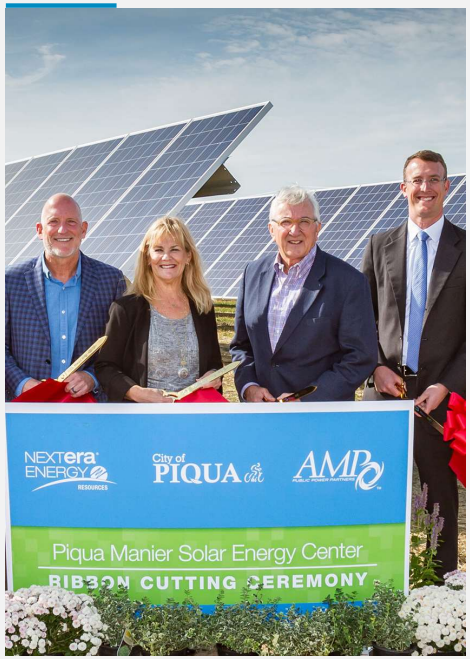
NextEra Energy Services (NES)
Retail and Renewable • Energy Efficiency

Commodity Supply
Renewable Energy Credits (RECs) • Fuels (Traditional and Renewable)

Additional Solutions
Energy Analytics • Fleet Electrification • Sustainable Water • Hydrogen

NextEra Energy Resources in Ohio

- To date, NextEra Energy Resources has made a capital investment of more than $112 million dollars in Ohio.
- NextEra Energy Resources has 60 MW of solar currently deployed in the state with an additional 40 MW in development.
- NextEra Energy Resources' solar portfolio in Ohio is providing energy savings to local utilities and community benefits through tax payments to the local jurisdictions.

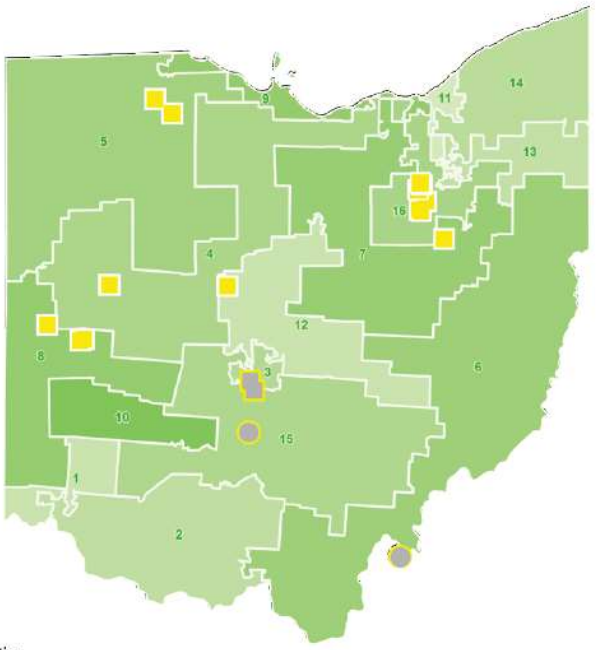


Ohio Portfolio

14
distributed energy resources
in operation

2
distributed energy resources
in development

2
utility-scale solar projects
in development



Legend: Distributed Energy Resources Utility-Scale Solar Development/Construction

Empowering Businesses with Sustainable Energy Solutions

Driving Energy Efficiency and Sustainability for the Commercial and Industrial Sectors

Hormel: A Case Study in Solar Innovation

Located in Montevideo, MN

Behind-the-Meter (BTM) Solar Project:

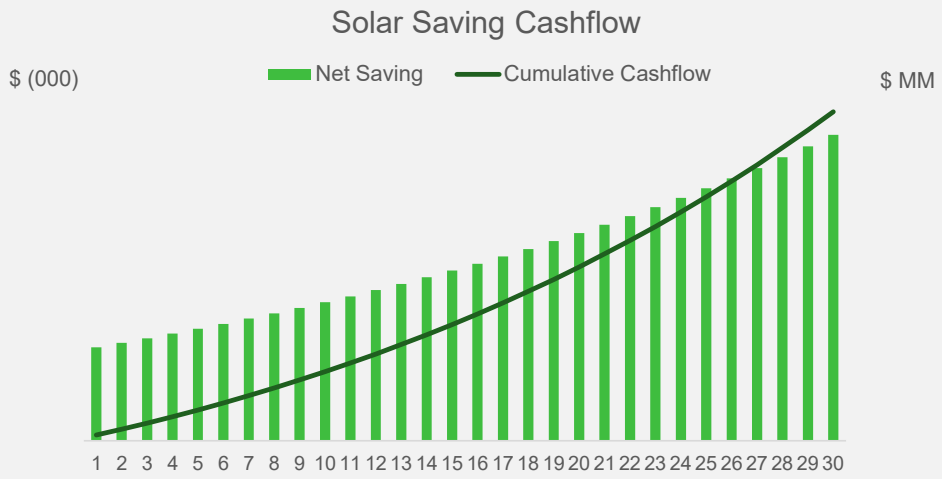
- **Direct Energy Utilization:** Solar array tailored for on-site energy generation, directly powering Hormel's operations.
- **Enhanced Efficiency:** BTM project optimized for maximum energy yield, minimizing reliance on the grid and reducing operational costs.
- **Sustainable Operations:** Contributed significantly to Hormel's goal of cutting greenhouse emissions, reinforcing its commitment to corporate responsibility.
- **Size:** 0.62 MWac
- **Annual Production:** 1,317 MWh

Onsite solar: Install solar with no capital outlay and realize immediate energy cost savings

Offering

NextEra Energy Resources invests the upfront capex and builds, owns and operates the on-site (or off-site adjacent land) solar asset. Solar asset would be tied behind your company's meter offsetting between 5-50 MWs of power.

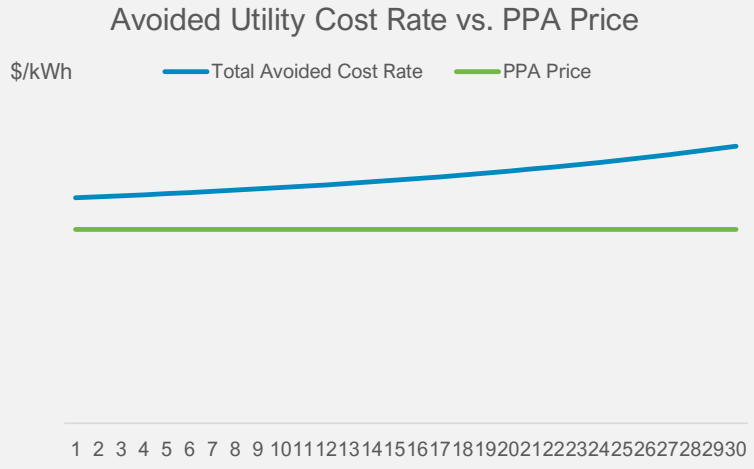
Payment Structure



Illustrative example

Offering

In Ohio, your company should realize immediate electric bill savings from distributed solar.



Illustrative example

Grid-Scale Renewables

Why it's important

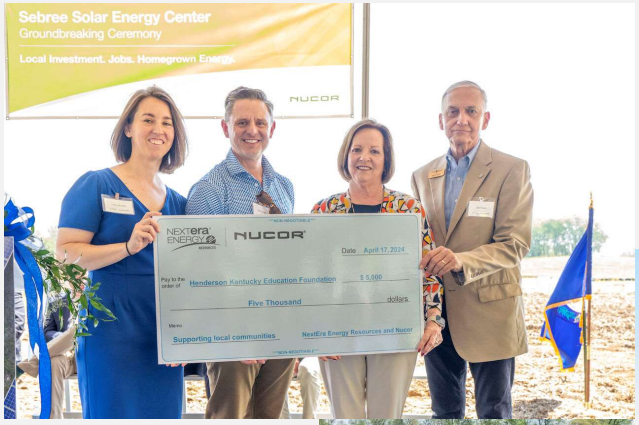
There are three primary ways for your business to address portfolio-wide electricity usage and obtain RECs.

1. The first is through Virtual Power Purchase Agreements (VPPAs). Basically, a VPPA is a financial transaction. You contract with large-scale wind and/or solar energy projects, exchanging a fixed-price cash flow for a variable-priced cash flow and RECs.
2. The second way to procure grid-scale energy is through a utility green tariff, a Sleeved PPA program in which we supply you with bundled renewable power through specific projects at a special utility tariff rate.
3. And the third method is to physically obtain the energy directly from onsite and offsite wind and solar facilities.

How it works for you

- Offsets grid supplied energy usage
- Efficiently meets renewable energy and greenhouse gas (GHG) emissions reduction goals
- Provides long term energy savings with no upfront costs

Grid-Scale Renewables Power the Steel Industry



Nucor Corporation

"Our country's energy transition will be built with steel and the steel it is built with should be produced sustainably. And while Nucor is already among the world's cleanest and most sustainable steel producers, this agreement will further reduce our climate footprint and supports our goal of achieving net-zero emissions by 2050." - Greg Murphy, executive vice president of business services and general counsel at Nucor Corporation

Nucor entered into a Power Purchase Agreement (PPA) for 250 MWs of renewable energy from NextEra Energy Resources' Sebree Solar.

