



**Energy Committee Agenda**  
**May 21, 2020**

**Welcome and Introductions**

Brad Belden, President, Belden Brick  
Committee Chair

**State Public Policy Report**

- State Government Overview
- FERC MOPR / House Bill 6 / Energy Harbor stock buyback

Ryan Augsburger, OMA Staff

**Member Spotlight:**

- *Update on business conditions in refinery manufacturing*

Rod Cundiff, Husky Energy, Lima Refinery

**Energy Engineering Report**

- Post-HB 6 efficiency programs
- FERC MOPR case and PJM reaction
- Transmission cost increases

John Seryak, PE, RunnerStone, LLC  
OMA Energy Engineer

**Counsel's Report**

- House Bill 6 and recession-proof utilities
- Ohio Power Siting Board
- PUCO case highlights

Kim Bojko, Carpenter Lipps & Leland  
OMA Energy Counsel

**Special Guest**

- *Impacts of the FERC MOPR ruling on electricity markets and prices*

Dr. Joseph Bowering, President, Monitoring Analytics, PJM Independent Market Monitor

Dr. Edward "Ned" Hill, Economist, John Glenn College of Public Policy, Ohio State University

**Natural Gas Market Trends**

Richard Ricks, NiSource, Columbia Gas of Ohio

**Electricity Market Trends**

Susanne Buckley, Scioto Energy

**Our Meeting Sponsors:**



**2020 Energy Committee Calendar**  
**Meetings begin at 10 a.m.**

Wednesday, December 2

OMA Energy Committee

Name	Company	Location
Kevin Abke	Ohio CAT	Perrysburg, OH United States
Matthew Allyn	Infinite Energy	Columbus, OH United States
Todd Altenburger	A E P Energy	Columbus, OH United States
David Arndt	Pentaflex, Inc.	Springfield, OH United States
Ryan R. Augsburg	The Ohio Manufacturers' Association	Columbus, OH United States
Bradley H. Belden	The Belden Brick Company	Canton, OH United States
Amy Berendt	FCA US LLC	Trenton, MI United States
Kimberly W. Bojko	Carpenter Lipps & Leland LLP	Columbus, OH United States
Dylan Borchers	Bricker & Eckler LLP	Columbus, OH United States
Daniel Bremer	Honda of America Manufacturing, Inc.	Marysville, OH United States
Susanne Buckley	Scioto Energy	Columbus, OH United States
Lael Campbell	Exelon Corporation	Washington, DC United States
Ben Cross	Russ College of Engineering, Ohio University	Athens, OH United States
Mickey Croxton	Plaskolite	Columbus, OH United States
Noah Dormady	The Ohio State University	Columbus, OH United States
Tari Emerson	Charter Steel	Saukville, WI United States
Todd Frank	Vistra Energy	Cincinnati, OH United States
Scott Frens	Fort Recovery Industries Inc.	Fort Recovery, OH United States
Ryan Frey	Vertiv	Delaware, OH United States
Richard Hawk	Hi-Tek Manufacturing, Inc.	Mason, OH United States
Ned Hill	The Ohio State University	Columbus, OH United States
Tyrel Jacobsen	AMG Vanadium LLC	Cambridge, OH United States
Jeremy Johnston	Cleveland State University	Cleveland, OH United States
Matthew F. Johnston	Worthington Industries, Inc.	Columbus, OH United States
Nathanael Jonhenry	Squire Patton Boggs	Columbus, OH United States
Ralph Joseph	B A S F Fort Amanda Specialties LLC - Lima	Lima, OH United States
Kathryn Karbo	Koch Companies Public Sector, LLC	Washington, DC United States
Jamie Karl	The Ohio Manufacturers' Association	Columbus, OH United States
John Keegan	PJM Interconnection	Norristown, PA United States
Madison King	U S Steel	Pittsburgh, PA United States
Matt Koppitch	Bricker & Eckler LLP	Columbus, OH United States
Larry Kunkel	Parker Hannifin Corporation	Mayfield Heights, OH United States
Gwen Kyle	United Energy Trading LLC	Columbus, OH United States
Mike LaWell	ArcelorMittal	Fairview Park, OH United States
Timothy Ling	Plaskolite	Columbus, OH United States
Sherri Loscko	Castings USA, Inc.	Dublin, OH United States
Richard Loth	McWane Ductile-Ohio, A Division Of McWane, Inc.	Coshocton, OH United States
Kenneth D. Magyar	D T E Energy	Canonsburg, PA United States
Vira Maruli	Liberty Casting Co., LLC	Delaware, OH United States
Mitchell Maynard	Vistra Energy	Columbus, OH United States
V. David Mazzia	B A S F Corporation	Florham Park, NJ United States
Becky Merola	Calpine Energy Solutions	Powell, OH United States
Scott Miller	Voinovich School, Ohio University	Athens, OH United States
Dennis Moore	Universal Metal Products	Wickliffe, OH United States
Jane M. Neal	AMG Vanadium LLC	Cambridge, OH United States
Melville Nickerson	N R G Energy Inc.	Chicago, IL United States
Dave Podmeyer	Continental Mineral Processing	Cincinnati, OH United States
John Rego	Benesch, Friedlander, Coplan & Aronoff LLP	Cleveland, OH United States
Richard Ricks	Columbia Gas of Ohio	Cambridge, OH United States
Meike Sahlmann	Covestro LLC	Hebron, OH United States
Jim Samuel	NRG Energy Inc. C/o Capitol Integrity Group	Columbus, OH United States
Christine Schwartz	Honda North America, Inc.	Marysville, OH United States
Tadd Schwarz	RJS Corporation	Akron, OH United States
Nick J. Scolaro	Morrison Products Inc.	Cleveland, OH United States
Maxim Serezhin	Standard Power Group Ohio	New York, NY United States
John Seryak, PE	Go Sustainable Energy, LLC	Columbus, OH United States
Jack Shaner	EnviroScience	Stow, OH United States
Stacey Simmons	Smiths Medical	Dublin, OH United States

OMA Energy Committee

Name	Company	Location
Christopher N. Slagle	Bricker & Eckler LLP	Columbus, OH United States
Mike Smaha	O-I	Arlington, VA United States
Duane Steelman	Zaclon LLC	Cleveland, OH United States
Samantha Summers	Whirlpool Corporation	Washington, DC United States
Robert W. Tansing	Athens Foods, Inc.	Brook Park, OH United States
Andrew R. Thomas	Levin College of Urban Affairs, Cleveland State University	Cleveland, OH United States
Dietrick Von Allman	McWane Ductile-Ohio, A Division Of McWane, Inc.	Coshocton, OH United States
Justin Walder	Nutrien	Northbrook, IL United States
Gene White	National Machine Co	Stow, OH United States
Peter Worley	Go Sustainable Energy, LLC	Columbus, OH United States
Gene Zychowicz	Crown Battery Mfg. Co.	Fremont, OH United States

Total Participants 69

**To: OMA Energy Committee**  
**From: Ryan Augsburger**  
**Re: Energy Public Policy Report**  
**Date: May 21, 2020**

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## **Overview**

Public policy activity over the past quarter has been dominated by government action to respond to the COVID-19 pandemic.

On the energy front, the controversial House Bill 6 remains in the rearview mirror. Implementation is still underway, with some provisions not effective until 2021. When the energy committee met in March, members reacted to the recent action by the federal government to restrict subsidized generation from entering power markets, standing HB 6 on its head. The resolution to that question remains front and center.

Other market distortion bills are pending in the legislature that will unfavorably impact the cost of power for Ohio businesses.

## **FERC Decision Tips HB 6 on its Head**

On December 19, the Federal Energy Regulatory Commission (FERC) issued an order to protect competitive wholesale electricity markets from subsidized power.

The order, which modifies and expands the Minimum Offer Price Rule (MOPR), was originally designed to prevent state subsidization of new natural gas generators. Under FERC's recent order, the expanded MOPR also applies to nuclear, coal, and renewable power plants that receive state subsidies. FERC did this to level the playing field.

The FERC order tips House Bill 6 on its head, according to the OMA analysis (included following Engineering report). The OMA with expertise provided by John Seryak of RunnerStone LLC warned of such market consequences last summer.

## **House Bill 6 Becomes Law**

Recall HB 6 which was rocketed through the General Assembly last year, provided subsidies for the owners of uneconomic power plants, namely the two nuclear power plants. The bill also notably provided a subsidy to the power plants owned by the Ohio Valley Electrical Corporation (OVEC). The bill also largely orders a stop to Ohio's utility-administered energy efficiency programs and renewable energy standards.

The bill in its final form will distort electricity markets denying customers of the long-term benefits of competition. New costs, some known and some unknown, will hit customers of all sizes.

Virtually all the warnings expressed by the OMA over the past year have materialized exposing manufacturers of all sizes to new costs. Just last week, the owner of the nuclear power plants took action to reward investors, sending hundreds of millions of dollars of revenue to be paid by captive Ohio customers and proving the bailout was not needed. See included resource material.

## **HB 6 Implementation**

The provisions of HB 6 became effective in late-October. The bill delegated immense new authority and price-setting to the PUCO and other state agencies. The OMA Energy Group has been participating in those proceedings to protect manufacturing interests.

## **Decoupling Revenue Guarantees Utility Record Revenue**

Among the HB 6 provisions that opened the door to unknown new customer costs was the creation of a decoupling rider. Six months after passage of the HB6, the PUCO gave approval to FirstEnergy utilities to place the new rider on customer bills. Under the mechanism, if annual revenue in a given calendar year is

less (or greater) than 2018's base distribution revenue, FirstEnergy utilities will charge (or credit) the difference to customers through the decoupling rider. 2018 produced record revenue for the utilities. Additionally, the rider will move tens of millions of dollars in "lost revenue" charges from the expiring energy efficiency rider into this new rider. See decoupling report appended to counsel's report.

### **FES Bankruptcy**

A settlement between FE, FES, and the stakeholders was finalized in late February. Energy Harbor now owns the nuclear power plants and other generating facilities formerly owned by FirstEnergy. In the wake of the FERC ruling, they must determine next steps.

In 2019, the power plant owners together with concerned local government leaders had used the plant closure announcements to lever political support for state and federal bailouts. The beneficiaries of any possible bailout would seem to include speculative investors (hedge funds), former parent FE, and local governments hoping to prevent local job loss and tax revenue.

### **Post HB 6 Legislative Activity**

In the months since HB 6 was completed both the Ohio House and Ohio Senate appear poised to do more. Unfortunately, customer protection does not seem to be in store. Instead we are monitoring new proposals that will protect utilities and erode Ohio's deregulation law.

#### **House Bill 247**

Months after lawmakers gave utilities and other interests the opportunity to force captive ratepayers to pay for new generation, HB 247 would go further in allowing distribution utilities to offer services beyond distribution. It seems unnecessary and anti-market. One utility is aggressively lobbying for this bill and has asked their large manufacturing customers to pen a letter of support. Don't be fooled. The OMA has been communicating extensively about this threat. The OMA opposes HB 247.

#### **House Bill 246**

Is a placeholder bill to modernize the laws governing the PUCO and OCC. There has been a lot of speculation on what the bill may contain. Too early to know for certain. No action since last report.

#### **House Bill 104**

Introduced by Representative Dick Stein (R-Norwalk), HB 104 is intended to spur research and development of molten salt nuclear reactors in Ohio via state tax dollars. The bill also advances Ohio as a hub for radioactive wastes. The OMA has written the primary sponsor to convey concerns. Many other Republican legislators have co-sponsored this unwise legislation.

#### **House Joint Resolution 2**

Representatives Don Manning of Youngstown and Jamie Callender of Lake County recently provided proponent testimony on HJR 2 to place on the ballot an amendment to the Ohio Constitution to ban foreign interests from owning critical energy infrastructure. The move dovetails with the pro-HB 6 China-bashing campaign. Some believe the resolution is political retribution to referendum proponents.

In today's global economy, a state provision against foreign ownership seems unwise. Precedents abound for other commercial activity. For example, foreign interests invest heavily in manufacturing businesses in Ohio. No action since last report. Seems to have cooled down.

#### **Senate "Comprehensive" Energy Reform**

In mid-October Senate Energy & Public Utilities Chairman Steve Wilson (R-Maineville) signaled the Senate would focus on grid reliability as a central component in the Senate's comprehensive energy reform package. This is a curious, albeit familiar refrain from a policymaker since the grid is more reliable than ever today. The OMA fielded testimony on Tuesday, March 2.

### **PJM on Resiliency and Power Auctions Delayed**

Throughout the recent legislative subsidy debates at the General Assembly, grid operator PJM Interconnect had been clear to dispel the myths of poor fuel diversity and electric supply shortages affecting “reliability.” The OMA has an analysis on current PJM activity but further proceedings at PJM will be needed for clarity. PJM has already delayed a planned energy auction for a full year, from May 2019. PJM suggests it could hold the auction as soon as December of 2020, or as late as March 2021. However, some parties are advocating at the FERC to delay the auction deep into 2021 to allow states time to pass legislation that would return pricing capacity to state regulatory authorities.

### **Protecting Competitive Electric Markets**

In 1999, with the passage of Senate Bill 3, Ohio began a transition to deregulated generation. That transition has delivered customer choice, cost-savings and innovation. One of the main tenets of deregulation was forcing then-integrated utility companies to sell or spin-off their generation. “Stranded costs” and other above-market surcharge constructs enabled the utilities to have their generation paid for by Ohioans for a second time. HB 6 represents yet another above-market payment to utilities and power plant owners by customers who realize no benefit.

The OMA has been a proponent of markets, supporting the original deregulation legislation and opposing utility profit subsidy schemes that distort the market and result in new above-market charges on manufacturers’ electric bills. Several noteworthy studies have demonstrated how the market delivers lower prices, choice and innovation without compromising reliability. NOPEC in August issued an updated study that pegs customer savings at \$24 billion over eight years. With the passage of HB 6, competitive markets are under attack in Ohio.

### **OVEC Bailout**

Last session, the OMA opposed legislation to provide over one hundred million dollars per year to the owners of aging coal plants (one in Ohio and one in Indiana) operated by the Ohio Valley Electric Corporation (OVEC). The OMA had also opposed subsidies for OVEC in rate cases at the PUCO. In a decision by the Supreme Court of Ohio in late 2018, the Court effectively allowed utilities to collect the rider to subsidize OVEC under terms of a specific Electric Security Plan (ESP). An OVEC bailout for the out years beyond the terms specified in the Court decision is now included in HB 6. OVEC faces an apparent dilemma from the FERC MOPR decision.