OMA Energy Committee

Legal Cases of Interest

May 8, 2024

1

House Bill 6 Cases

1. Former FirstEnergy Executives and Randazzo Indicted by State of Ohio (CR-2024-02-437)
   - On February 9, 2024, former FirstEnergy CEO Chuck Jones, former FirstEnergy Senior VP Michael Dowling, and former PUCO Chairman Samuel Randazzo were indicted in Summit County on twenty-seven different felony criminal charges for their roles in the HB 6 bribery scandal between 2017 and 2020.
   - Dowling and Jones were both charged with counts of bribery, corruption, telecommunications fraud, money laundering, and aggravated theft. Dowling was also charged with tampering with records.
   - Randazzo was charged with twenty-two counts including corruption, failing to register as a lobbyist, grand theft, aggravated theft, money laundering, telecommunications fraud, tampering with records, and bribery.
   - Following Randazzo's suicide on April 9, 2024, Attorney General Yost stated that "Our case will move forward. We're not dismissing any charges. We're not dismissing any defendants."
2. Randazzo Federally Indicted (1:23-cr-00114)
   - On November 29, 2023, Randazzo was indicted on eleven counts of bribery, fraud, embezzlement, and other related crimes. If convicted as charged, Randazzo could face up to twenty years in prison.
   - During the criminal investigation into FirstEnergy's involvement in HB 6, FirstEnergy admitted to bribing Randazzo in the amount of $4.3 million in exchange for favorable treatment from the PUCO.
   - While the charges remain pending, Randazzo's death is expected to prevent this case from going forward.

2

House Bill 6 Cases Cont.

3. AG Yost and the Cities of Columbus and Cincinnati Lawsuits (20-CV-6281)
   - The 2021 order staying these proceedings "in all respects" was lifted on March 15, 2023 following Householder's criminal conviction.
   - Former PUCO Chairman Samuel Randazzo sought to reinstate the stay, which was partially granted pending resolution of his frozen assets.
   - On January 22, 2024, following Randazzo's federal indictment, the judge stayed the civil suit as it relates to Randazzo and his companies until the criminal case is resolved.
   - On March 14, 2024, the Court granted AG Yost's motion to stay this case until the criminal cases are resolved.
   - Following Randazzo's death, AG Yost stated that Randazzo's assets will remain frozen.
4. Householder Indicted by the State of Ohio (CR-24-690479-A)
   - While serving his 20-year federal prison sentence, Householder was indicted in Cuyahoga County on ten different felony criminal charges. One of these charges would ban him from ever holding public office in the state again.
   - The arraignment is set for May 13, 2024.

House Bill 6 Implementation Cases

1. 2021–2023 OVEC Rider Audit (24-153-EL-RDR)
   - On March 6, 2024, the PUCO directed Staff to issue a request for proposal for audit services to assist the PUCO with its prudency and performance review of the H.B. 6-created OVEC subsidy riders.
   - OMAEG intervened on March 27, 2024 to continue its opposition to the unreasonable OVEC subsidies.
2. 2020 OVEC Rider Audit (21-477-EL-UNC)
   - OMAEG filed comments on May 8, 2023 and May 23, 2023 arguing that customers should not pay to subsidize OVEC plants.
   - An evidentiary hearing began on October 17, 2023 and concluded on November 6, 2023.
   - On November 13, 2023, OMAEG filed an interlocutory appeal contesting the administrative law judges' ruling to strike significant portions of OMAEG's witness' testimony related to HB 6 and public corruption. The utilities filed memoranda contra on November 20, 2023.
   - Initial briefs were filed on February 12, 2024; reply briefs were filed on March 5, 2024.

House Bill 6 Implementation Cases Cont.

3. Audit Cases (17-974-EL-UNC, 20-1502-EL-UNC, 17-2474-EL-RDR, 20-1629-EL-RDR)
   - On August 16, 2022, the US Attorney asked the PUCO to stay the FirstEnergy corporate separation audit, HB 6 spending audit, Distribution Modernization Rider (DMR) audit, and Delivery Capital Recovery (DCR) Rider audit for six months.
   - This stay was initially granted on August 24, 2022, and later extended two more times before being lifted on February 26, 2024.
   - In the corporation separation and consolidated DMR and DCR audit cases, OMAEG requested that the PUCO amend the established procedural schedule to afford parties due process to be able to receive and review the voluminous amounts of documents provided by FirstEnergy Corp. after the stay was lifted.
   - The audit report in the HB 6 spending case is due August 28, 2024.

Statewide Cases

1. Implementing Prudency Reviews of Supplemental Transmission Spending
   - On September 28, 2023, OCC filed a complaint with FERC against PJM and Ohio's transmission utilities regarding the lack of oversight on supplemental transmission projects, which do not undergo rigorous review even though those project costs are charged to customers. OCC urges FERC to create a process to timely review the need, prudence, and cost-effectiveness of local transmission projects before construction begins.
   - OMAEG intervened on October 18, 2023.
   - PJM filed an answer on November 17, 2023; the Independent Market Monitor for PJM filed an answer supporting OCC's complaint on December 4, 2023.
   - Awaiting a procedural schedule.
2. AG Yost Suit to Declare Google a Public Utility (21-CV-H-06-0274)
   - A hearing on the issue is scheduled to begin on September 3, 2024.

AEP Cases

1. Long-Term Forecast Reports (24-501-EL-FOR; 24-1501-EL-FOR)
   - AEP and AEP Transmission Co. filed long-term forecast reports detailing projected energy demand, load growth, and planned investments in the transmission system.
   - OMAEG intervened in the AEP case on April 17, 2024 and in the AEP TransCo case on April 18, 2024.
2. Electric Security Plan V (23-23-EL-SSO)
   - OMAEG signed a settlement that significantly reduces new and increased rider charges, expands participation in both the BTCR Pilot and IRP-E, and ensures continued participation for OMAEG's participating/previously eligible members.
   - The settlement hearing concluded on November 3, 2023. Initial and reply briefs were filed on December 1, 2023 and December 22, 2023, respectively.
   - The PUCO approved the settlement on April 3, 2024, with one modification that required AEP shareholders, rather than customers, to fund a low-income bill assistance program costing $400,000/year.
3. Service Reliability (20-1111-EL0ESS)
   - OMAEG negotiated and signed a unanimous settlement agreement on March 27, 2024 that requires AEP to improve its reliability metrics, timely file a new reliability case, and provide OMAEG with certain customer disconnection data.

AES (DP&L) Cases

1. Smart Grid Phase 2 (24-112-EL-GRD)
   - AES proposes to spend a total of $755.5 million over ten years on Phase 2, which represents an annual increase of $8.65 million (or about 13%) compared to Phase 1.
   - OMAEG intervened on February 22, 2024.
   - An evidentiary hearing is scheduled to begin on September 23, 2024.
2. Electric Security Plan IV (22-900-EL-SSO)
   - ESP IV is for a term of three years.
   - OMAEG signed a settlement that significantly reduces new and increased rider charges and provides benefits to consumers, such as favorable transmission billing and incentives to support new or expanding businesses in AES' service territory.
   - After the hearing concluded on May 5, 2023, initial and reply briefs were filed May 26 and June 5, 2023.
   - The PUCO approved the settlement on August 9, 2023.
   - Applications for rehearing were filed on September 8, 2023 by AES and OCC. The PUCO granted the rehearing requests on October 4, 2023 to give itself more time.

Duke Case

1. Electric Security Plan V (24-278-EL-SSO)
   - The proposed ESP V is projected to cost $660 million over the proposed three-year term (beginning from June 1, 2025 through May 31, 2028). Duke proposes increased rider caps totaling over $438 million, new rider charges totaling at least $100.4 million, but likely more, and the unlawful reinstatement of utility-run energy efficiency and demand-side management programs.
   - OMAEG should intervene and participate in order to, among other things, limit the above-market charges being passed on to customers.

FirstEnergy Cases

1. Grid Modernization Phase II (22-704-EL-UNC)
   - An application to collect up to $770.5 million for grid modernization investments over the course of four years was filed on July 15, 2022.
   - OMAEG joined a settlement on April 12, 2024 that significantly reduces capital costs from $626.4 million to $421 million and requires FirstEnergy to create hosting capacity maps, incorporate the auditor's Grid Mod Phase I recommendations, and to withdraw anti-competitive and costly program proposals.
   - An evidentiary hearing on the stipulation is scheduled for June 5, 2024.
2. Electric Security Plan V (23-301-EL-SSO)
   - The proposed term of the ESP V is from June 1, 2024 through May 31, 2032.
   - The application proposes new and increased above-market charges totaling nearly $200 million in the first year alone.
   - ESP V would continue discriminatory access to the Economic Load Response Rider by only allowing access to customers or groups who signed the ESP IV Stipulation eight years ago, or who have a reasonable arrangement with FirstEnergy.
   - An evidentiary hearing began on November 7, 2023 and concluded on December 6, 2023.
   - Initial briefs were filed on January 19, 2024, and reply briefs were filed on February 9, 2024.

Dominion Cases

1. Rate Case (23-894-GA-AIR, et al.)
   - On October 31, 2023, Dominion filed an application to increase its distribution rates, seeking a total revenue requirement of $1.066 billion, a 24.80% increase in total operating revenue, and to increase its rate of return from 8.29% to 8.49%.
   - OMAEG intervened on December 11, 2023.
   - Awaiting a procedural schedule.

Supreme Court of Ohio Cases

1. Birch Solar Appeal (23-1011)
   - Birch Solar appealed the Ohio Power Siting Board (OPSB) denied Birch's request for a certificate to construct a solar-powered electric generation facility to the Supreme Court of Ohio.
   - The OPSB's decision was the latest in a disturbing trend of denying siting applications for large-scale generating projects based on the mere existence of perceived local opposition.
   - OMAEG filed an amicus brief on October 23, 2023 supporting Birch Solar's appeal because the OPSB's decision creates bad public policy.
   - OPSB filed its brief defending its decision on December 11, 2023, and Birch replied on January 19, 2024.
2. AES Ohio's Global Settlement (21-1473)
   - Oral arguments regarding whether the settlement unlawfully continued the Rate Stabilization Charge and denied residential customers required refunds are rescheduled to an unknown date.
   - OCC's motion to reschedule oral arguments was granted on December 5, 2023, but a new date has not been set.

CARPENTER LIPPS LLP

ATTORNEYS AT LAW

For more information, attend the OMA Energy Group Meeting

Additional Questions?

Contact:

Kim Bojko
Carpenter Lipps LLP
Telephone: (614) 365-4124
Email: bojko@carpenterlipps.com

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Electricity Market Update

May 8, 2024

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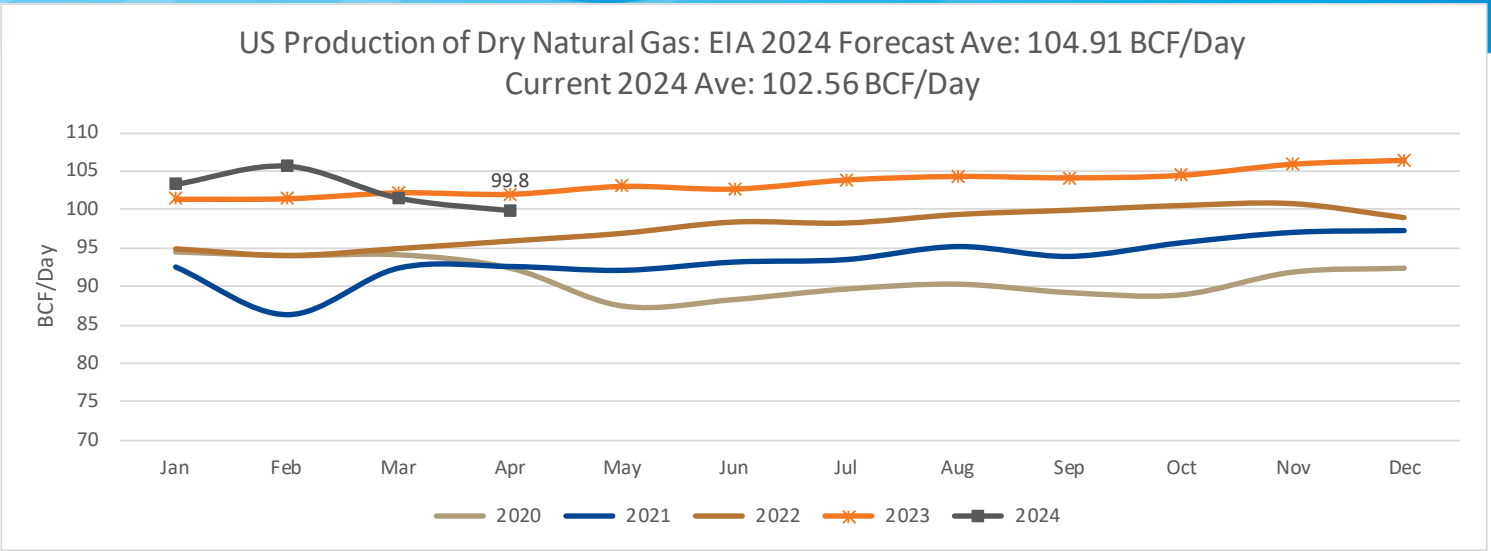
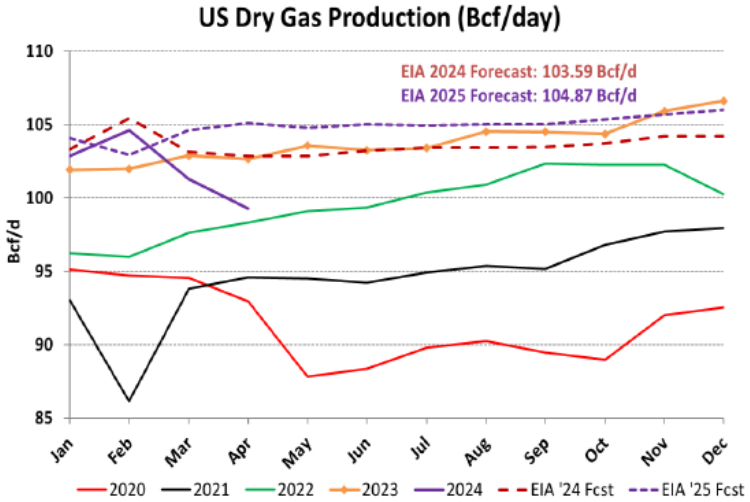
Natural Gas Production





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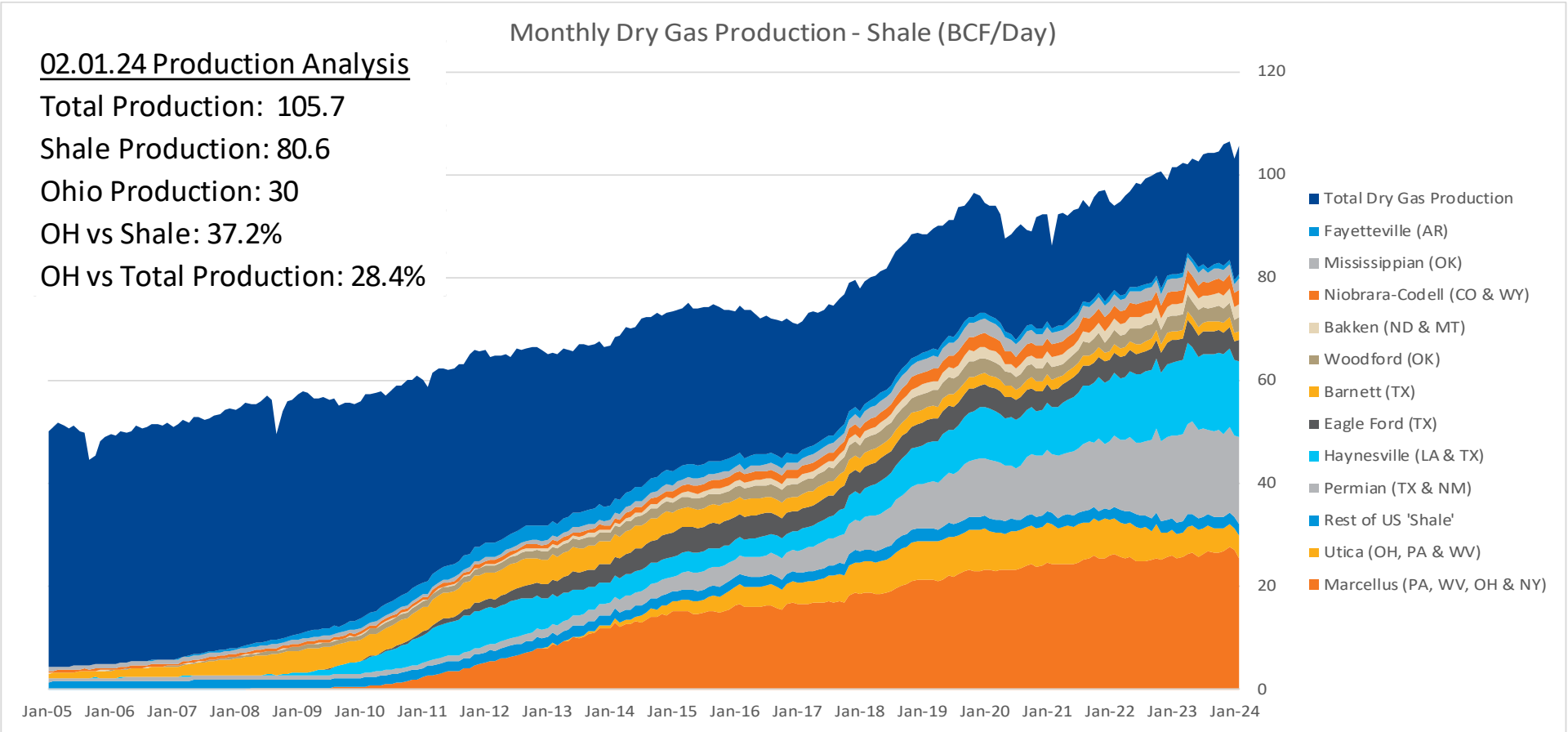
Dry Natural Gas Production