### **On-Site Generation Taxed in Ohio**

The Ohio Department of Taxation is sending out tax bills to third parties operating on-site generation, be it wind, solar or onsite gas generation. The Department contends that a customer who generates power should pay generation tax the same as a utility. The Department’s basis for collecting the tax is tenuous. The OMA supports a legislative correction for all forms of onsite generation. No further action.

### **Energy Standards Legislation**

After six years of back and forth policy battles, HB 6 dismantled the standards for efficiency and renewable energy. Siting requirements for large scale wind generation projects were not part of the debate. HB 6 will now give monopoly distribution utilities an unfair advantage in building new renewable energy at captive customers’ expense. The PUCO ordered energy efficiency programs to wind down beginning September 30, 2020, so manufacturers who are using rebates will want to claim them soon.

Cleveland.com

## With Ohio bailout law secured, FirstEnergy Solutions successor moves to increase share buybacks by \$300 million

Updated May 12, 2020; Posted May 12, 2020



The Perry nuclear plant in Lake County, seen here, and the Davis Besse plant near Toledo both will receive subsidies through a recently passed nuclear bailout law passed last year. (John Kuntz, The Plain Dealer)

By [Andrew J. Tobias, cleveland.com](https://www.cleveland.com)

- COLUMBUS, Ohio -- Leaders of a former FirstEnergy subsidiary, which Ohio electricity customers will soon begin paying \$150 million annually to subsidize under a nuclear bailout law Ohio officials passed last year, have moved to spend an extra \$300 million on repurchasing the company's own stock.

The stock buybacks, meant to benefit corporate shareholders, come less than a year after an aggressive multi-year lobbying effort by FirstEnergy that culminated in Gov. Mike DeWine and state lawmakers approving \$1 billion in bailout money funded by surcharges on Ohioans' electric bills. The company and elected officials who backed the bailout argued without state money, the power plants and their parent company would become insolvent.

The board of directors for the company now known as Energy Harbor on Friday voted to increase authorization for its stock buyback program from \$500 million to \$800 million, according to an investor presentation the company posted to its website. Energy Harbor can buy back the stock any time until Aug. 27., under the terms of a company plan, approved as the Akron company spun off from FirstEnergy as it emerged from bankruptcy proceedings earlier this year.

Private companies buy shares of their own stock to help increase overall share prices by reducing the number of shares available on the market. While the company's stock is not listed on any U.S. stock exchange, shares of Energy Harbor are available for purchase by the general public through private brokerage companies.

The company's stock was trading at \$36.01 a share when markets closed Tuesday evening, more than double the \$15.75 it cost when shares first began trading on April 7.

The Energy Harbor investors presentation says the company's "visible" cash flow generated by its nuclear plants is supported by "clean air zero emission credits," a term for the subsidy created by the nuclear bailout law, called House Bill 6. Energy Harbor owns the Perry Nuclear Power Plant in Lake County and the Davis-Besse Nuclear Power Station near Toledo. It argues "free cash flow increase from potential future carbon policy offers meaningful upside for Energy Harbor."

In a statement, the company said money for the stock buyback “is not related to the funding generated by House Bill 6 which does not begin until April 2021.”

“Once received, HB6 funds will be used to keep our nuclear units in Ohio operating, maintain more than 4,000 jobs, and generate 90 percent of the carbon free electricity for the State of Ohio,” the statement said.

But Ned Hill, an economic development professor at Ohio State University and critic of HB6, said he’s not surprised that Energy Harbor would move to repay its investors now that their subsidy is secure.

He also said contrary to the company’s arguments that it was in financial trouble, thus requiring the bailout, the increased share buyback is a sign Energy Harbor management is confident it’s going to make money.

“This was an act of socialism, where you socialize the risk and privatize the benefits,” Hill said. “So it’s no big surprise they’re now going to make sure their investors get a return from their investment in the political process. They won, so they get their cash.”

The subsidy is paid for by a rate increase on all Ohio electricity customers. Under the bill, from 2021 until 2027, every Ohio electricity customer would have to pay a new monthly surcharge that ranges from 85 cents for residential customers to \$2,400 for large industrial plants. The new charges will be offset by the elimination of different subsidies that paid for renewable energy projects.

FirstEnergy [spent years underwriting an expensive lobbying campaign](#) to get the legislation passed that included [spending millions of dollars to help elect politicians](#) who ended up supporting the bailout. That included helping then-State Rep. Larry Householder [win a bitterly contested fight among Republican state lawmakers](#) to lead the Ohio House. Company officials argued that without the subsidy, the aging plants would close, their jobs would be lost and Ohio’s energy options would be diminished.

FirstEnergy [emerged from bankruptcy in February](#), after spinning off FirstEnergy Solutions as a separate company. FirstEnergy now focuses on transmission and distribution of electricity through power lines. FirstEnergy Solutions changed its name to Energy Harbor, and now owns the nuclear power plants.

Todd Snitchler, a former chairman of the Ohio Public Utilities Commission who now runs a trade group for power plants that compete with Energy Harbor, said the stock buyback underscores arguments he and other House Bill 6 opponents made last year.

“If you look at the state of Ohio, and all the things that are going on there, and you find a company that’s found a way to extract \$1 billion from the pockets of Ohioans and is returning \$800 million to their investors, that doesn’t sound like a timely move to maintain a good appearance or good reputation,” said Snitchler a former Republican Ohio state lawmaker. “Given the struggle this country is going through, this feels poorly timed.”

Spokespeople for Householder, Senate President Larry Obhof and Gov. Mike DeWine have not returned messages seeking comment for this story.

#### **Read previous cleveland.com coverage**

[FirstEnergy Solutions emerges from bankruptcy, becomes Energy Harbor](#)

[Nuclear bailout bill passes Ohio legislature, signed by Gov. Mike DeWine](#)

[Nuclear bailout bill shows how big money can be put to work in the Ohio Statehouse](#)

[FirstEnergy and its allies, seeking nuclear plant bailout, have spent millions on influence campaign](#)

# FirstEnergy's bad math

5/15/2020

## THE EDITORIAL BOARD

Just a year ago, FirstEnergy was crying poor and demanding a \$1 billion bailout to save its nuclear power plants and the northwest Ohio jobs that go with them. Now, set to begin taking in the \$150 million a year subsidy from its customers, the company plans to spend \$800 million on a stock buyback plan to benefit its stockholders.

If that math seems a bit fuzzy, that's because it is.

But FirstEnergy specializes in that kind of bad math. Consider, for instance, that the bankrupt company argued it was in such dire financial straits that only a consumer bailout could save Davis-Besse and Perry nuclear power plants. Without the bailout, FirstEnergy would become insolvent, the plants would close, jobs would be lost, electric bills would climb, they warned.

### Read more Blade editorials

So the General Assembly approved House Bill 6, which adds a surcharge to bills of Ohio's electric customers from 2021 to 2027.

But at the same time, FirstEnergy gave \$1.88 million to Generation Now Inc. to fight a referendum campaign to roll back the bailout.

FirstEnergy and its employees also contributed more than \$1 million to lawmakers, candidates, and other public officials between 2017 and 2019, when the measure to add a bailout charge to consumers' bill passed the General Assembly.

FirstEnergy has since emerged from bankruptcy and spun off FirstEnergy Solutions, which was then renamed Energy Harbor. That company owns the nuclear power plants.

And its stockholders stand to benefit from the stock buyback plan. Companies use stock buybacks to repurchase their own stock and drive up the price of the rest of the shares.

Energy Harbor officials say the buyback and the bailout are unrelated because the surcharge won't show up on consumers' bills until 2021. That explanation doesn't add up, but keep in mind this company is prone to fishy math.

The stock buyback plan is a brazen slap in the face to every Ohio customer who will have to pony up to subsidize a pair of nuclear power plants that are financially troubled in the age of cheap oil and natural gas.

Ohio's lawmakers and its utility regulators should comb through every law and agreement relating to Energy Harbor in search of a way to claw back some of the money the company is sucking out of this state.

And failing that, they must, at the very least, remember this episode the next time the energy company comes with hat in hand, demanding its customers cough up even more.



**Testimony of David Johnson  
CEO, Summitville Tiles  
Substitute House Bill 6**

**Senate Energy and Public Utilities Committee  
The Honorable Steve Wilson, Chair**

**June 18, 2019**

Chairman Wilson, Vice Chair McColley, Ranking Member Williams, and members of the Senate Energy and Public Utilities Committee, I appreciate the opportunity to present opponent testimony on this legislation before your committee.

My name is David Johnson. I am the CEO of Summitville Tiles in Columbiana County. My company is one the last surviving manufacturers of ceramic tile and flooring brick in the nation. I am also a longtime member of The Ohio Manufacturers' Association, having chaired the organization in the early 2000s. As such, I have firsthand knowledge of Ohio's move to deregulate electric generation in 1999. I speak to you with these perspectives.

First let me say that I closely monitor legislative proposals that may adversely impact Ohio's manufacturing sector, particularly when such proposals directly impact Summitville Tiles. In this context, I am *awestruck* at the significant cost prospects posed for Ohio manufacturer's by Sub. House Bill 6, especially in the As Passed by House version (referred to a HB 6 hereafter).

My colleagues in the manufacturing sector count on affordable and reliable sources of clean energy in order to compete. But this bill is fraught with open-ended and potentially significant new costs that will be passed onto Ohio ratepayers in outlying years. And to what end?

It seems clear that the primary beneficiaries of all of this will be certain hedge funds, utility conglomerates and their shareholders – to the tune of hundreds of millions of dollars per year, subsidized by and on the backs of Ohio ratepayers and companies like Summitville Tiles.

HB 6 is so complex that I cannot begin to dissect all the features that are likely to impact us, if not immediately then within a few short years.

Provisions contained in the bill, for instance, offer *multiple* opportunities for new “riders” and cost add-ons, to be layered upon ratepayers. I have to wonder, frankly, whether or not such complexity in a bill such as this is *intentionally* designed to complicate the matter and make it harder to fight, without a battery of high-priced attorneys?

At its core, HB 6 purports the false notion that existing energy efficiency and renewable energy “riders” are to be “replaced” by a lower-cost “rider”...directed, supposedly, to resuscitate First Energy’s two Ohio nuclear power facilities, as well as two older coal generated power facilities (one of which is in Indiana!).

Yet, in the very language of HB 6, energy efficiency and renewable energy “riders” may be reinstated by electric utilities merely by filing with the PUCO, beginning in 2021.

Finally, I think it is important to recognize that this bill begins to re-regulate Ohio’s electricity generation segment, which was de-regulated twenty years ago, and that has produced upwards of \$3 billion in savings per year for Ohio’s ratepayers. This was the promise that led free-market business advocates to pursue deregulation all those years ago. I was there! Finally, now, the market is working and delivering lower-priced generation and more innovative energy products to customers.

Do we really want to replace free market energy options such as we fought hard to put into place with the veritable hand-picking of new “winners” and “losers” in Ohio’s energy sector based seemingly upon who (which utility conglomerate) has the most political clout with our General Assembly? I would hope not.

How does all of this impact Summitville Tiles? Conservative total cost estimates of HB 6 to Summitville are estimated to be on the order of \$100,000 over the course of the next five years, based upon current electricity consumption

tables. While this is not a dire, make or break cost factor...yet it *is* one more added cost to our electric bill at a time when energy costs should be going down.

Despite cost reductions realized by Ohio's 1999 deregulation of the electric generation component of our electric bill, Summitville has absorbed a 20% increase in its total electricity bill, averaged over the last decade, during a time when we downsized our operations by 40%. The cost variable here, clearly, is in all of the utility company "riders" that kept being added to our electric bill. When our competitors in China are undercutting our prices by 70%, it makes these well-intentioned charges by monopoly distribution utilities just another barrier to our success and vitality as a company. There is nothing in HB 6 to protect customers from runaway distribution costs.

Mr. Chairman and members of the Committee, before I conclude I want to paint a parallel. If a business seeking a cash infusion sought such a proposal in the private sector, the owners would be required to prove their case with credible audited financial statements. I sit on the board of a national chartered bank where lending is, by federal and state code, tied directly to independent audit and examination standards designed to mitigate risk of repayment.

In this case, the power plants are not seeking a loan, but a gift from Ohio ratepayers. I can think of no reason why they should not have to prove to the state exactly what their profitability is before being awarded subsidies on an annualized basis.

I'm sure you are aware of a recent credible study that suggests the nuclear power plants will in fact be profitable to the tune of nearly \$70 million annually once FES exits bankruptcy and sheds much of its debt. The OMA has estimated that even if the plants were losing \$90 million annually (as is estimated by the PJM Independent Market Monitor) then the owners would

pocket \$176 million per year, over \$1 billion over the term of the bill. That level of profit increases to over \$350 million per year if the two nuclear plants are in fact profitable.

If you remain favorable to interfering in the marketplace, then at a minimum I urge you to install safeguards to prevent windfall profiteering. Specifically, you can insert guardrails with the addition of an ironclad and independent profitability analysis and place a reasonable limit on both power plants' profits before the state can dole out Ohioans' moneys. These guardrails should be annual and in the event of windfall profits, then customers should be credited. The OMA staff and retained counsel would be happy to work with Senators to craft such a sensible consumer protection. And under no circumstances should this audit function run any risk that political influence may affect an outcome.

Mr. Chairman, in conclusion, I most respectfully urge you to oppose HB 6. This bill is in so many ways just plain bad for Ohio.

Thank you for the opportunity to visit with you today. Together with my colleagues from Belden Brick and Cooper Tires, and OMA's Energy Counsel, Ms. Kim Bojko, I would be pleased to respond to your questions.

## Energy

### **FirstEnergy Solutions Successor Seeks to Buy Back \$300M in Additional Shares** **May 15, 2020**

Leaders of Energy Harbor — formerly known as FirstEnergy Solutions — have moved to repurchase an additional \$300 million of its own stock, according to a **report this week at Cleveland.com**. (The Statehouse News Bureau **also covered** the story.) This comes as Ohio electricity customers — including manufacturers — are about to subsidize the company to the tune of \$150 million annually through surcharges imposed by House Bill 6, last year's nuclear bailout law. The article quotes Ned Hill, a professor at The Ohio State University, who said contrary to the company's arguments that it was in financial trouble, the buyback shows Energy Harbor's management is confident it will make money as it now rewards shareholders.