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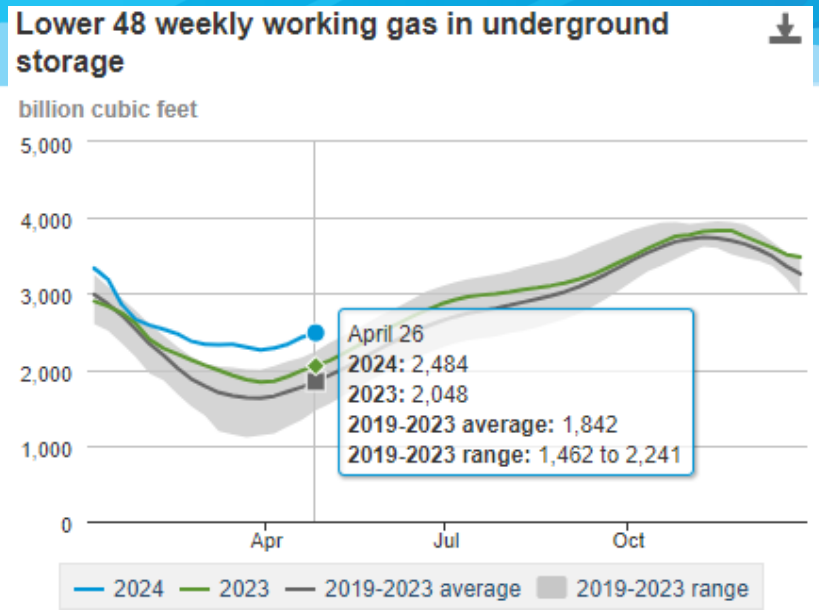
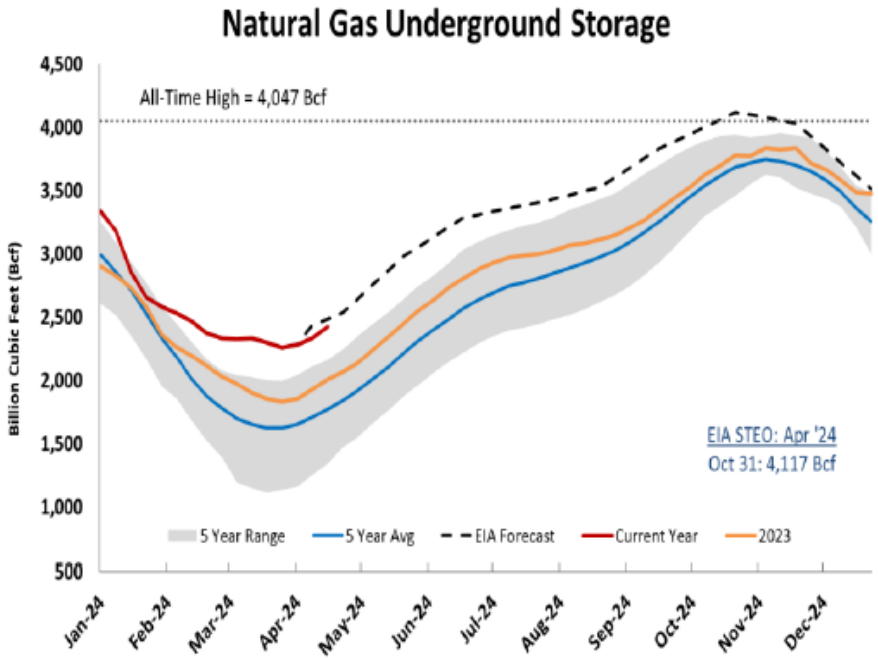
Natural Gas Storage



35% above 5-year average



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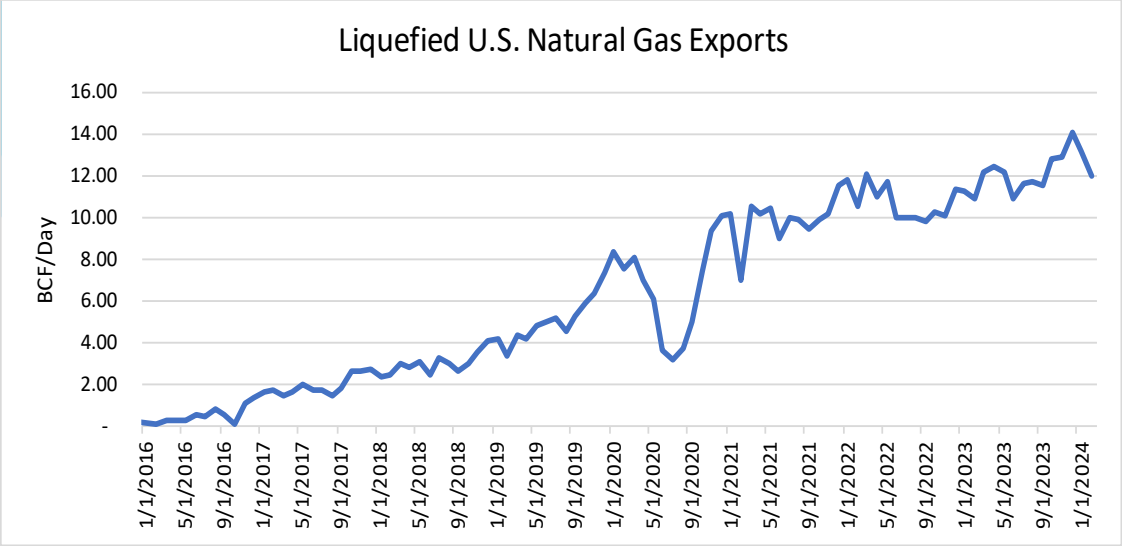
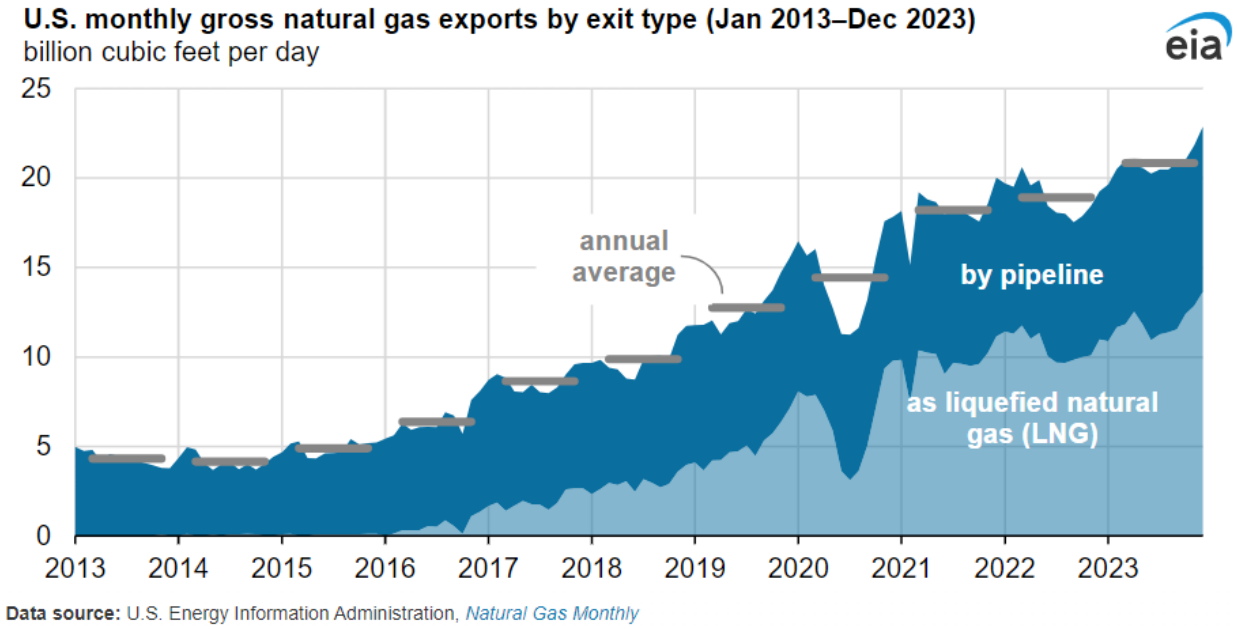
LNG Projected Exports





The US exported a record of 20.9 Bcf/d (10%) more natural gas in 2023 than in 2022

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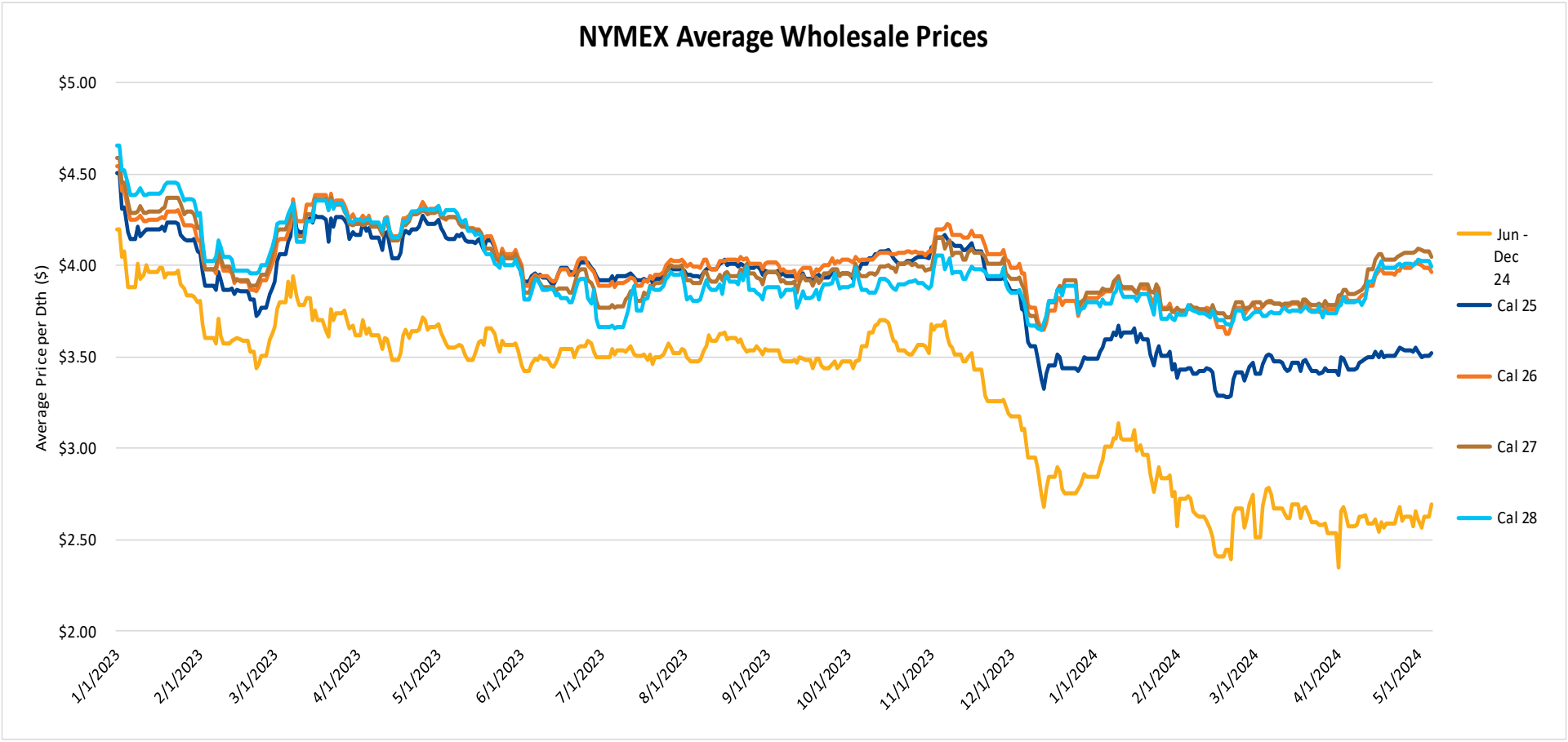
NYMEX Natural Gas Forwards



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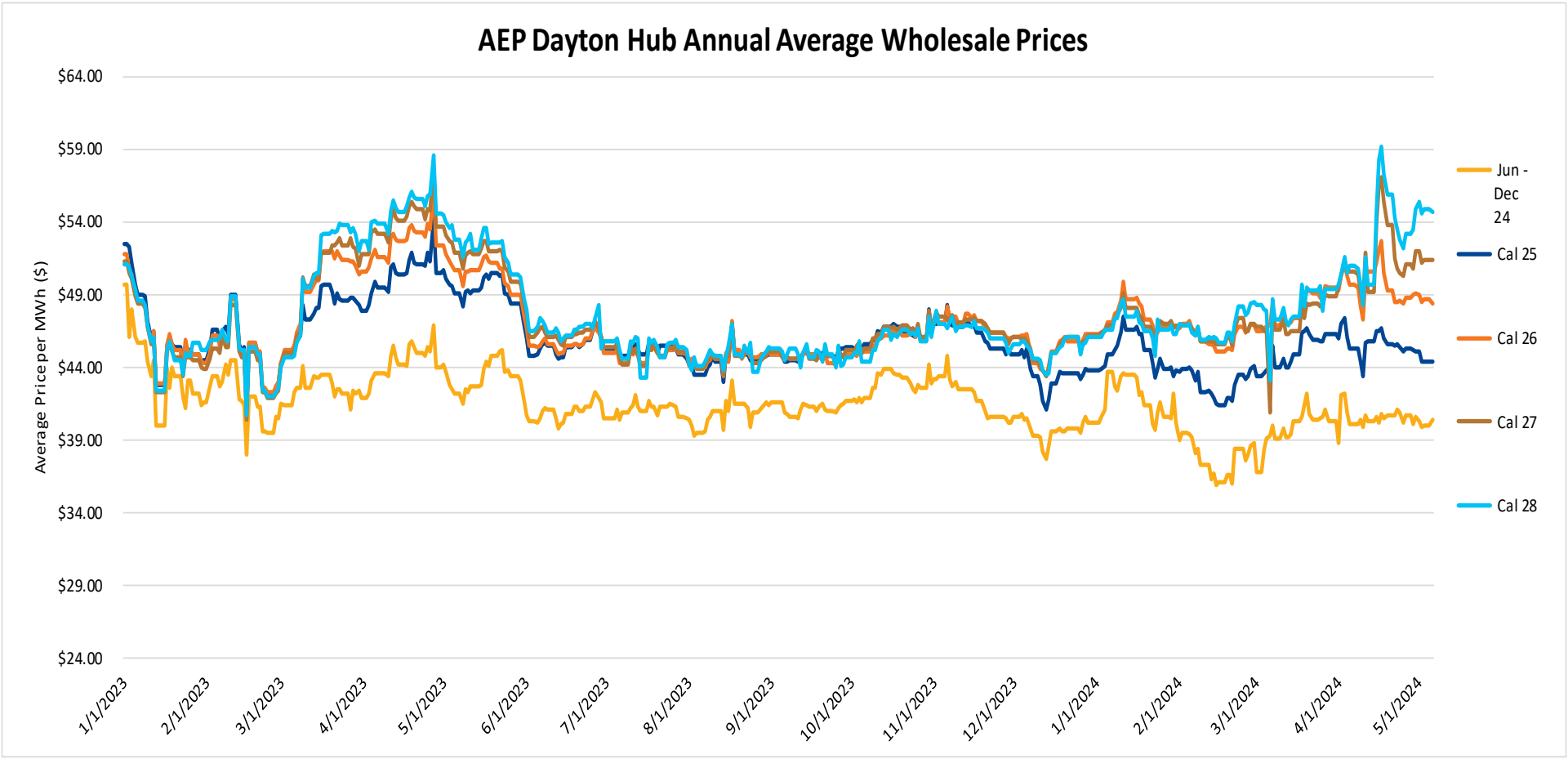
PJM AD Hub Electricity Forwards



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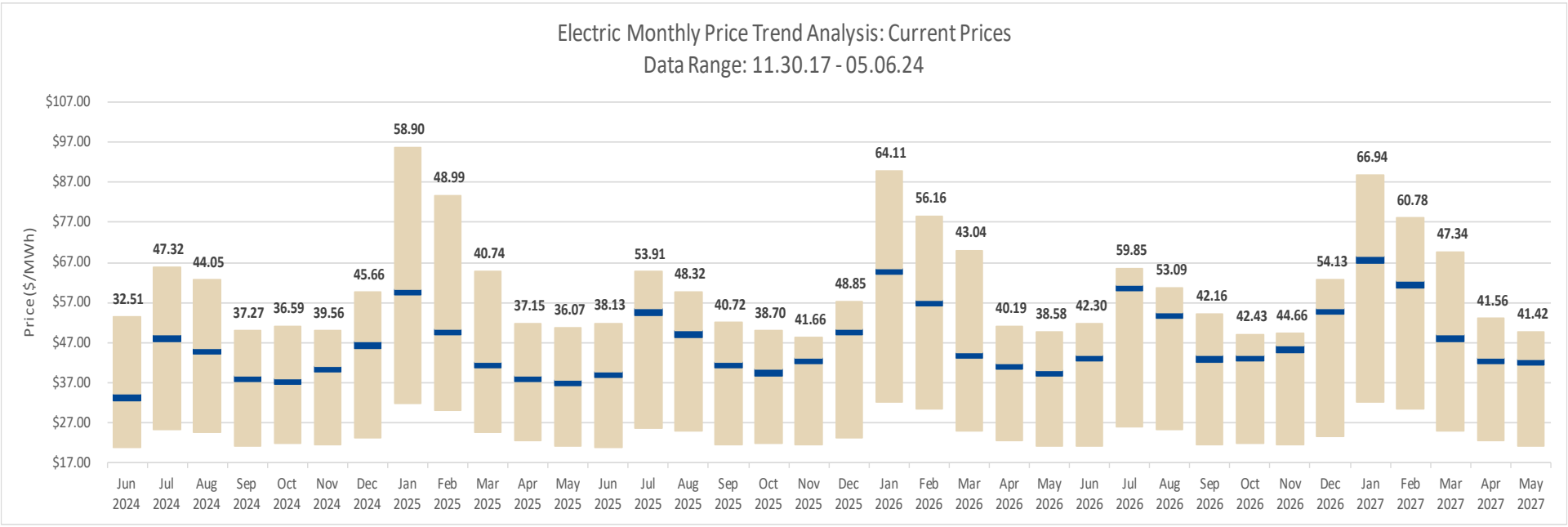
PJM AD Hub Electricity Forwards



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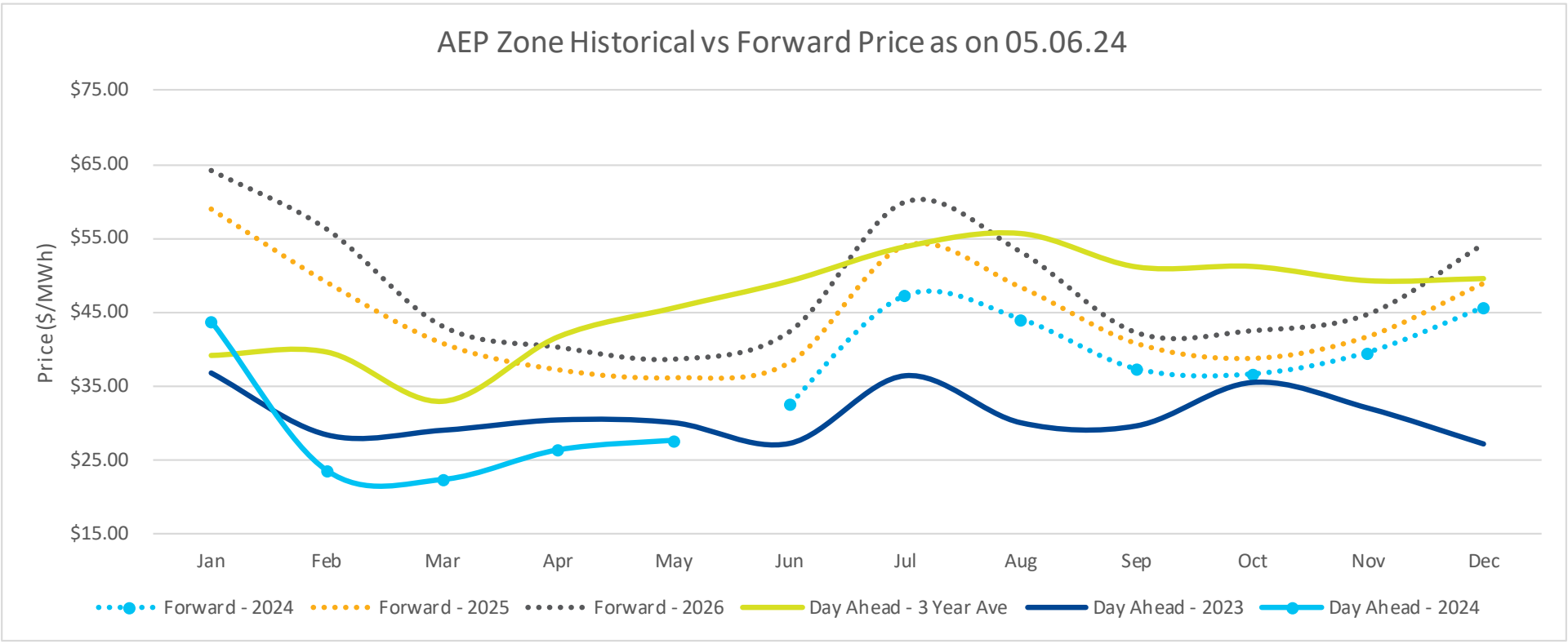
PJM AD Hub Electricity Forwards