Nearly a year ago, as he delivered **OMA opponent testimony** on HB 6, former OMA Chairman David W. Johnson of Summitville Tiles urged Ohio lawmakers to require an annual, independent profitability analysis before the state doled out Ohioans' moneys to the generation company that is now Energy Harbor. That, of course, didn't happen. Join the discussion at the **OMA Energy Committee meeting next week**. 5/13/2020

### **Pandemic Sparks Slump in Wholesale Electricity Prices** **May 15, 2020**

Due to the COVID-19 crisis, the International Energy Agency expects the biggest worldwide decline in electricity consumption since the Great Depression, **according** to *The Wall Street Journal*. "It is as if Germany and France were both turned off for the year," the story notes. In the U.S., the drop has been most severe in New York City, where wholesale power prices averaged \$16.57 a megawatt-hour in the first six days of May — down by more than a quarter from the start of the 2020. Meanwhile in Ohio, despite lower electricity consumption, Ohio electric distribution utility FirstEnergy is assured to enjoy record profits due to the **new decoupling rider** authorized by

HB 6. Under the mechanism, if annual revenue in a given calendar year is less (or greater) than 2018's baseline revenue, FirstEnergy utilities will charge (or credit) the difference to customers through the decoupling rider. 5/11/2020

### **COVID-19 Continues to Inflict Damage on Renewable Industries** **May 8, 2020**

The U.S. renewable energy industry continues to suffer from the pandemic. As many as 120,000 jobs in solar and 35,000 in wind could be lost, trade groups say. The wind industry, in particular, is plagued by slowdowns in obtaining parts from overseas, according to the **AP**. 5/4/2020

### **Infographic: America's Growing Dependency on China for Essential Minerals, Rare Earth Metals** **May 8, 2020**

Today, the U.S. is 100% import-reliant on many minerals and metals that are essential for defense technologies, consumer goods, and clean energy technology. VisualCapitalist.com has published a **new infographic** to spotlight China's dominance in the production of critical minerals needed for the new energy era. 5/7/2020

### **In 2019, U.S. Energy Production Exceeded Consumption for First Time in 62 Years** **May 1, 2020**

In 2019, for the first time since 1957, America's energy production exceeded energy consumption on an annual basis, **according** to the U.S. Energy Information Administration. Domestic energy production has grown substantially during the past decade due mostly to increased crude oil and natural gas production from hydraulic fracturing and horizontal drilling. Meanwhile, due to the COVID-19 shutdown, U.S. fracking activity in April was poised to suffer its largest-ever monthly drop, according to **reports**. 4/29/2020

## How Oil Prices Went Sub-Zero April 24, 2020

Oil prices fell into negative territory for the first time in history this week, leaving oil producers to effectively pay others to store their crude. With the sudden reduction in the demand for fuel, **some experts say** a second wave of negative pricing could emerge. VisualCapitalist.com has created **this infographic** to tell the story of what led to this week's oil price crash. *4/21/2020*

## U.S. Coal Production Expected to Fall 22% from 2019 April 17, 2020

The U.S. Energy Information Administration (EIA) **forecasts** that U.S. coal production will be down 22% from 2019 and that energy-related CO2 emissions will decrease by 7.5% in 2020. It also predicts that the U.S. will again be a net importer of crude oil and petroleum as domestic oil production continues to decline due to low energy prices. *4/13/2020*

## Renewable Energy Sector Hit Hard in March April 17, 2020

The coronavirus outbreak has dealt a blow to more than just traditional energy producers. More than 106,000 jobs in the clean energy sector were lost in March, according to a **new study** conducted by BW Research Partnership for the E2 advocacy group. The analysis showed losses in several areas of the clean energy sector, including energy efficiency, renewable power generation and alternative transportation. *4/15/2020*

## Analysts: Retail Gasoline Prices Could Fall Below \$1 April 10, 2020

Reports circulated this week that gasoline prices at distributors around the country are falling fast as the supply grows and demand has been cut in half due to stay-at-home orders in most states.

Analysts have said gasoline prices at the pump **could fall to under \$1** in more parts of the country, with some wholesale prices under 20 cents a gallon and as low as 10 cents a gallon in some parts of the Midwest. *4/9/2020*

## Capacity Market Prices Not Expected to Increase Due to FERC's MOPR Ruling April 10, 2020

The **Independent Market Monitor** recently studied how the change in the Minimum Offer Price Rule (MOPR) by the Federal Energy Regulatory Commission (FERC) will impact PJM capacity market prices. The study concludes that the change should not increase PJM capacity market prices due to exemptions for various existing resource types (e.g. demand response and renewable energy), as well as little change in the handling of new natural gas power plants. Another reason cited by the study: existing state-subsidized nuclear plants outside Ohio being able to bid at competitive prices, lower than the minimum offer prices, through the resource specific exemption. *4/9/2020*

## What's Happening in the Energy Markets? April 3, 2020

The U.S. Energy Information Administration has **several data tools** that offer a glimpse at current energy markets, all of which are feeling the effects of COVID-19. You can investigate regional electricity use, petroleum supplies, gasoline and diesel fuel prices, natural gas storage, and much more. *3/31/2020*

## Electricity Demand Falls Across PJM's Territory March 20, 2020

Electric demand across regional transmission organization **PJM's** 13-state footprint — which includes all of Ohio — has declined this week as consumers hunker down due to the spread of the coronavirus. As businesses and public entities take steps to protect employees, PJM says such actions are bound to translate into further changes in the demand needs of its 85 million customers. *3/18/2020*

## PJM Capacity Market Timeline Proposed March 20, 2020

This week, PJM **filed tariff changes** at the Federal Energy Regulatory Commission (FERC) in response to its **landmark order** — issued in December to protect competitive wholesale electricity markets against unfair competition from subsidized actors.

The changes to the Minimum Offer Price Rule (MOPR) will potentially affect revenue for Ohio's two nuclear power plants, OVEC's coal-fired power plants, select large-scale solar projects, and the Sammis coal-fired power plant. All of these power plants are eligible to receive direct subsidies from Ohio ratepayers as a result of last year's House Bill 6, or are receiving indirect subsidies in the case of Sammis.

PJM has recommended a 35-day comment period, and a six-and-a-half-month lead time from FERC's acceptance of its tariff changes to when it would hold the next capacity auction. PJM's capacity auction, already a year behind, may not occur until late 2020. 3/19/2020

### **Pennsylvania to Join the Regional Greenhouse Gas Initiative as EnergyHarbor Rescinds Nuclear Plant Closure March 20, 2020**

Pennsylvania's nuclear and renewable energy power plants may continue to receive PJM capacity revenue — while Ohio's may not. Here's why:

It has been reported that EnergyHarbor, the company formerly known as FirstEnergy Solutions (FES), has **rescinded its closure** of the Beaver Valley nuclear power plant in Pennsylvania. Not that long ago, FES had argued to the Pennsylvania General Assembly that the plant was uneconomical, but it failed to win approval of state subsidies — the opposite of what happened in Ohio. Now Pennsylvania intends to join the multi-state carbon market known as the Regional Greenhouse Gas Initiative (**RGGI**), prompting the reversal of Beaver Valley's closure. RGGI's compensation to nuclear power plants for no-carbon power is unlikely to be qualified as a state subsidy. 3/19/2020

### **OMA Energy Committee Gets Insight Into Markets During Turbulent Times March 13, 2020**

This week, the OMA Energy Committee held its first quarterly meeting of 2020 to review numerous regulatory and legislative matters that could affect Ohio manufacturers, including post-House Bill 6 activity and the December **2019 FERC order**.

Meeting highlights included a presentation from Tim Ling, corporate environmental director at Plaskolite, who provided insightful analysis into energy management in an unstable environment. Greg Bechert of Scioto Energy gave members a comprehensive look at **electricity market trends**, while Richard Ricks of NiSource, Columbia Gas of Ohio briefed members on **natural gas trends**. Also discussed was the recent drop in oil prices and **its impact** on oil and natural gas supplies.

The **next meeting** of the OMA Energy Committee is scheduled for Thursday, May 21. All members are welcome to register for in-person or by-phone participation. 3/12/2020



Among this week's presenters at the OMA Energy Committee's meeting was Tim Ling, corporate environmental director at Plaskolite.

### **How Would You Decide These Ohio Cases on Electricity Rates? March 13, 2020**

Regulatory proceedings have big impacts on how much Ohioans pay for their electric service. To drive that point home, the *Energy News Network* this week published an **online, interactive segment** that allows readers to decide how they would rule on real cases recently decided by the Public Utilities Commission of Ohio or the Supreme Court of Ohio. After answering, readers find out how their answers compare to what actually happened. 3/12/2020

**Energy Legislation**  
Prepared by: The Ohio Manufacturers' Association  
Report created on May 19, 2020

- HB6**      **CLEAN AIR PROGRAM** (CALLENDER J, WILKIN S) To create the Ohio Clean Air Program, to facilitate and encourage electricity production and use from clean air resources, and to proactively engage the buying power of consumers in this state for the purpose of improving air quality in this state.  
*Current Status:* 7/23/2019 - **SIGNED BY GOVERNOR**; Eff. 10/22/19  
*State Bill Page:* <https://www.legislature.ohio.gov/legislation/legislation-summary?id=GA133-HB-6>
- HB20**      **SOLAR PANEL LIMITATIONS** (BLESSING III L) To prohibit condominium, homeowners, and neighborhood associations from imposing unreasonable limitations on the installation of solar collector systems on the roof or exterior walls of improvements.  
*Current Status:* 6/26/2019 - House State and Local Government, (First Hearing)  
*State Bill Page:* <https://www.legislature.ohio.gov/legislation/legislation-summary?id=GA133-HB-20>
- HB55**      **OIL AND GAS WELL ROYALTY STATEMENTS** (CERA J) To require the owner of an oil or gas well to provide a royalty statement to the royalty interest holder when the owner makes payment to the holder.  
*Current Status:* 2/26/2019 - House Energy and Natural Resources, (First Hearing)  
*State Bill Page:* <https://www.legislature.ohio.gov/legislation/legislation-summary?id=GA133-HB-55>
- HB94**      **LAKE ERIE DRILLING** (SKINDELL M) To ban the taking or removal of oil or natural gas from and under the bed of Lake Erie.  
*Current Status:* 9/17/2019 - House Energy and Natural Resources, (First Hearing)  
*State Bill Page:* <https://www.legislature.ohio.gov/legislation/legislation-summary?id=GA133-HB-94>
- HB95**      **BRINE-CONVERSION OF WELLS** (SKINDELL M) To alter the Oil and Gas Law with respect to brine and the conversion of wells.  
*Current Status:* 9/17/2019 - House Energy and Natural Resources, (First Hearing)  
*State Bill Page:* <https://www.legislature.ohio.gov/legislation/legislation-summary?id=GA133-HB-95>
- HB104**      **NUCLEAR DEVELOPMENT** (STEIN D) To enact the Advanced Nuclear Technology Helping Energize Mankind (ANTHEM) Act by establishing the Ohio Nuclear Development Authority and the Ohio Nuclear Development Consortium and authorizing tax credits for investments therein.  
*Current Status:* 5/12/2020 - House Energy and Natural Resources, (Fifth Hearing)  
*State Bill Page:* <https://www.legislature.ohio.gov/legislation/legislation-summary?id=GA133-HB-104>

- HB223 WIND SETBACKS** (STRAHORN F, SKINDELL M) To alter the minimum setback requirement for wind farms of five or more megawatts.  
*Current Status:* 5/8/2019 - Referred to Committee House Public Utilities  
*State Bill Page:* <https://www.legislature.ohio.gov/legislation/legislation-summary?id=GA133-HB-223>
- HB245 PROPERTY TAX EXEMPTION TIMELINES** (SMITH J) To remove the current deadlines by which an owner or lessee of a qualified energy project must apply for a property tax exemption.  
*Current Status:* 5/21/2019 - Referred to Committee House Energy and Natural Resources  
*State Bill Page:* <https://www.legislature.ohio.gov/legislation/legislation-summary?id=GA133-HB-245>
- HB246 PUCO/OCC REFORM** (VITALE N) To reform and modernize the Public Utilities Commission and the Consumers' Counsel.  
*Current Status:* 5/21/2019 - Referred to Committee House Public Utilities  
*State Bill Page:* <https://www.legislature.ohio.gov/legislation/legislation-summary?id=GA133-HB-246>
- HB247 RETAIL ELECTRIC SERVICE LAW** (STEIN D) Regarding the competitive retail electric service law.  
*Current Status:* 10/23/2019 - House Public Utilities, (Third Hearing)  
*State Bill Page:* <https://www.legislature.ohio.gov/legislation/legislation-summary?id=GA133-HB-247>
- HB260 CLEAN ENERGY JOBS** (DENSON S, WEINSTEIN C) To maintain operations of certified clean air resources, establish the Ohio generation and jobs incentive program and the energy performance and waste reduction program, and make changes regarding wind turbine siting.  
*Current Status:* 5/28/2019 - Referred to Committee House Energy and Natural Resources  
*State Bill Page:* <https://www.legislature.ohio.gov/legislation/legislation-summary?id=GA133-HB-260>
- HB401 TOWNSHIP REFERENDUM - WIND FARMS** (REINEKE W) To require inclusion of safety specifications in wind farm certificate applications, to modify wind turbine setbacks, and to permit a township referendum vote on certain wind farm certificates.  
*Current Status:* 12/3/2019 - House Energy and Natural Resources, (Third Hearing)  
*State Bill Page:* <https://www.legislature.ohio.gov/legislation/legislation-summary?id=GA133-HB-401>
- HB499 MOTOR FUEL TESTING PROGRAM** (KELLY B, LANG G) To authorize a county to implement a motor fuel quality testing program.  
*Current Status:* 5/19/2020 - House Transportation and Public Safety, (First Hearing)  
*State Bill Page:* <https://www.legislature.ohio.gov/legislation/legislation-summary?id=GA133-HB-499>

- HB564**      **PREVENT UTILITY DISRUPTION DURING COVID-19** (LELAND D) To prevent the disruption of utility service during the state of emergency declared regarding COVID-19 and to declare an emergency.  
*Current Status:* 5/5/2020 - Referred to Committee House Public Utilities  
*State Bill Page:* <https://www.legislature.ohio.gov/legislation/legislation-summary?id=GA133-HB-564>
- HJR2**      **CRITICAL INFRASTRUCTURE PROTECTION AMENDMENT** (MANNING D, CALLENDER J) Proposing to enact Section 12 of Article XV of the Constitution of the State of Ohio to provide Ohio critical infrastructure protection.  
*Current Status:* 10/30/2019 - House Energy and Natural Resources, (First Hearing)  
*State Bill Page:* <https://www.legislature.ohio.gov/legislation/legislation-summary?id=GA133-HJR-2>
- SB86**      **UTILITY SERVICE RESELLERS** (MAHARATH T) To regulate certain resellers of utility service.  
*Current Status:* 12/10/2019 - Senate Energy and Public Utilities, (Third Hearing)  
*State Bill Page:* <https://www.legislature.ohio.gov/legislation/legislation-summary?id=GA133-SB-86>
- SB234**      **WIND FARMS** (MCCOLLEY R) To require inclusion of safety specifications in wind farm certificate applications, to modify wind turbine setbacks, and to permit a township referendum vote on certain wind farm certificates.  
*Current Status:* 2/11/2020 - Senate Energy and Public Utilities, (Third Hearing)  
*State Bill Page:* <https://www.legislature.ohio.gov/legislation/legislation-summary?id=GA133-SB-234>

# PolicyGoal:

## Access to Reliable, Economical Energy Resources

Energy policy can 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 (a) ensure access to reliable, economical sources of energy, and (b) promote energy efficiency that lowers costs for manufacturers and strengthens grid resiliency.