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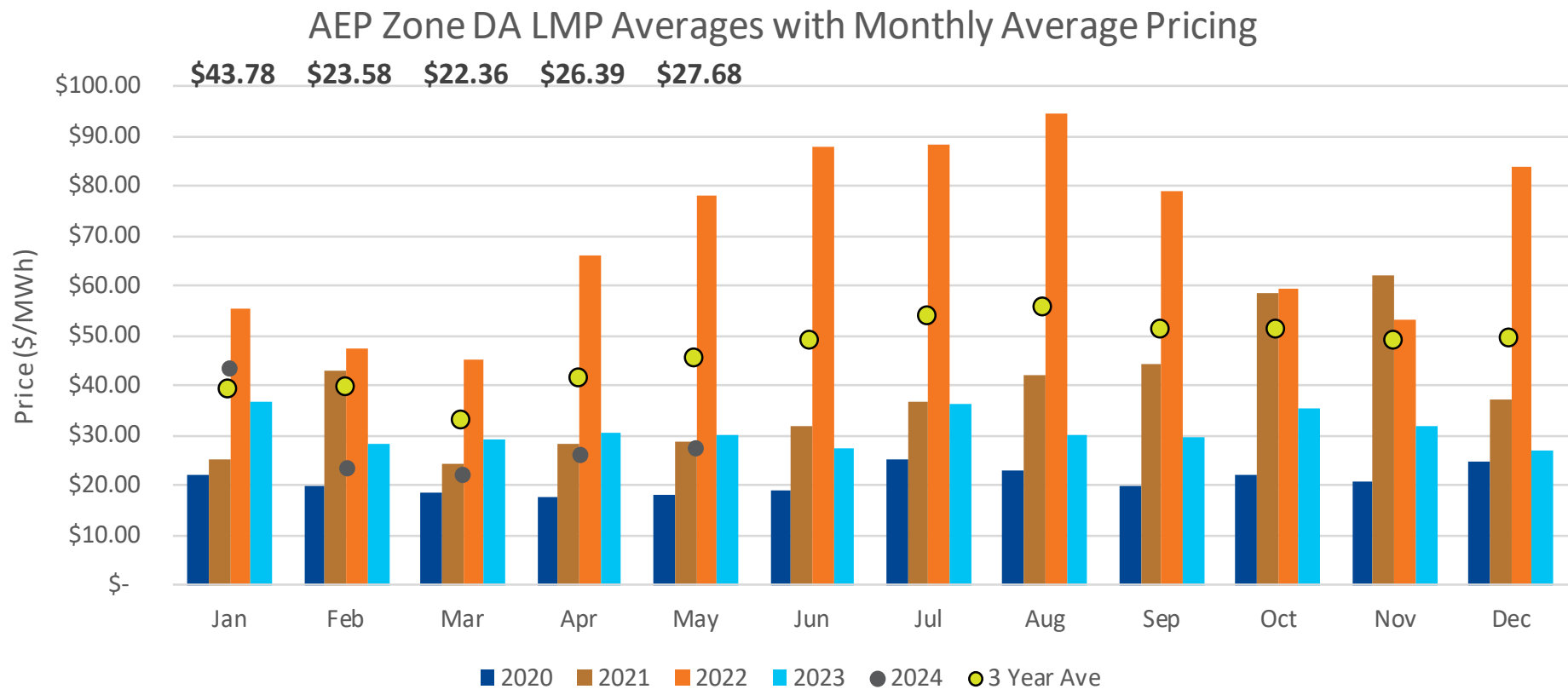
PJM AD Hub Day Ahead LMP's



*Pricing listed is for 2023 averages

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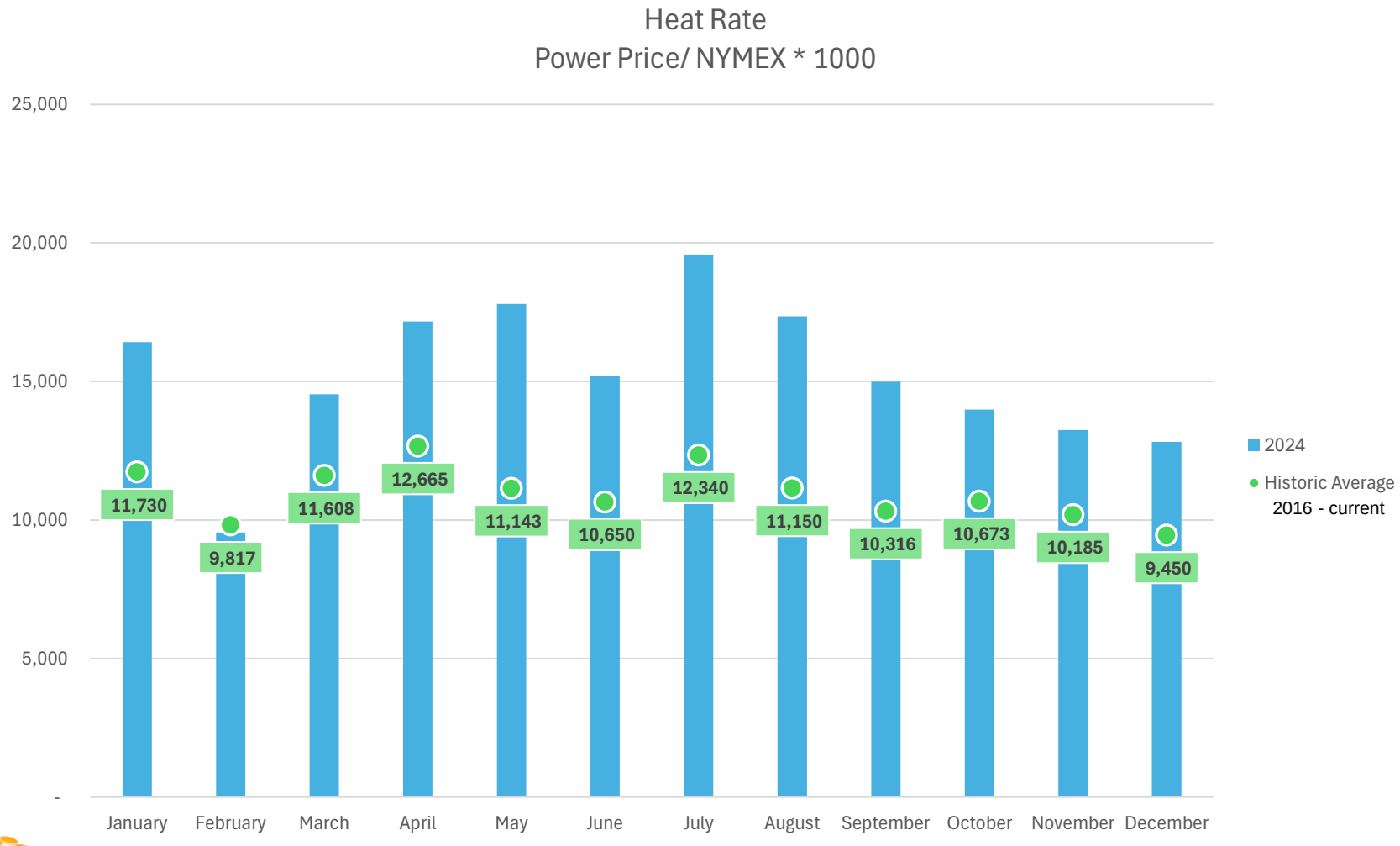
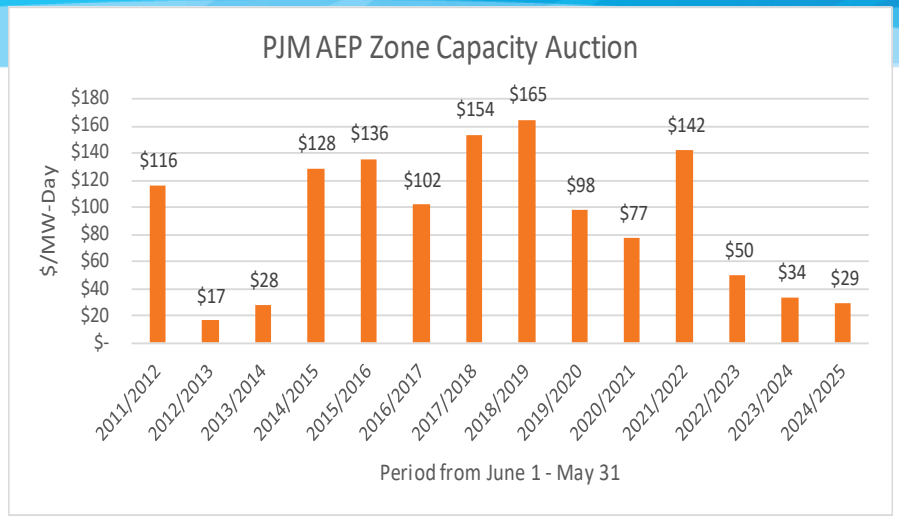
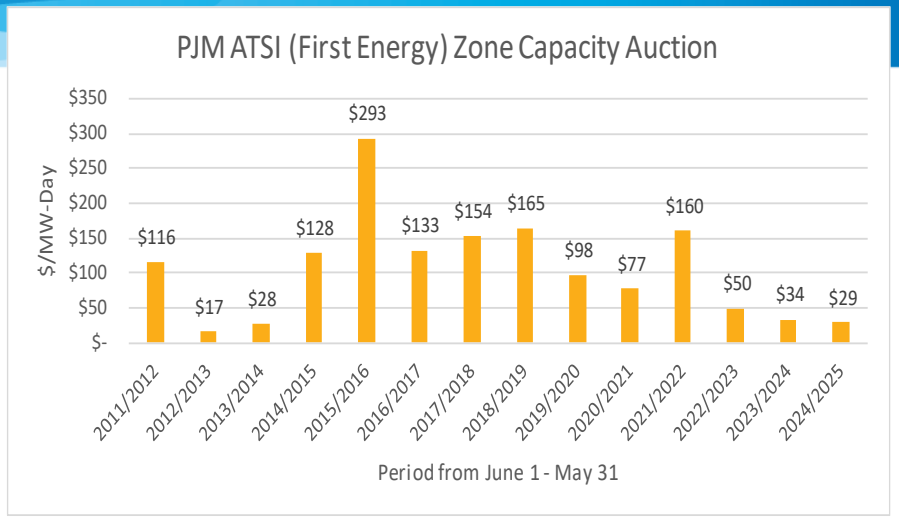
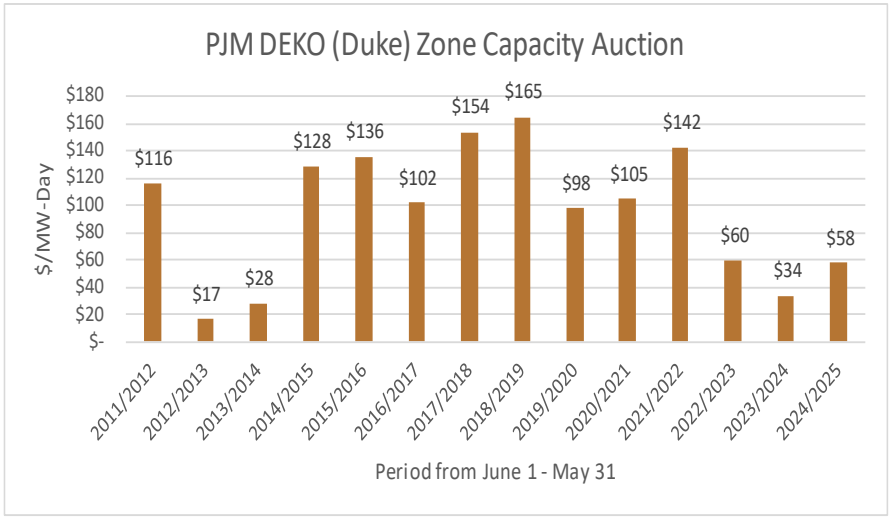
Heat Rate Increase