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:**

Assure an open and fair electricity generation marketplace, in which competition enables consumer choice, which, in turn, 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 that makes Ohio competitive with other states.

Oppose legislation and regulation that force customers to subsidize uneconomical generation, including nuclear and certain coal power plants.

Support deployment of customer-sited generation technologies, such as cogeneration, energy efficiency and demand-side management, in order to achieve least-cost and sustainable energy resources.

## Analysis of Energy Harbor Investor Presentation

Energy Harbor (formerly First Energy Solutions prior to bankruptcy emergence in late 2019) made available to the public on its website on May 10<sup>th</sup> its most recent financial outlook targeted to investors. The main focus of the newly published material was to announce a \$300M increase in stock buyback authorizations, which increases the cash they plan to put in the hands of their shareholders from \$500M to \$800M. The stock repurchase is based on the “strong value proposition” of the company and the excess cash they expect to have on hand. Ironically, the excess cash is fast approaching the size of the ratepayer-funded subsidies Energy Harbor expects to receive for its nuclear facilities – subsidies funded by Ohio citizens as a result of Ohio State legislation passed in 2019.

As shown in Energy Harbor’s own presentation, **the source of much of that excess cash they are putting into the hands of shareholders is coming directly from these Ohio ratepayer-funded subsidies, so-called ZECs**, passed in HB6 last year. As mentioned above, Energy Harbor’s Investor Presentation is a public document and a review of the facts highlights how the HB6 subsidies are really used:

- Energy Harbor is projecting a material increase in its Adjusted Free Cash Flow, or actual cash generated by the business, over the next three years, more than doubling profitability by 2022 (\$250M in '20 vs. \$530M in '22)
  - The presentation deck reveals the 2020 cash flow projection for the company was already **well into positive territory** before the HB6-approved subsidies kicked in
  - Layering on the ~\$150M of anticipated subsidies by 2022 just increases the profitability of what was already a cash-flow positive company
- In reviewing the nuclear units alone, which Energy Harbor claimed were unprofitable and threatened to shut-down if the HB6 ratepayer subsidies were not approved, the data is clear that **Energy Harbor expects those plants to be profitable even without the subsidy**.
- Specifically:
  - Energy Harbor projects 95% of its estimated \$530M FCF in 2022 to come from its Nuclear and Retail segments
  - With Retail segment EBITDA being ~\$205M, it is clear that the 2022 **FCF from the nuclear units is expected to be at least ~\$300M**
  - Recall that half of that \$300M is the HB6 subsidy payments, leaving **~\$150M of positive FCF from the nuclear units without the subsidies**
- These nuclear units are **expected to be profitable even though they didn’t receive** an obligation from the 2021/2022 PJM annual capacity auction. The auction is a market mechanism to compensate generators for the obligation to be available when needed in periods of high electric demand. All facilities receive the capacity payment if they participate in the auction regardless if they run all the time, like Energy Harbor’s nuclear plants do, or run only during peak periods. This market-designed mechanism could have further funded the company with an additional ~\$50-100M in annual capacity revenues
- But Energy Harbor **now intends to participate** in future capacity auctions, after securing subsidies, and generate yet another payment stream, arguing it should be able to take advantage of the Ohio subsidy in the PJM auction process putting them in a position to reward their investors with the subsidy windfall.

Many industry experts, including nuclear experts, argued throughout the legislative process that the Energy Harbor nuclear plants were profitable and there was no need for a subsidy. Importantly, the experts also argued that the nuclear facilities could make even more money by improving the

performance of the units like so many of their competitors have. Energy Harbor, First Energy Solutions at the time, blatantly argued they were losing money and would shut the nuclear facilities down, holding employees, communities, elected officials, and captive ratepayers hostage.

In summary, Energy Harbor's own financial information to investors reveals it didn't need subsidies to keep the plants profitable or to save jobs. Further, the \$150M of clean-air credits funded by Ohioans will now be used as "excess cash" and put into the pockets of Energy Harbor shareholders. Energy Harbor boasts glowingly about their ill-gained subsidy on the backs of Ohio citizens, while these very citizens of Ohio are struggling through the COVID-19 virus – all while the State of Ohio racks up nearly \$1 billion deficit due to COVID-19 (notably, roughly the size of the subsidy), and while it is abundantly apparent that the subsidy was not necessary and is going from the hands of Ohio citizens into the hands of Wall Street investors.

# Energy Engineering Report

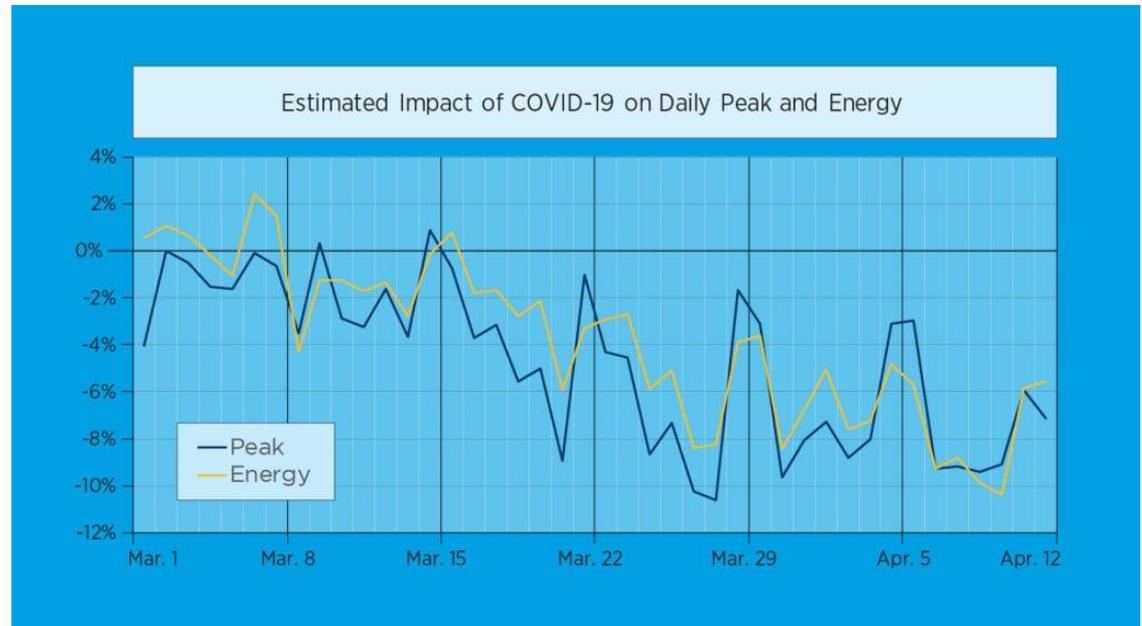
OMA ENERGY COMMITTEE – MAY 2020



# Impact of Covid 19 on Electricity

## PJM weekday impact

- ❑ Peak (MW) - ~8-9% reduction, ~7,500 MW
- ❑ Energy (MWh) - ~7% reduction



# Energy Efficiency Programs



- Going once...going twice...
- State-mandated energy efficiency programs
  - Applications due by September 30<sup>th</sup>
  - Ramp down 4<sup>th</sup> quarter
  - Cost true-up in 2021
  - Subject to mercantile opt-out. Customers using > 700,000 kWh/year or part of a national account can forgo paying into and participating in the programs
- Contact [jseryak@gosustainableenergy.com](mailto:jseryak@gosustainableenergy.com) for assistance

# HB6 Impact – FirstEnergy Solutions stock buy-back



- ❑ HB6 proponents claimed nuclear plants need funds to stay open
  - ❑ How much money do the Energy Harbor (formerly FES) nuclear plants need?
    - ❑ \$150 million per year from HB6's Nuclear Generation Fund
- ❑ Questions: should government subsidies or markets meet that need? Is the need that large, or there at all?
  - ❑ PJM Independent Market Monitor estimates - FirstEnergy Solutions loses about \$98 million/year on its Ohio nuclear power plants
  - ❑ Former PJM Chief Economist Dr. Paul Sotkiewicz estimated \$72 million annual profit w/o subsidy, post bankruptcy
  - ❑ All told – OMA estimated possibility of excess profits on order of \$300 million per year
- ❑ Energy Harbor increased stock buy-back by \$300 million – up to \$800 million
- ❑ Takeaway – Ohio ratepayers are subsidizing profits to Energy Harbor during a severe economic downturn

# HB6 Impact – OVEC



- ❑ HB6 creates a statewide subsidy for OVEC, two 1950s era coal plants – Kyger Creek (Ohio), Clifty Creek (Indiana)
- ❑ Ohio subsidizes OVEC on the order of \$70 million annually
- ❑ Not a set subsidy amount. Subsidy is the difference between “prudently incurred costs” and revenue
- ❑ OVEC generated ~19% less electricity in January and February 2020 as compared to 2019 – OVEC revenue is likely to drop substantially
- ❑ Takeaway – Ohio ratepayers are subsidizing old, uneconomic power plants (one of which is in Indiana) during a severe economic downturn
  - ❑ Your OVEC will change

# HB6 Impact – Decoupling

- ❑ How to hide \$90 million /yr
- ❑ FirstEnergy CEO on an investor call, “..essentially it takes about one-third of our company and I think makes it somewhat recession-proof”
- ❑ And, “supports continued energy efficiency efforts”. FirstEnergy suspended energy efficiency programs in January.
- ❑ FirstEnergy customers, find your costs in Rider CSR, the “Conservation Support Rider”, likely to increase next year

 **LAWriter®** Ohio Laws and Rules

Route: [Ohio Revised Code](#) » [Title \[49\] XLIX PUBLIC UTILITIES](#) » [Chapter 4928: COMPETITIVE RETAIL ELECTRIC SERVICE](#)

**4928.471 Application to implement a decoupling mechanism.**

(A) Except as provided in division (E) of this section, not earlier than thirty days after the effective date of this section, an electric distribution utility may file an application to implement a decoupling mechanism for the 2019 calendar year and each calendar year thereafter. For an electric distribution utility that applies for a decoupling mechanism under this section, the base distribution rates for residential and commercial customers shall be decoupled to the base distribution revenue and revenue resulting from implementation of section [4928.66](#) of the Revised Code, excluding program costs and shared savings, and recovered pursuant to an approved electric security plan under section [4928.143](#) of the Revised Code, as of the twelve-month period ending on December 31, 2018. An application under this division shall not be considered an application under section [4909.18](#) of the Revised Code.

(B) The commission shall issue an order approving an application for a decoupling mechanism filed under division (A) of this section not later than sixty days after the application is filed. In determining that an application is not unjust and unreasonable, the commission shall verify that the rate schedule or schedules are designed to recover the electric distribution utility's 2018 annual revenues as described in division (A) of this section and that the decoupling rate design is aligned with the rate design of the electric distribution utility's existing base distribution rates. The decoupling mechanism shall recover an amount equal to the base distribution revenue and revenue resulting from implementation of section [4928.66](#) of the Revised Code, excluding program costs and shared savings, and recovered pursuant to an approved electric security plan under section [4928.143](#) of the Revised Code, as of the twelve-month period ending on December 31, 2018. The decoupling mechanism shall be adjusted annually thereafter to reconcile any over recovery or under recovery from the prior year and to enable an electric distribution utility to recover the same level of revenues described in division (A) of this section in each year.

(C) The commission's approval of a decoupling mechanism under this section shall not affect any other rates, riders, charges, schedules, classifications, or services previously approved by the commission. The decoupling mechanism shall remain in effect until the next time that the electric distribution utility applies for and the commission approves base distribution rates for the utility under section [4909.18](#) of the Revised Code.

(D) If the commission determines that approving a decoupling mechanism will result in a double recovery by the electric distribution utility, the commission shall not approve the application unless the utility cures the double recovery.

(E) Divisions (A), (B), and (C) of this section shall not apply to an electric distribution utility that has base distribution rates that became effective between December 31, 2018, and the effective date of this section pursuant to an application for an increase in base distribution rates filed under

# Transmission Costs



- ❑ AEP Ohio transmission cost increase effective April 1<sup>st</sup>
- ❑ BPCR – 37% to 42% increase
- ❑ BPCR Pilot – 39% increase

## BASIC TRANSMISSION COST RIDER

Effective Cycle 1 ~~May~~April 2019~~2020~~, all customer bills subject to the provisions of this Rider, including any bills rendered under special contract, shall be adjusted by the Basic Transmission Cost charge per kW and/or kWh as follows:

Schedule	¢/kWh	\$/kW
<b>Residential</b> RS, RR, RR-1, RS-ES, RS-TOD, RLM, RS-TOD2, CPP, RTP, and RDMS	<u>1.663232.49270</u>	
<b>Non Demand Metered</b> GS-1, GS-1 TOD GS-2 Recreational Lighting, GS-TOD, GS-2-TOD, and GS-2-ES GS-3-ES EHS SS	<u>1.237251.83179</u>	
<b>Demand Metered Secondary</b> GS-2 GS-3	<u>0.039140.04501</u>	<u>3.855.45</u>
<b>Demand Metered Primary</b> GS-2 GS-3 GS-4	<u>0.037780.04344</u>	<u>4.516.18</u>
<b>Demand Metered Subtransmission/Transmission</b> GS-2 GS-3 GS-4	<u>0.037030.04257</u>	<u>4.105.60</u>
<b>Lighting</b> AL SL	<u>0.714800.50947</u>	
<b>County Fair Transmission Supplement Secondary</b>	<u>1.237251.83179</u>	
<b>County Fair Transmission Supplement Primary</b>	<u>0.897091.08521</u>	
<b>Interim Pilot 1CP Secondary</b>	<u>0.039140.04501</u>	<u>6.328.80</u>
<b>Interim Pilot 1CP Primary</b>	<u>0.037780.04344</u>	<u>6.108.49</u>
<b>Interim Pilot 1CP Subtransmission/Transmission</b>	<u>0.037030.04257</u>	<u>5.988.32</u>

The Interim Pilot 1CP Demand rates for the Basic Transmission Cost Rider are limited to availability as established in Case No. 16-1852-EL-SSO. The monthly \$/kW for the Interim Pilot 1CP Basic Transmission rate will be based on the participating customer's demand during the single zonal transmission peak. The 1CP will be changed each January based on the customer's contribution to the single zonal transmission peak during the previous year.

This Rider is subject to reconciliation, including, but not limited to, refunds to customers, based upon the flow

# Transmission Costs

## Drivers of transmission costs

1. Total cost of transmission system

“the size of the pie”

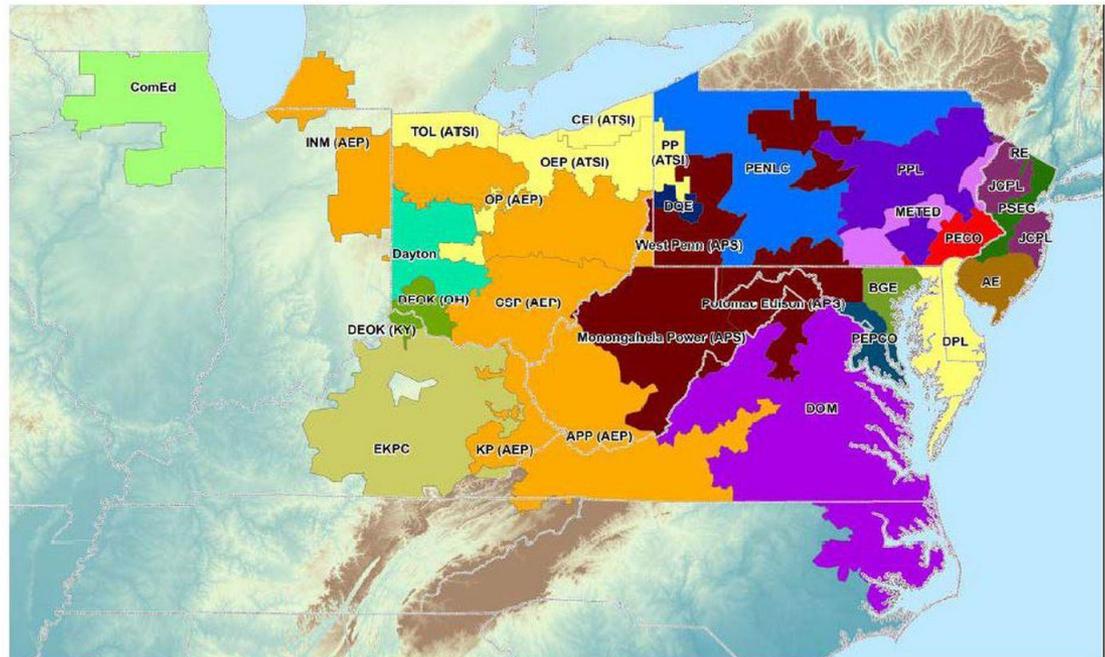
2. Allocation of costs of transmission to AEP distribution utilities

“the size of the pie slice”

3. The metric you’re billed on

“how many toppings you order”

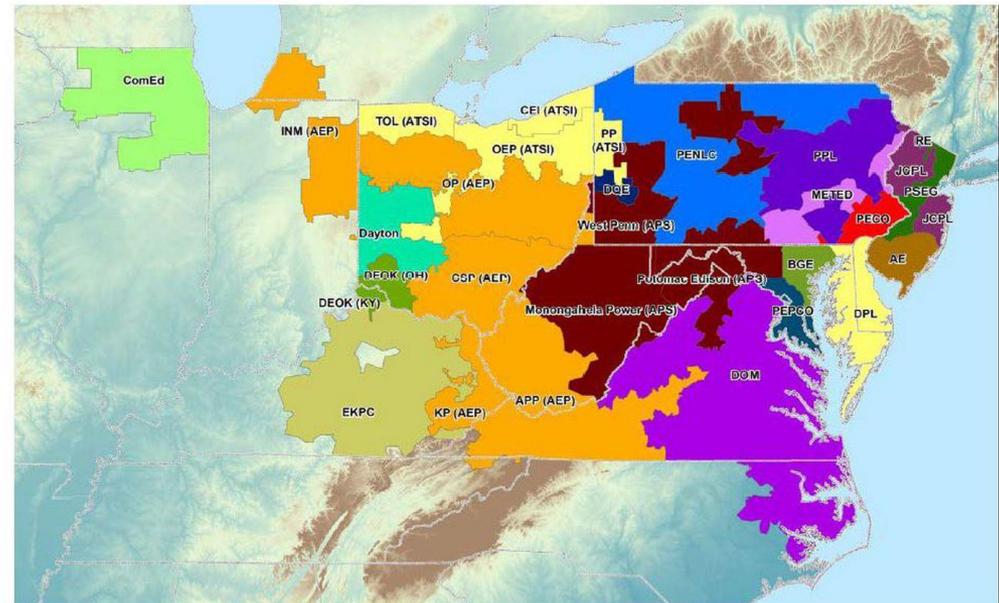
PJM Footprint and Locational Deliverability Areas



# Transmission Costs

- ❑ The pie size: transmission costs in Ohio
  - ❑ AEP - \$80,306 /MW-yr
  - ❑ ATSI-FE - \$57,482 /MW-yr
  - ❑ Duke - \$25,840 /MW-yr
  - ❑ Dayton - \$12,561 /MW-yr
- ❑ Recent AEP transmission costs
  - ❑ 2019 - \$65,923 /MW-yr
  - ❑ 2018 - \$59,818 / MW-yr
- ❑ The slice of the pie: The allocation
  - ❑ Based on the 1 CP
  - ❑ 2018 and 2019 were winter 1 CPs, which result in a smaller slice for AEP Ohio
- ❑ Your contribution
  - ❑ BTCR – Monthly demand
  - ❑ BTCR pilot – 1 CP

PJM Footprint and Locational Deliverability Areas



- ❑ Waiting for FERC approval of PJM filing
- ❑ Expect Base Residual Auction to occur late in 2020 or early 20201 – we’re already a year late
  - ❑ Some parties want an even later auction to allow for states to pass legislation to create fixed resource requirements (FRR)
  - ❑ Fair point: “Suspension of market milestones in deference to states embroiled in special interest lobbying does not simultaneously freeze all other factors that contribute to the economics of supply and demand of a 180,000-MW market, which serves 65 million customers,” NRG said.
- ❑ Big question – what will nuclear units, OVEC, impacted solar units do?
- ❑ Concern – actions to remove Ohio from PJM or request a “fixed resource requirement” entity.



# FERC's December 2019 Order on State Subsidies

## *The Expanded Minimum Offer Price Rule and its Impact on Manufacturers, Markets, Ohio Energy Policy, and Electricity Generation Technology*

January 30, 2020

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The Federal Energy Regulatory Commission (FERC) issued an order on December 19, 2019 stating that

“... out-of-market payments provided, or required to be provided, by states to support the entry or continued operation of preferred generation resources threaten the competitiveness of the capacity market administered by PJM ...”.

FERC's order is a direct response to a trend of state subsidization of uneconomical power plants, including those benefitting from the recently passed Ohio House Bill 6 (HB6). The FERC order is a giant stick against state subsidies, and tips HB6 on its head: Rather than improve the economic position of select Ohio (and Indiana) power plants, the HB6 subsidies now jeopardizes these same power plants from competitively earned revenue in the wholesale electric capacity market. In fact, by charging Ohio's ratepayers hundreds of millions of dollars in annual subsidies for select power plants, about \$190 million in annual capacity revenue for these same generators is now at risk. Unfortunately, by favoring select power plants through subsidies, HB6 has created a financial liability for them.

To be clear, the select subsidized power plants can request, and may receive, a “Unit Specific Exemption” to earn capacity revenue. Or, these same power plants may request additional subsidies or financial support from the state.

The eventual effect of FERC's order on wholesale electricity prices is being debated, as is which type of generating technologies win or lose. But FERC's order is clear – if states like their subsidy plan, they can keep it – but the state and its ratepayers will bear the direct cost and consequences.

### **Impact to Manufacturers**

A significant concern to Ohio manufacturers is how the FERC order, in conjunction with HB6, impacts electricity costs. The FERC order does not stop Ohio from subsidizing select power plants. And thus, HB6's above-market charges for select nuclear, coal, and renewable energy projects will persist on manufacturers' electric bills.

However, the FERC order does create major changes to how electricity markets work and estimating the financial impact will take careful study. At this date, there is no agreement on the financial impact. Some parties warn that the FERC order could create significant

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additional electricity costs, while other parties suggest there may be no additional cost at all. Still others may argue that preservation of market forces is the ultimate cost protection, an assertion supported by market studies and academic literature. PJM and its Independent Market Monitor often conduct detailed simulations of the near-term effect of major policy changes and likely will do so for this FERC order.

Manufacturers should also be concerned about potential state responses to the FERC order, namely, a drive to create fixed resource requirement (FRR) entities. By creating an FRR, a state may attempt to create yet more out-of-market revenue streams for power plants. Not only would this increase charges even more on customers' electric bills, but it would further erode market protections.

While cost is a primary concern for all manufacturers, also of note in the FERC order is a problematic issue for manufacturers with regard to greenhouse gas (GHG) emissions reductions goals. The FERC order will apply to new renewable energy projects receiving state subsidies, including renewable energy credits (RECs) from a renewable portfolio standard (RPS). While the FERC order recognizes that renewable energy projects subscribed with corporate REC purchases should not be subject to the MOPR, it then states that "it is not possible" to distinguish a voluntary REC from a state-mandated REC. As such, without clarification, new corporately funded renewable energy projects could be deprived of capacity revenue unfairly.

### **Impact to Electricity Markets**

The FERC order is intended to protect functioning, competitive electricity markets. In general, competitive markets are desirable because they have been shown to produce lower electricity prices for consumers than cost-of-service regulation. Markets also tend to produce better resource efficiency, and thus lower emissions from power plants. This is all to say that an order to protect markets has inherent features that protect consumers and manufacturers.

However, FERC's order is complex, and it is not fully known how it will impact electricity prices in the short and long term. The order modifies and expands a mechanism called the Minimum Offer Price Rule (MOPR).

The MOPR was originally designed to prevent state subsidization of new natural gas generators entering the market. In contrast, the expanded MOPR will apply to new and existing power plants of any technological types that "receive, or are entitled to receive, certain out-of-market payments, with certain exemptions." This means that nuclear, coal, and renewable power plants that receive state subsidies or other non-bypassable rider support will be required to offer into PJM's capacity auction at a set minimum price or apply for a Unit Specific Exemption. New power plants will have one set of resource-specific prices, called Net CONE (Cost of New Entry). Existing power plants will have another set of resource-specific prices, called Net ACR (Avoidable Cost Rate). The application of these minimum price thresholds is meant to prevent a power plant from using a state subsidy to outbid its unsubsidized competition by offering an artificially low bid into PJM's capacity auction.

Table 1 shows PJM’s proposed Net CONE and Net ACR values<sup>1</sup>. Consider, in comparison, that PJM’s capacity auction clearing price over the past 15 years has been a minimum of \$16 to a maximum of \$174/MW-day, a median of \$110/MW-day. Thus, new and existing resources would need to have minimum offer prices of, at most, around \$110/MW-day to clear the capacity market at least half of the time. Given this low price, it is unlikely that new generating plants that receive or are entitled to receive state subsidies will be able to clear the PJM capacity auction on a regular basis, unless they apply for and receive a Unit Specific Exemption.

For existing resources, it is also unlikely that subsidized nuclear units will be able to clear the auction in most cases, and subsidized coal plants will likely only be able to clear the auction occasionally. New and existing demand response and energy-efficiency should be able to clear most auctions. As for renewable energy, new renewable energy would likely not be able to clear the auction, but existing renewable energy would.

Note that PJM is preparing updated Net CONE and Net ACR values which will be subject to FERC approval. These updated values will have meaningful bearing on how the FERC order plays out. Additionally, any resource may apply for a “Unit Specific Exemption,” in order to bid at a different price than Net CONE and Net ACR. Many resources that appear uneconomical based on Net CONE or Net ACR may in fact be economical based on their specific financial situation.

**Table 1: PJM Proposed Minimum Prices**

	New Resources - Net CONE (\$/MW-day)		Existing Resources - Net ACR (\$/MW-day)	
Nuclear - Single Unit	\$	1,451	\$	265
Nuclear - Double Unit	\$	1,451	\$	227
Coal	\$	1,023	\$	126
Combined Cycle - NG	\$	438	\$	1
Combustion Turbine - NG	\$	355	\$	31
Hydro	\$	1,066	\$	-
Solar PV	\$	387	\$	-
Onshore Wind	\$	2,489	\$	-
Offshore Wind	\$	4,327	\$	-
Demand (DR or EE)		\$29 - \$67	\$	-

The impact on electricity prices then depends on several things:

- How many MWs of power plants will be subject to the expanded MOPR, and effectively forced out of the capacity auction? The answer is not simple. Some power plants receiving or entitled to receive subsidies have already not cleared the auction. For example, Ohio’s nuclear power plants have not cleared the auction recently. Other power plants may choose to forgo their subsidy so they are

<sup>1</sup> PJM Communication, Table 2. <https://pjm.com/-/media/committees-groups/committees/mic/20190306/20190306-item-10-communication-regarding-mopr-related-requirements.ashx>  
 Net-ACR from: INITIAL SUBMISSION OF PJM INTERCONNECTION, L.L.C. Docket No. EL16-49-000, pages 118 & 120 of pdf.  
<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=15059002>

permitted to bid into the auction without the minimum offer price if the subsidy is lower in value than PJM's capacity payments. Or, perhaps some states will find their subsidization policies ineffective, and will eliminate them in the law so that their power plants may compete for capacity revenue. Finally, there exists a "Unit Specific Exemption" process with the MOPR. If a power plant can show that it does not need its subsidy to offer competitive capacity bids, then it may receive this exemption, and continue to receive capacity revenue. Ironically, if a power plant receives this exemption, it will be proof to state policymakers that the subsidy is not needed. For this reason, it should be considered requiring subsidized resources to apply for a Unit Specific Exemption.