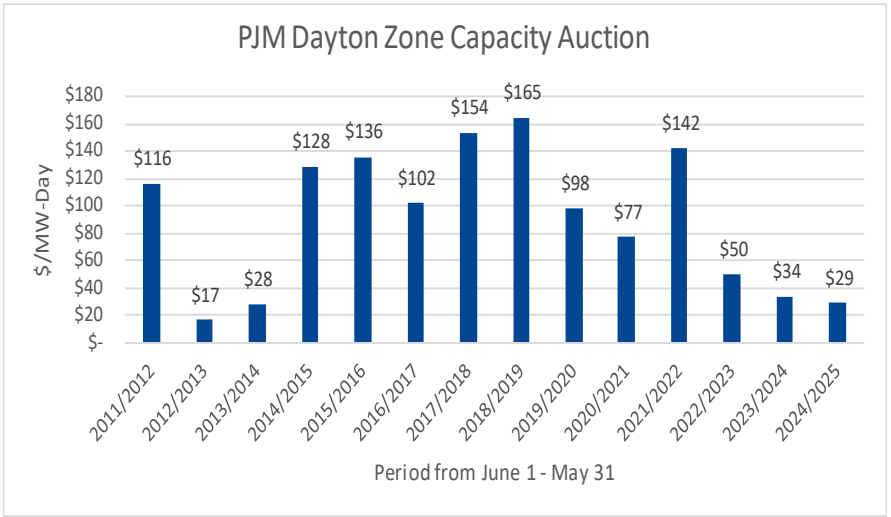


Capacity Auction Rates









Next Auction: July 2024

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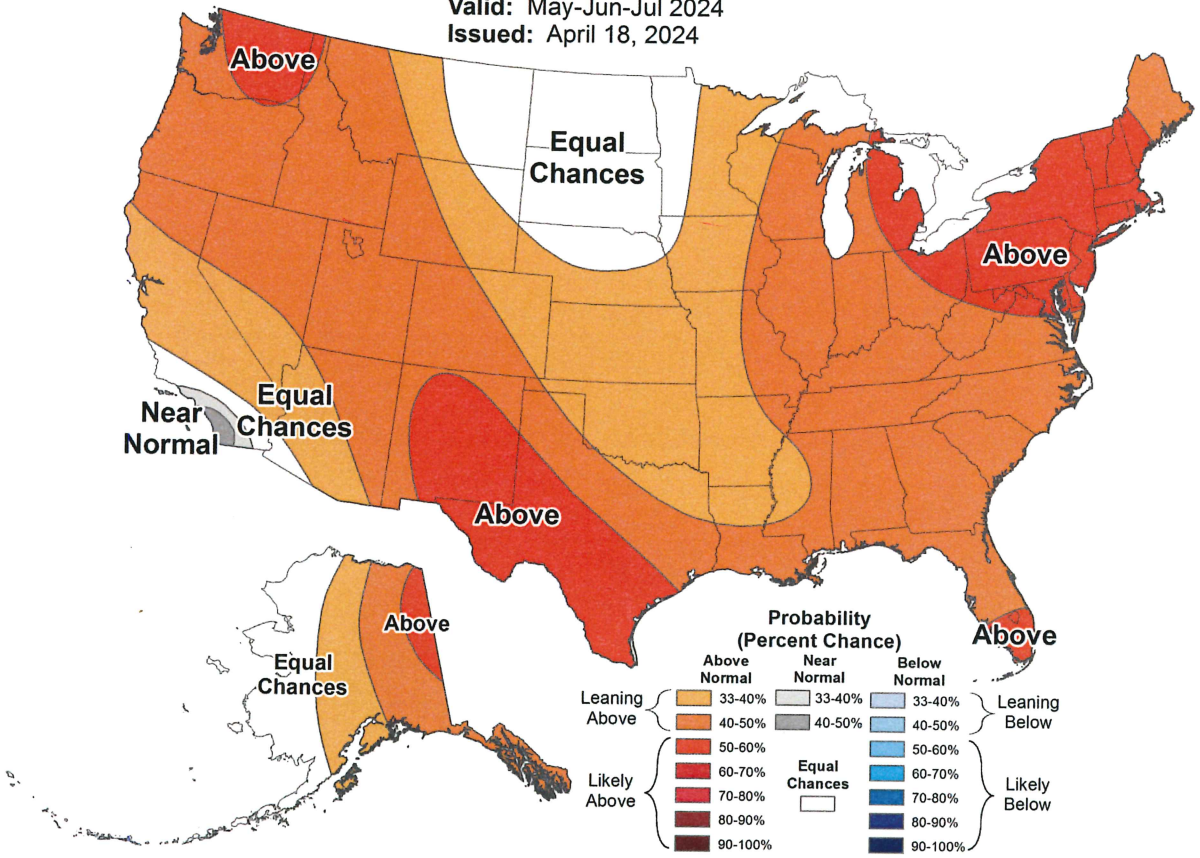
OMA Energy Committee
Natural Gas Update