- How many new power plants will enter the market due to the expanded MOPR? Again, this is not simply answered, but it is probable that increased amounts of new natural gas fired power plants will enter the market. Some parties' fear of increasing capacity prices come largely from the observation that by excluding subsidized power plants from PJM's capacity auction, the supply of power plants will decrease, while demand for power remains relatively the same. However, PJM has seen large amounts of power plant retirements in the last 15 years, with little impact on capacity prices. This is because as uneconomic power plants close, other power plants that are economic open. It is reasonable to expect that over some period of time, new economic generation will fill the gap and keep prices in check.

All told then, the goal of the FERC order appears to be to reinstate a functioning electric market and the order is designed to seriously discourage state subsidies' manipulation of the electric market. Power plants receiving unit-specific exemptions will have shown that their subsidy is unnecessary, and that they can compete without state subsidy support. Power plants that are subject to MOPR and do not clear the auction will have shown that they are uncompetitive and may need to return to the state for additional subsidies or cease operating. The resulting supply and demand in the market then will more closely match that of a competitive market absent state subsidies. And thus, the resulting price of wholesale electricity should match that of a competitive market.

A caveat is that in the short-term, there may be a mass exit of power plants that are subject to MOPR because of state subsidies. If there is an atypical quantity of exiting power plants, combined with a shorted development timeframe for new entrants, there is the possibility for short-term capacity price increase. Again, Ohio's manufacturers should wait for independent modeling of this financial impact.

The cost of state subsidies will still be borne by the residents of the state, until a state repeals its subsidy policy. And, creation and proliferation of FRR entities is an emerging risk.

### **Impact to Ohio's State Policy and Regulation of Power Plants**

FERC's order has significant impacts to the objectives of the recently passed HB6 in Ohio, and to other Ohio policies and regulations that create subsidies for select electrical power generators. Below we cover possible impacts to specific power plants and technologies in Ohio.

- Davis-Besse and Perry Nuclear Power Plants – The Davis-Besse and Perry nuclear power plants are entitled to receive a subsidy of \$9 per MWh generated from Ohio’s Nuclear Generation Fund, newly created by HB6. This will result in \$150 million of payments annually from Ohio ratepayers to these two nuclear power plants. However, the two nuclear power plants will be subject to the expanded MOPR. The combined capacity of the power plants is about 2,150 MW. At a typical PJM capacity auction price of around \$120 /MW-day, this equates to \$94 million of forgone annual capacity revenue for the two nuclear plants.

It is not clear whether Energy Harbor’s nuclear power plants could receive a Unit Specific Exemption. It is distinctly possible that these nuclear power plants are economical without the HB6 subsidy. If so, they *could* apply for a Unit Specific Exemption, and receive it. However, applying for a Unit Specific Exemption is a choice for Energy Harbor.

In any case, Ohio policymakers face difficult choices. At a minimum, requiring HB6 subsidized units to apply for a Unit Specific Exemption is logical. If subsidized units receive an exemption, then policymakers will need to reconsider whether to continue subsidies that a power plant doesn’t need. If a unit fails to receive an exemption, policymakers will need to reconsider whether to subsidize an uneconomical power plant.

- OVEC Coal Plants – The coal plants of the Ohio Valley Electric Corporation, which include the Kyger Creek plant in Ohio and the Clifty Creek plant in Indiana, will also be subject to the MOPR. There is a chance that they will not clear the PJM capacity auction. OVEC’s capacity is about 2,175 MW, and thus it will forego about \$95 million annually in capacity revenue. However, OVEC’s subsidy is not in the form of a fixed credit, but instead in a rider that passes a pro-rated percentage of its financial losses onto Ohio utilities. As a result, Ohio’s ratepayers will share in 38.68%<sup>2</sup> of this loss, or about \$36.7 million annually.

Because OVEC’s Ohio utility owners are insulated from any and all financial losses, it is probable this additional cost will simply be passed on to Ohio’s manufacturers and other ratepayers.

- HB6-Favored Solar Energy Plants – HB6 creates a Renewable Generation Fund which will pay \$9 per MWh for renewable energy credits (RECs) for select solar projects. These solar projects have not yet been built and will thus almost certainly be subject to the MOPR and are unlikely to clear the PJM capacity auction. Moreover, given the choice, solar photovoltaic (PV) projects may prefer to receive capacity revenue over the renewable energy credit revenue. For example, a 1 MW solar PV project in central Ohio would receive about \$12,500 in capacity revenue<sup>3</sup>. That same 1 MW of solar PV would receive \$11,150<sup>4</sup> from the Renewable Generation Fund. As such, renewable projects of any scale may choose to receive

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<sup>2</sup> OVEC Annual Report, cumulative percentage of Ohio investor-owned sponsoring companies: The Dayton Power and Light Company, Duke Energy Ohio, FirstEnergy Solutions, and Ohio Power Company.

<sup>3</sup> 1 MW nameplate x 0.2856 central Ohio capacity factor x \$120 /MW-day, typical x 365 days/year)

<sup>4</sup> 1 MW of ground-mounted fixed solar in central generates about 1,239 MWh/year, according to PV Watts. \$9 /MWh x 1,239 MWh/year = \$11,150 /year

PJM capacity revenue over HB6 subsidies.

Thus, HB6 could result in reduced revenue for these select solar projects, making them less competitive. The forgone capacity revenue from HB6's select solar projects would be about \$22 million per year.

- Sammis Coal Plant – The Sammis coal-fired power plant owned by the former FirstEnergy Solutions may also be subject to the FERC expanded MOPR because of HB6. At first, this may be surprising, as there is no direct mention or direct subsidy of the Sammis plant within HB6. However, the FERC order appears to catch within its scope sleight-of-hand with state subsidies. FERC states:

“... we consider a State Subsidy to be: a direct *or indirect* payment, concession, rebate, subsidy, non-bypassable consumer charge, or other financial benefit that is (1) a result of any action, mandated process, or sponsored process of a state government, a political subdivision or agency of a state ...”

Importantly, FirstEnergy Solutions had publicly credited the HB6 subsidies it is receiving for its nuclear plants for *indirectly* allowing it to subsidize the Sammis coal plant<sup>5</sup>. According to FES comments, the Sammis coal plant cleared 1,233 MW in the most recent PJM capacity action<sup>6</sup>. Thus, HB6 has indirectly put \$54 million in annual capacity revenue at risk for the Sammis coal plant.

- Existing Renewable Energy – Existing renewable energy projects will be exempt from the MOPR and will continue to be able to participate in PJM's capacity auction.
- New “Behind-the-Meter” Renewable Energy – New renewable energy projects that are customer-sited, behind-the-meter, will not be subject to the MOPR. This is because behind-the-meter generation would not bid into PJM's capacity auction anyways. Instead, behind-the-meter generation reduces a customer's capacity obligation. As such, behind-the-meter projects would be able to monetize both capacity value and voluntary or state-mandated renewable energy credits.
- New “Front-of-the-Meter” Renewable Energy – New, front-of-the-meter renewable energy will be subject to the MOPR. As shown in Table 1, solar PV has the second lowest Net CONE value of new resources, after natural gas combustion turbines. That said, it is unlikely that PJM's capacity market price will clear high enough that a solar PV or wind project could enter the capacity market at the Net CONE price. This gives renewable energy developers two options. First, they could choose to enter the market competitively, favoring capacity revenue over REC revenue and subsidies. Second, if new renewable energy plants do not require REC payments to be competitive, they may apply for a “Unit Specific Exemption” and bid into the capacity market at a lower price than Net CONE. This is distinctly possible, as renewable energy projects receive comparatively less of their revenue from capacity payments due to their intermittency and REC prices have dropped to just

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<sup>5</sup> “House Bill Six is really designed to support our nuclear plants, and all the money from that would go to those nuclear plants. But at the same time, it would make our company economically healthy enough that we would be able to look at other investments like investing in the Sammis Plant”, FES CEO John Judge, <https://wtov9.com/news/local/sammis-plant-may-not-close>

<sup>6</sup> <https://www.prnewswire.com/news-releases/firstenergy-solutions-comments-on-results-of-pjm-capacity-auction-300654549.html>

a few dollars per MWh. As renewable energy installation costs drop, their reliance on REC payments may be low enough that it does not affect the decision on whether to build the project or not, and thus competitive renewable energy projects may request and receive an exemption while preserving their REC payments.

- Energy Efficiency and Demand Response – Most new energy-efficiency and demand response capacity resources would have a Net CONE generally lower than a typical PJM capacity auction clearing price. That is to say, these new resources would have the MOPR applied to them but would still be able to clear the auction at their corresponding technology-specific Net CONE price. Moreover, existing efficiency and demand response resources would be able to continue to bid at any price. While there is some risk that new demand response and energy-efficiency resources may not clear the capacity auction in some years, this may be a manageable risk.

### **Impact to Technology Mix**

Of interest is how FERC's order expanding MOPR will affect the generation technology mix in the PJM territory. While the expanded MOPR is complicated and has nuances, it appears to effectively disincentivize subsidization of older, uneconomical power plants. In recent years, these subsidies have been targeted at coal and nuclear power plants. Newer emerging technologies such as renewables and load management will not be entirely unaffected by the MOPR, but are positioned to be able to continue to grow for a number of reasons, be it behind-the-meter applications, the Unit Specific Exemption, or simply because they no longer require state subsidies. Thus, the expanded MOPR is likely to reinforce the recent trend in electric generation technology mix – considerably more natural gas fired generation with some meaningful expansion of renewable energy and customer-load management, and considerably less coal-fired generation with some reduction in nuclear power.

***This analysis was prepared by John Seryak, PE, and Peter Worley of RunnerStone, LLC, Energy Technical Consultant to The Ohio Manufacturers' Association.***



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**MEMORANDUM**

To: OMA Energy Committee  
From: Kim Bojko, OMA Energy Counsel  
Re: Energy Committee Report  
Date: May 21, 2020

**Active Administrative Actions in which OMAEG is Involved:**

**American Electric Power (AEP):**

- **Application for a Reasonable Arrangement and Deferral Authority for COVID-19 Emergency Plan (Case Nos. 20-0602-EL-UNC, et al.)**
  - On March 17, 2020, AEP requested accounting authority and a recovery mechanism for the costs associated with its COVID-19 Emergency Plan.
  - On April 9, 2020, AEP filed a Second Amended Application requesting a reasonable arrangement to allow minimum demand charges for commercial and industrial customers to be temporarily reset at lower usage level and for authority to recover forgone revenue (including foregone discretionary revenue).
  - On April 27, 2020, OMAEG filed comments to protect members from being charged for AEP's imprudent costs and lost revenue claims during the declared emergency (including the impropriety of the reasonable arrangement mechanism, the type and level of deferrals, and potential for double recovery). Others filed similar concerns. IEU-Ohio and OEG, however, expressed support for AEP's reasonable arrangement and cost recovery proposal.
  - On May 6 2020, the PUCO agreed with OMAEG (and others) and denied the proposed reasonable arrangement and cost recovery through the Economic Development Rider. Although the PUCO granted AEP deferral authority for its foregone revenues and expenses, it explained, at OMAEG's and Staff's request, that recovery is not guaranteed and the amounts must be reasonable, properly computed, and not double recovered. The PUCO also stated that recovery for foregone revenue associated with eliminating minimum billing demand charges should only be collected from those benefiting and directed AEP to establish an opt-in process. Importantly, the PUCO also rejected AEP's request to repurpose its regulatory liability from an overcollection of the Phase-In-Recovery Rider and ordered that it be applied to the universal service fund rider to lower customers' costs. Lastly, the PUCO ordered AEP to track costs avoided due to emergency and to track and defer uncollectible expenses with its default service generation such that expenses could potentially be recovered through a bypassable

mechanism, and noted that AEP may be able to collect some of its costs through its next rate case.

- **New Distribution Rate Case Filed –NOI (Case No. 20-585-EL-AIR)**
  - On April 29, 2020 AEP filed a notice of intent to file an application to increase its distribution rates, which will be filed on or around May 29, 2020.
  - OMAEG intervened to protect members from being charged unreasonable rates.
- **AEP Request to Develop Renewable Resources (Case No. 18-501-EL-FOR)**
  - AEP requested that the PUCO permit it to amend its longer-term forecast report to allow AEP and its affiliates to develop at least 900 MW of renewable projects. AEP concedes that PJM wholesale markets already provide sufficient capacity, yet strangely argues that these proposed renewable projects are necessary for AEP to meet its obligation to provide customers with a standard service offer (SSO). The proposal appears to be an attempt by AEP to charge customers for generation supplied by itself and its affiliates, which is contrary to Ohio's state law and policy, which support competitive electric generation markets.
  - After an extensive hearing, on November 21, 2019, the PUCO found that AEP Ohio failed to demonstrate a need, under any offered definition of the term, for at least 900 megawatts of renewable generating facilities.
  - On December 23, 2019, AEP filed an application for rehearing, which was opposed by multiple parties, including OMAEG. The PUCO denied the rehearing request by operation of law.
- **Application to Initiate its gridSMART Phase 3 Project (Case No. 19-1475-EL-RDR)**
  - AEP filed to initiate phase 3 of its smart grid deployment project, which it claims will expand reliability benefits of Distribution Automation Circuit Reconfiguration (DACR) to additional distribution circuits, the energy efficiency and retail power cost savings of Volt-Var Optimization (VVO), and complete Advanced Metering Infrastructure (AMI) deployment.
  - OMAEG has intervened in this case in order to protect members' interests.
- **Application for Establishment of Renewable Reasonable Arrangements With Multiple Non-Residential Customers (Case No. 19-2037-EL-AEC)**
  - On November 15, 2019, AEP filed to allow implementation of a significant number of MWs as part of the approved commitment for AEP to develop 900 MW of renewable generation resources in Ohio, without a general finding of need for the solar wind resources that the Company requested in Case No. 18-501-EL-FOR. As part of a future Amended Application to be filed in this proceeding, AEP Ohio plans to request that the PUCO approve each of the individual reasonable arrangements.
  - On January 2, 2020, the PUCO suspended the proceeding until further notice.

## **Duke Energy Ohio (Duke):**

- **Application for a Reasonable Arrangement for COVID-19 Emergency Plan (Case No. 20-0856-EL-AEC)**
  - On April 16, 2020, Duke filed an application with the PUCO seeking an economic development reasonable arrangement to recover lost revenues from its proposal to reduce demand ratchets for commercial and industrial customers during the COVID-19 emergency.
  - On May 7, 2020, OMAEG filed comments to protect members from being charged for Duke's imprudent costs and lost revenue claims during the declared emergency (including the impropriety of the reasonable arrangement mechanism, the type and level of deferrals,
- **Application to Adjust Rider PF (Case No. 19-1750-EL-UNC)**
  - On April 15, 2020 and May 15, 2020, OMAEG and other stakeholders submitted comments on Duke's request to recover costs associated with its Infrastructure Modernization Plan from customers in its Power Forward Rider (Rider PF). OMAEG asserted that Duke's deferral request is improper and that Duke unlawfully sought recovery of past costs. OMAEG also stated that utility ownership of competitive products or services would violate Ohio public policy. Duke's request for mandatory new service and requirement for separate meters for its Commercial Level II program would unnecessarily increase rates for customers.
- **MGP Remediation Rider (Case Nos. 17-596-GA-RDR, et al.)**
  - On March 31, 2017, Duke filed an application to recover 2016 costs for investigation and remediation of its Manufactured Gas Plant (MGP) site. In Duke's natural gas distribution case (Case No. 12-1685-GA-AIR), the PUCO approved up to \$55.5 million for investigation and remediation costs incurred from January 2008 through December 2012.
  - OMAEG filed reply comments regarding Duke's proposed MGP Rider to collect costs from customers for the remediation of gas plants which are no longer in service. In those comments, OMAEG argued that the parties to these cases are entitled to a hearing on these issues, that Duke should continue exploring cost recovery from other parties to mitigate the burden on customers, and that any cost recovery should be carefully audited and only persist for a limited duration.
  - Duke has now sought to recover its MGP remediation costs incurred since 2013 through 2018 from customers, requesting an additional \$45.8 million.
  - Staff issued Staff reports recommending that \$23.3 million be disallowed and not recovered from customers.
  - On May 10, 2019, Duke filed a motion to continue the recovery of Rider MGP costs at the then current rate. OMAEG and others opposed Duke's attempt to seek recovery of these costs without a full hearing process on the appropriateness of the proposed recovery.

- On July 23, 2019, Duke informed the PUCO that its recovery of remediation costs is complete and filed revised tariffs setting the MGP rider to zero.
- On August 13, 2019, the PUCO consolidated all of the cost recovery cases, 2013 through 2018, and set a procedural schedule. The PUCO also denied Duke's request to continue the MGP rider during the pendency of the cases and set the rider to zero, which will result in cost savings to customers.
- A hearing was held in November 2019, where OMAEG and other parties presented evidence demonstrating that Duke is not entitled to recover certain remediation costs related to 2013 through 2018, including costs incurred remediating the Ohio River and Kentucky.
- Awaiting PUCO decision.
- **2019 MGP Adjustment (Case Nos. 20-0053-GA-RDR, et al.)**
  - On April 30, 2020, Duke filed another application to increase rates for its Manufactured Gas Plant Rider (MGP) to recover another year (2019) of investigation and remediation costs.
  - As in the other cases, OMAEG will intervene to protect members from these extraordinary, unlawful costs.
- **University of Cincinnati Unique Arrangement Application (Case No. 18-1129-EL-AEC)**
  - The University of Cincinnati (UC) filed an application for a unique arrangement centered around the UC's ability to interrupt a portion of its electric load. Under the proposed arrangement, UC would commit to interrupting up to 54.7 MW when certain conditions are met in exchange for a credit against its monthly distribution charges. The credit would be capped at \$2.3 million annually and \$12.8 million over the 7-year term. This credit would be paid for by other Duke customers. UC does not propose any capital investments or employment commitments as part of the proposed arrangement.
  - OMAEG intervened on August 9, 2018.
  - Parties are awaiting a procedural schedule.
- **EE/PDR Recovery Case (18-0397-EL-RDR)**
  - Duke filed an application to recover costs related to compliance with energy efficiency mandates and lost distribution revenues.
  - OMAEG intervened in the case to protect the interests of its members as Duke attempts to recover additional costs from customers.
  - The PUCO approved Duke's request for recovery of program costs, lost distribution revenue and performance incentives related to Duke's EE/PDR programs for 2017. PUCO excluded from recovery incentive pay, dining, sponsorships, labor, employee and other expenses. The PUCO noted that Rider EE-PDR is subject to reconciliation as the result of annual audits by the PUCO.

- Duke sought rehearing on August 30, 2019, seeking to recover the disallowed costs on the grounds that incentive pay and other employee incentives are not tied to “financial goals,” which was opposed.
- Awaiting PUCO decision.

**FirstEnergy:**

- **FirstEnergy Revenue Decoupling Case (Case Nos. 19-2080-EL-ATA)**
  - On November 21, 2019, FirstEnergy filed an application for approval of a decoupling mechanism pursuant to HB 6. HB 6 authorizes an electric distribution utility to file an application to implement a decoupling mechanism.
  - FirstEnergy used its 2018 revenues as a baseline from which future rates will be determined. Staff recommended that FirstEnergy’s baseline be weather-normalized to protect against high over collections in years with average weather.
  - On January 15, 2020, the PUCO approved the decoupling without the modification that Staff requested, stating that it lacked authority to do so.
- **Rider DSE Update (Case Nos. 14-1947-EL-RDR, et al.)**
  - FirstEnergy filed tariff pages reflecting changes to its Demand Side Management and Energy Efficiency Rider (Rider DSE). Rider DSE recovers costs associated with energy efficiency, peak demand reduction, and demand side management programs and is subject to an annual audit by the Commission. FirstEnergy’s filing does not appear to be consistent with the PUCO’s stated expectation that Rider DSE adjustments following the implementation of the Amended Portfolio Plan would reflect lower costs to customers.
  - A Staff report was issued on February 28, 2019, and the PUCO set a procedural schedule with FirstEnergy’s testimony due June, 22, 2020, and a hearing scheduled for July 27, 2020.
- **Corporate Separation Case (Case No. 17-0974-EL-UNC)**
  - PUCO initiated a review of FirstEnergy’s compliance with the PUCO’s corporate separation rules. FirstEnergy is the first utility to undergo this review process.
  - Comments and reply comments were filed.
  - On April 29, 2020, PUCO directed interested persons to file supplemental comments regarding the audit report by May 29, 2020, and supplemental reply comments by June 15, 2020.
  - OMAEG is monitoring this case.

## **Dayton Power & Light (DP&L):**

- **Application for a Reasonable Arrangement and Deferral Authority for COVID-19 Emergency Plan (Case Nos. 20-650-EL-AAM, et. al.)**
  - On March 23, 2020, DP&L requested deferral authority for expenses related to its Plan during the COVID-19 emergency.
  - On April 15, 2020, DP&L supplemented its Plan by proposing to temporarily revise demand charges for commercial and industrial customers. For customers whose meters cannot be read, DP&L will charge an energy-only rate and for customers whose meters can be read, it will reduce the minimum demand charge. DP&L sought to defer as a regulatory asset for future recovery charges avoided by customers provided that those costs are not already included in the distribution decoupling deferral request that DP&L filed on January 23, 2020 in Case No. 20-140-EL-AAM. Alternatively, DP&L proposed recovering these lost revenues through an economic development or unique reasonable arrangement.
  - On May 4, 2020, OMAEG filed comments to protect members from being charged for DP&L's imprudent costs and lost revenue claims during the declared emergency (including the impropriety of the reasonable arrangement mechanism, the type and level of deferrals, the potential for double recovery and the impropriety of recovering foregone revenue associated with acts of good-will during the COVID-19 emergency).
- **Electric Security Plan (Case Nos. 16-395-EL-SSO, et al.)**
  - DP&L filed an amended application on October 11, 2016, proposing to withdraw its Reliable Electricity Rider (RER) request. Instead, it sought a Distribution Modernization Rider (DMR) for a term of seven years to recover \$145 million per year from customers.
  - DP&L and certain intervening parties reached a settlement, which was opposed by numerous other intervening parties, including OMAEG.
  - On March 13, 2017, a new settlement was reached between a majority of the parties, including PUCO Staff and OMAEG (as a non-opposing party). Under the new settlement, DP&L will receive \$105M/year for 3 years from customers, with an option to request a two-year extension. The Distribution Investment Rider (DIR-B) rider was eliminated (which had been estimated to cost consumers \$207.5M), and DP&L agreed to convert the forgone tax sharing liabilities to AES Corporation into equity payments (estimated by DP&L to be a \$300M gain for customers). DP&L will also provide several OMAEG members the economic development rider (EDR) credit of \$.004/kWh. For OMAEG members that do not qualify for the EDR credit, DP&L agreed to slightly discount those members' previous rates. Thus, those members will receive a collective total of \$18,000 per year in shareholder dollars to compensate them for the increase in rates.
  - After a hearing, the PUCO approved the settlement, but also modified it to include non-bypassable OVEC recovery. OMAEG filed an application for rehearing, arguing that this modification was unjust, unreasonable, and unlawful.
  - The PUCO denied rehearing on its decision to modify the settlement.

- Interstate Gas Supply, Inc. (IGS) withdrew from the settlement and reopened the proceedings based upon the PUCO’s modification to make OVEC recovery non-bypassable.
  - After IGS’ withdrawal, the PUCO held a hearing on the reopened proceeding. OMAEG participated in that hearing as a non-opposing party along with Staff, DP&L, and several other parties. OCC, who had opposed the settlement, has appealed the PUCO’s modified approval of the settlement to the Supreme Court of Ohio.
  - In light of the Court’s decision regarding FirstEnergy’s credit support rider, the PUCO ordered DP&L to eliminate its DMR rider.
  - As a result of the PUCO’s order, DP&L withdrew from its ESP, which the PUCO approved, and DP&L reverted to a prior “blended” ESP containing favorable elements of its past ESPs.
  - OMAEG and others challenged the blended ESP. Rehearing is pending.
  - On May 12, 2020. The Supreme Court Ohio granted OCC’s request to dismiss its appeal of DP&L’s Distribution Modernization Rider (DMR). OCC opted to not pursue the matter in light of DP&L withdrawing its ESP and the PUCO eliminating the DMR rider.
- **Application to Establish a Distribution Modernization Plan (Case Nos. 18-1875-EL-GRD, et al.)**
    - Pursuant to its ESP Stipulation, DP&L filed an application to establish a distribution modernization plan. DP&L asks the PUCO to approve over \$600 million in cost recovery for the implementation of this plan. DP&L offers speculative benefits that customers will purportedly receive from this plan and states that it is advancing the PUCO’s goals established in the PowerForward initiative.
    - Given that the enabling ESP Stipulation has been withdrawn, DP&L has re-initiated settlement discussions for this case based on a smart grid rider approved in an earlier case. DP&L is no longer attempting to tie this case with its DMR Extension case.
  - **DMR Extension Application (Case No. 19-162-EL-RDR)**
    - DP&L’s Rider DMR was established in DP&L’s most recent ESP proceeding. DP&L filed an application to extend Rider DMR for an additional two years, with Rider DMR set at \$199 million per year.
    - OCC filed a motion to dismiss in light of the PUCO’s decision to eliminate the DMR from DP&L’s ESP.
    - On April 6, 2020, DP&L filed a motion to withdraw its application to extend the DMR. The PUCO has yet to take action on this motion.
    - On May 12, 2020. The Supreme Court Ohio granted OCC’s request to dismiss its appeal of DP&L’s Distribution Modernization Rider (DMR). OCC opted to not pursue the matter in light of DP&L withdrawing its ESP and the PUCO eliminating the DMR rider.

- **Distribution Decoupling Costs (Case No. 20-0140-EL-AAM)**
  - The June 18, 2018 Stipulation and Recommendation from that Distribution Rate Case established that DP&L was authorized to implement “Revenue Decoupling.” Recovery would occur through the Decoupling Rider that was established in DP&L's third Electric Security Plan case ("ESP III") (Case No. 16-0395-EL-SSO, et al.), which DP&L withdrew. Given this withdrawal, the PUCO ruled that DP&L could no longer implement the Decoupling.
  - On January 23, 2020, DP&L requested accounting authority to defer its distribution decoupling costs that it would have been otherwise able to recover under ESP III.
  - OMAEG is considering intervention to protect members’ interests.
- **SEET (Case No. 20-0680-EL-UNC)**
  - On April 1, 2020, DP&L requested a determination that its current ESP passes the Significantly Excessive Earnings Test (SEET) and More Favorable in the Aggregate Test over the forecast period of 2020-2023.
  - OMAEG intervened to protect members from excessive charges.
- **Transmission Cost Recovery Rider (Case No. 20-0547-EL-RDR)**
  - On September 4, 2013, in Case No. 12-426-EL-SSO, et al., DP&L was authorized to separate its Transmission Cost Recovery Rider (TCRR) into a market based bypassable rider (TCRR-B) and a non-market based rider (TCRR-N).
  - On October 20, 2017 in Case No. 16-395-EL-SSO, et al., the PUCO authorized DP&L to amend the TCRR-N and establish a pilot program, which allows certain customers to opt out of the TCRR-N and purchase transmission services directly from the regional transmission operator.
  - Although DP&L withdrew its ESP and reverted to ESP I, the PUCO found that DP&L’s TCRR-N is authorized under ESP I and should be continued.
  - On March 16, 2020, DP&L filed the annual update of its TCRR-N, as amended on April 17, 2020.
  - On May 8, 2020, Staff filed its Staff Report, recommending that the PUCO approve the amended application, subject to its recommendation that DP&L not significantly increase the max charge in TCRR-N.

**Statewide:**

- **PUCO COVID-19 Emergency Orders (Case No. 20-591-AU- UNC)**
  - On March 12, 2020, PUCO directed public utilities to review their disconnection policies and other practices and promptly seek approval to suspend any requirements that might impose a "service continuity hardship" on customers or create unnecessary risks associated with spreading the virus. The PUCO also encouraged municipalities and cooperatives that are beyond their jurisdiction to take similar actions. The Order

also empowered Chair Sam Randazzo and Vice Chair Beth Trombold to act individually on behalf of the full five-member PUCO for the duration of the emergency.