Darin King
Columbia Gas of Ohio
May 8, 2024

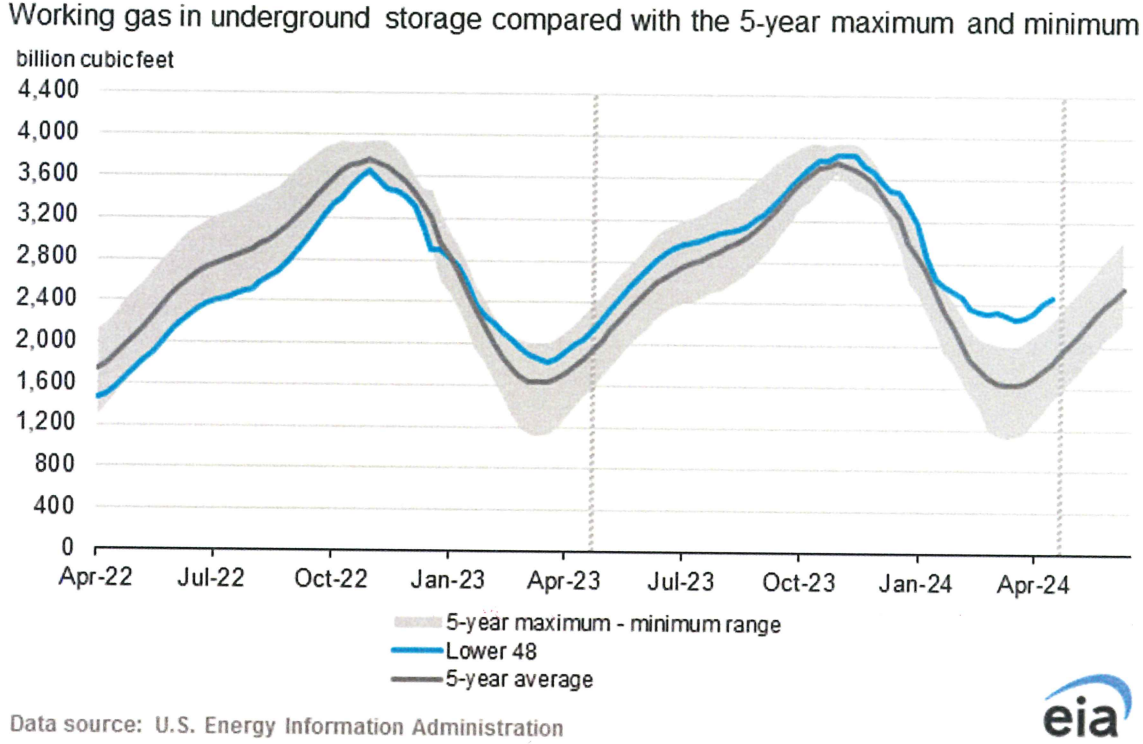
Seasonal Temperature Outlook

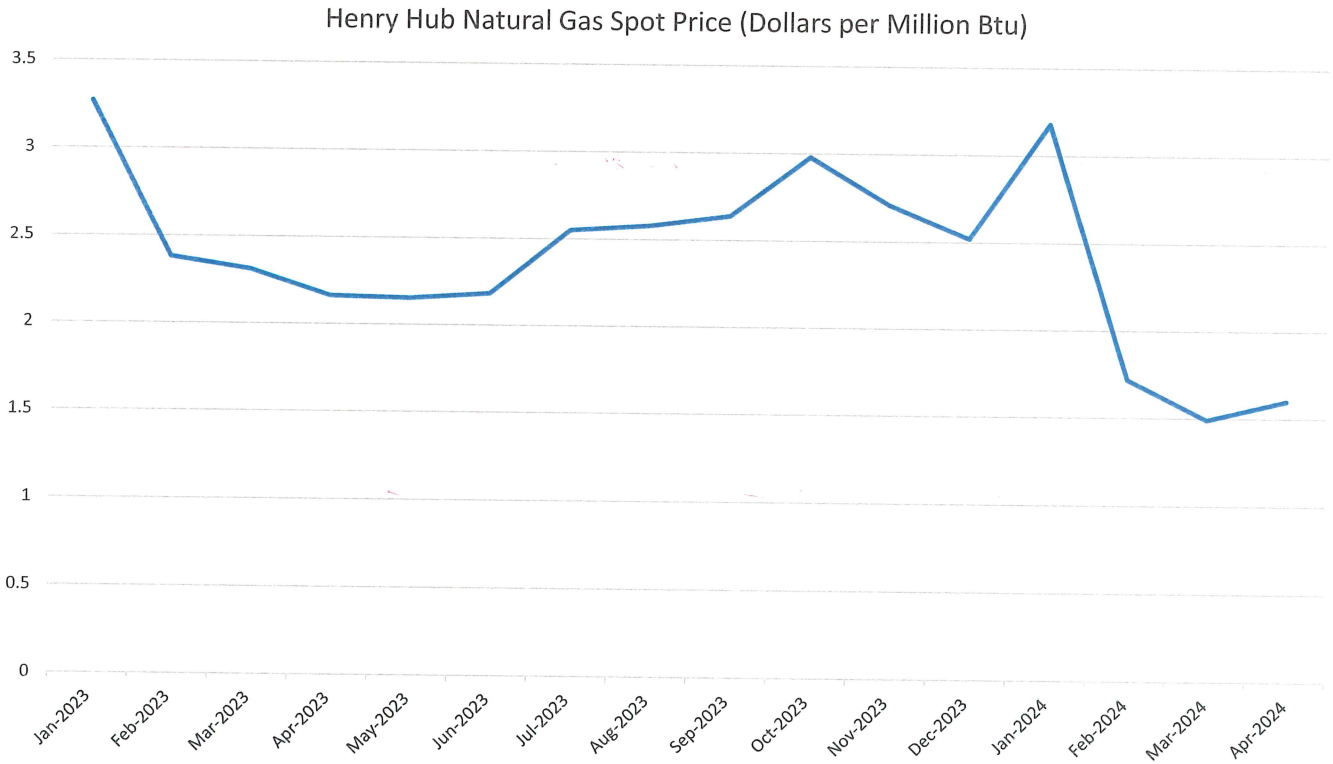
Valid: May-Jun-Jul 2024
Issued: April 18, 2024



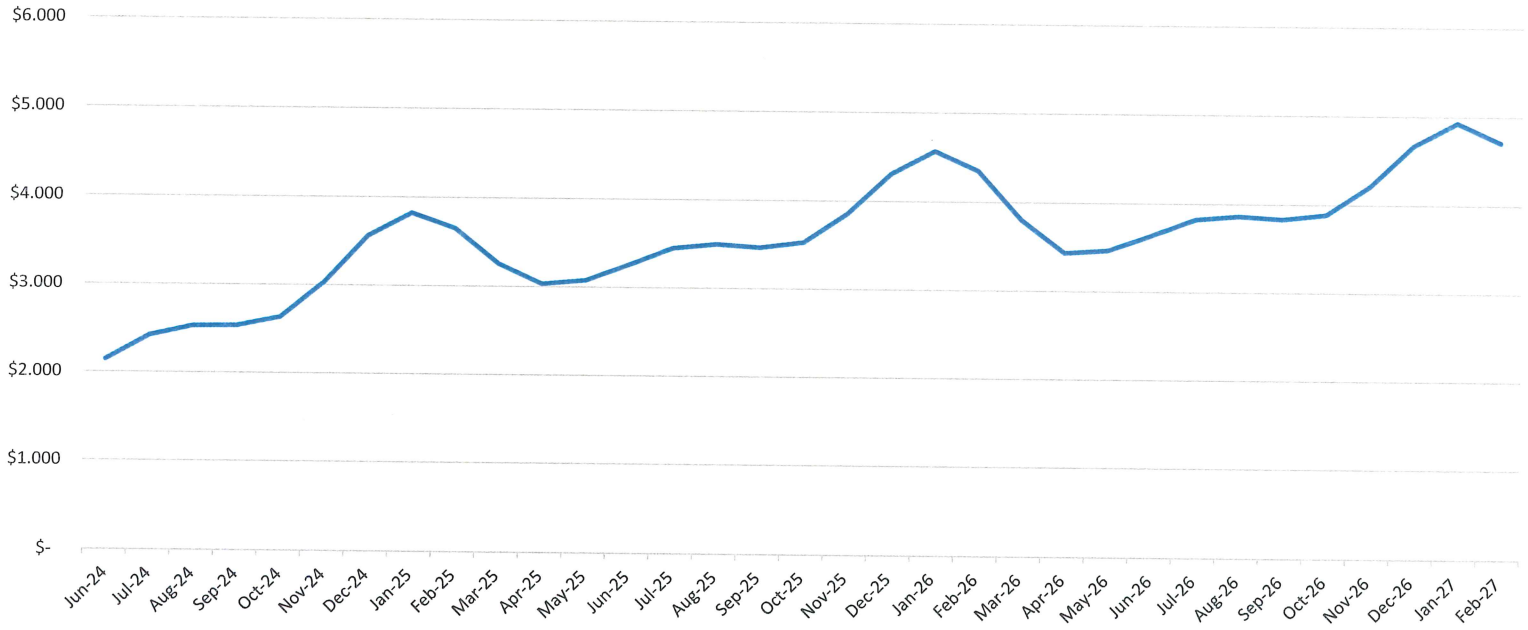
Storage

Working gas in storage was 2,484 Bcf as of April 26th.
436 Bcf higher than last year at this time, and 642 Bcf above the five-year average of 2,187.




Henry Hub Natural Gas Spot Price (Dollars per Million Btu)
3.5
3
2.5
2
1.5
1
0.5
0
Jan-2023
Feb-2023
Mar-2023
Apr-2023
May-2023
Jun-2023
Jul-2023
Aug-2023
Sep-2023
Oct-2023
Nov-2023
Dec-2023
Jan-2024
Feb-2024
Mar-2024
Apr-2024

NYMEX Henry Hub Forward Pricing



Source: NRG Energy

NYMEX Term Pricing

TERM	PRICE 2/24	PRICE 5/24
3 month	$1.80	$ 2.41 (+$0.61)
6 month	$2.06	$ 2.59 (+$0.53)
12 month	$2.57	$ 3.00 (+$0.43)
18 month	$2.77	$ 3.17 (+$0.40)

Hub Pricing

HUB LOCATION	2/2024	5/7/2024
Henry Hub	$1.52	$1.90 (+$0.38)
Houston Ship Channel	$1.10	$1.68 (+$0.58)
TCO Pool	$1.30	$1.63 (+$0.33)
Dominion South Point	$1.25	$1.58 (+$0.33)
TETCO M-2	$1.28	$1.58 (+$0.30)

Dominion, TCO, & TETCO pricing is Marcellus/Utica Area.

Natural Gas: A Natural Bridge to Fuel AI's Electric Demand

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TC Energy Preparing for Natural Gas Demand Surge