- The PUCO and Ohio Power Siting Board (OPSB) tolled any time period in an order, statute, or rule requiring PUCO or OPSB to act upon a pending application or filing during the declared emergency and fourteen days after. The tolling does not apply to automatic approval of filings to suspend service disconnection or reconnection requirements.
- On March 13, 2020, PUCO extended the Winter Reconnect Order through May 1, 2020. The PUCO's Order does not eliminate customers' payment obligations.
- On March 20, 2020, the PUCO ordered the suspension of utilities' non-essential activities during the COVID-19 emergency. The Order does not relieve utilities of the obligation to address safety concerns.
- On April 8, 2020, the PUCO extended its March 12, 2020 emergency Order by an additional 30 days.
- On April 8, 2020, the PUCO authorized eligible utilities to obtain loans through the Federal Paycheck Program without receiving additional PUCO approval. The program authorizes up to \$349 billion in forgivable loans to enable small businesses to retain employees during the COVID-19 emergency. Utilities with fewer than 500 employees are eligible.
- On April 22, 2020, in response to the state of emergency, the PUCO temporarily waived requirements regarding provisional medical certification of commercial drivers. The waiver expires on June 30, 2020.
- **Review of Interconnection Services Rules (Case No. 18-884-EL-ORD)**
  - The PUCO opened a proceeding to review the PUCO's rules governing interconnection services, scheduled a workshop to discuss changes to those rules, and sought comments from stakeholders.
  - On March 13, 2020, OMAEG filed comments addressing costs, access to data, and the formation of a stakeholder group on distributed energy resources (DERs).
  - On April 3, 2020, OMAEG filed reply comments asserting that allocation of distribution system upgrade costs should take into consideration system benefits. OMAEG requested that more data from the interconnection process be accessible, recommended the formation of a working group on interconnection issues, and that the PUCO clarify that a DER is permitted on adjacent property.
- **Net Metering Rules (Case No. 12-2050-EL-ORD)**
  - On January 8, 2016, OMAEG filed comments urging the PUCO to adopt rules that align the compensation schemes applicable to shopping and non-shopping customers.
  - On November 8, 2017, the PUCO adopted new rules for net metering. These rules allow customer-generators to generate up to 120% of their own energy needs and allow customers who obtain their energy through a CRES provider to enter into net metering contracts with those providers. Customer-generators that generate more than they

consume may receive a credit to their bill for the excess generation. That credit will be based on the energy-only component of the electric utility's standard service offer.

- Upon applications for rehearing filed by several parties, the PUCO held oral arguments on the net metering rules on January 10, 2018. Among other issues, the parties discussed compensation for excess generation, availability of net metering to customers who take service from CRES providers, and location requirements for net metering facilities.
- The PUCO denied rehearing and the environmental groups appealed the decision to the Supreme Court of Ohio.
- On May 12, 2020 the Supreme Court of Ohio disposed of the case by granting the PUCO's Motion Dismiss, which asserted that the Appellants challenged PUCO's adopted net-metering rule on policy and not legal grounds, and that any harm alleged was hypothetical.
- **PUCO Investigation into CRES Contracts (Case No. 14-0568-EL-COI)**
  - The PUCO issued an order setting out its "fixed-means-fixed" guidelines which provide that CRES providers may not include a pass-through clause in a contract labeled as a fixed rate, pass-through provisions must be labeled as variable or introductory rates, regulatory-out clauses must be marked in "plain language," and CRES providers had until January 1, 2016 to bring products into compliance with the fixed-means-fixed guidelines. On rehearing, the PUCO punted the determination of remaining issues, including whether small commercial customers should be more stringently defined, to a future rulemaking proceeding.
  - Rehearing is pending.
- **PUCO PowerForward Initiative**
  - The PUCO announced the launch of PowerForward to comprehensively explore technology and consider how it could serve to enhance the customer electricity experience.
  - Phase 1 featured presentations examining technologies affecting a modern distribution grid, what our future grid could offer customers, and what technologies are in development to realize such enhancements.
  - Phase 2 focused on the grid, platforms, the grid's core components, requirements for building the grid of the future, distribution system safety and reliability, planning and operations of the distribution system, and energy storage.
  - Phase 3 focused on grid modernization, the distribution system, data access, ratemaking, and rate design.
  - Following the completion of the three phases of the PowerForward Initiative, the PUCO issued a report outlining its approach for maintaining a strong, robust power grid that will benefit Ohio consumers.
  - The PUCO established working groups and proceedings for each of the three PowerForward working groups: the PowerForward Collaborative, the Distribution

System Planning Working Group, and the Data and the Modern Grid Working Group. The PUCO stated that it was establishing these proceedings in order to ensure that its PowerForward roadmap is being fulfilled. The PUCO invited interested parties to participate in these proceedings so that their views can be considered throughout this process.

- The PUCO ordered electric distribution utilities to file reports regarding the current status of their grid architecture and distribution system capability. The PUCO determined the required contents of these reports after reviewing comments submitted by various parties. The PUCO stated that these reports will be an important component in advancing various components of the PowerForward initiative.
- On April 22, 2020, the PUCO found that the works of the Collaborative, the Distribution System Planning Workgroup (PWG), and the Data and Modern Grid Workgroup have been completed and closed those cases. The PUCO stated that it will continue to address issues raised in the Power Forward Roadmap in discrete proceedings. In her concurring opinion, Commissioner Trombold stated EDUs should make interval data from advanced meters available to customers and competitive suppliers. Similarly, Commissioner Conway advocated in a concurring opinion for customer benefits resulting from customer energy usage data access. In addition, he supported the suggestions in EnerNex’s Final Report for the PWG regarding standards for the interconnection of distributed energy resources with the EDUs’ networks.
- **Nuclear Bailout Bill (HB 6)**
  - The Ohio General Assembly passed a bill that effectively serves as a bailout for nuclear generation. OMAEG actively participated throughout the hearing process regarding this proposed legislation, including various members and legal counsel offering testimony opposing the bill. The bill was amended several times, and each amendment included provisions that would impose unreasonable costs on customers in order to subsidize uneconomic generation.
  - The Governor signed into law HB 6 on July 23, 2019, which means that customers will be forced to subsidize failing nuclear and coal facilities. The mechanics of the increase in charges to customers has been left to the PUCO, which will now open proceedings to establish new rates and rules in light of HB 6.
  - Not enough signatures were gathered to place the referendum on the ballot as required by the Ohio Constitution. Challengers went to federal court to obtain an extension, but it was punted to the Supreme Court of Ohio to resolve what the federal court considered a “state question.”
  - Appellants Ohioans Against Corporate Bailouts voluntarily dismissed their appeal, explaining that the group did not have sufficient money to continue the appeal. Efforts to repeal HB 6 by veto measure have ended.
  - Following the \$1 billion ratepayer-funded nuclear bailout that Ohio legislators passed last year, Energy Harbor LLC, formerly FirstEnergy Solutions, has moved to spend an additional \$300 million to repurchase the company’s stock. On May 8, 2020, Energy Harbor LLC’s board of directors voted to increase authorization for its stock buyback program from \$500 million to \$800 million. The company can buy back its stock at

any time until August 26, 2020. This benefit to corporate shareholders comes after FirstEnergy Solutions declared bankruptcy and lobbied aggressively for the HB 6 subsidy, which will increase rates for Ohio customers.

- **HB 6 Implementation Issues**

- OAQDA Rulemaking
  - OAQDA requested written comments on its proposed rules. As established in HB 6, the rules provide for utility ratepayer funding of two newly created funds – the nuclear generation and renewable generation funds. OMAEG and OCC were the only entities that filed written comments by the published deadline. OMAEG filed comments requesting clarification and supplementation, to ensure that the proposed rules are complete and allow for adequate and transparent reporting and accountability regarding the nuclear and renewable generation program and funding mechanism.
  - OAQDA issued a memorandum rejecting all comments, stating that its rules comply with the minimal requirements of HB 6 and OMAEG’s and OCC’s comments address considerations outside the scope of rules.
  - Subsequently, OAQDA held a public hearing regarding its proposed rules on November 18, 2019. OMAEG presented its previously filed written comments at the hearing. AEP provided oral and written comments, requesting a rule clarification that the nine dollar per megawatt hour payment created in HB 6 does not strip the underlying renewable or green attribute in the power so that customers may count the renewable energy as green power or use it for sustainability purposes. FES provided written comments stating that the rules met the minimum requirements of HB 6 and rebutted OMAEG’s proposed accountability and transparency provisions. Hillcrest Renewables also provided oral comments agreeing with OMAEG’s comments regarding the importance of transparency and accountability and requested a rule modification allowing entities to opt-in and out of the program.
- OVEC Recovery Mechanism (Case No. 19-1808-EL-UNC)
  - PUCO Staff proposed to establish a nonbypassable rate mechanism to recover the prudently incurred costs related to OVEC through a newly created legacy generation resource rider (LGR Rider) on customers’ bills. Staff proposed to charge the LGR Rider and establish the monthly cap on a “per month per customer account/premise.” OMAEG argued that HB 6 explicitly used the terms “per customer” to differentiate from a “per account” or “per meter” cap, while OEG and IEU-Ohio commented that Staff’s proposed methodology largely complies with the requirements in HB 6.
  - On November 21, 2019, despite the mandate that the PUCO implement a per customer cap, the PUCO established a nonbypassable mechanism that is collected on a “per customer account” basis and which creates only one nonresidential monthly cap. The PUCO also determined that the program was not subject to a refund if HB 6 is invalidated.
  - OMAEG challenged the decision, which was denied in January.

- **PUCO Solicited Comments Regarding Future of Energy Efficiency Programs (Case No. 17-1398-EL-POR)**
  - The PUCO requested comments from interested persons regarding the appropriate steps to be taken with respect to energy efficiency programs once the statewide cap of 17.5 percent, set by HB 6, has been reached. Staff has been tracking the EDUs' progress towards the benchmark, and has been filing periodic reports regarding that progress.
  - The PUCO solicited comments from interested persons on: (1) whether the PUCO should terminate the energy efficiency programs once the statutory cap of 17.5 percent has been met; and (2) whether it is appropriate for the EDUs to continue to spend ratepayer provided funds on energy efficiency programs after the statutory cap has been met.
  - On November 25, 2019, OMAEG and other stakeholders submitted comments regarding the future of Energy Efficiency programs for FirstEnergy and the other EDUs since implementation of HB 6.
  - OMAEG argued that the EDUs should continue their Energy Efficiency programs through December 31, 2020, with programs continuing as economically appropriate thereafter.
  - The PUCO agreed with OMAEG and others and concluded that HB 6 and the public interest require all of the utilities' EE Programs to continue through 2020. The PUCO, however, determined that there should be an orderly wind-down of the programs beginning on September 30, 2020 to minimize any recovery of costs associated with the programs after 2020. The PUCO directed the EDUs to honor any application for EE programs approved prior to September 30, 2020 and to cease accepting applications for direct rebate programs on September 30, 2020. The PUCO also ordered the EDUs to notify customers beginning April 1, 2020 that EE applications will no longer be accepted as of September 30, 2020 and stated that any programs that do not involve a direct rebate to consumers should continue only until September 30, 2020 in order to ensure that all activities are completed by December 31, 2020.
- **Reasonable Arrangement Rule Revisions (Case No. 18-1191-EL-ORD)**
  - The PUCO initiated a rule review process to review its rules regarding economic development arrangements, energy efficiency arrangements, and unique arrangements (collectively, reasonable arrangements). As part of that process, the PUCO released its proposed rules and solicited comments from interested parties.
  - OMAEG submitted comments and reply comments on the proposed rules, arguing that the PUCO should create clear standards governing these arrangements in order to ensure fairness and predictability in the process, including both standards for approval and for addressing recipients of reasonable arrangements who do not meet their commitments.
  - On May 6, 2020, the PUCO amended its rules. Despite the suggestions of OMAEG and others, the PUCO appeared to relax its rules and filing requirements regarding

reasonable arrangement applications, adopting criteria that it will consider, but not require of applicants, when evaluating reasonable arrangements. The PUCO disregarded several recommendations, including: a cost-benefit requirement; minimum capital investment and job creation requirements; a requirement that applicants show that charges paid to a utility cover all incremental costs of service and contribute to payment of fixed costs; a prohibition against the renewals of reasonable arrangements; and the reservation of economic development reasonable arrangements for energy-intensive customers. Overall, the PUCO opted for language that would allow it maximum discretion over reasonable arrangements. The PUCO did agree with OMAEG and retained requirements that applicants must state the economic benefits of their proposals and that a utility must summarize customers' annual reports.

▪ **Stakeholder Input to Improve OPSB Siting Process**

- The OPSB held informal stakeholder discussions to learn how to improve public participation in the siting process, technical application requirements, and construction compliance efforts.
- On March 10, 2020, the OPSB held its first stakeholder meeting. Stakeholders raised concerns about applicant costs, delays between certification and construction for wind and solar projects, and the appropriate level of private company involvement with the OPSB process. The Board also heard various proposals to increase public input, including the extension of the 90-day window following the public information meeting process. Stakeholders also discussed how increased flexibility could improve the application process for transmission lines for wind projects. It was further suggested that for transmission projects generally, there should be a higher level of scrutiny for need and an earlier determination of need.
- On March 11, 2020, the OPSB held its second stakeholder meeting. Stakeholders stated that the Board should ensure it has adequate resources to conduct independent assessments on project impacts, using actual data from the area. Stakeholders urged that the pre-application conference be mandatory, held in the project area, and run by the OPSB with the developer present. It was stated that everyone, not just leaseholders, needs an opportunity to provide input, especially on wind projects. Stakeholders discussed that there are no siting regulations for solar projects, whereas there are specific requirements for wind projects. It was argued that OPSB should verify that the developer satisfies each condition post-certification and this information should be docketed and made public. Stakeholders asserted that decommissioning plans should be fully developed, giving communities a clear idea of when they will be funded.
- On May 12, 2020, the OPSB held its third stakeholder discussion. Stakeholders made several comments recommending what the Board should examine in its process including: the cumulative effect of multiple projects in a single area; the long-term impact of wind turbines; warranty and merchantability issues; promises of financial gains made to school districts; multigenerational land use issues; reporting requirements once sites are operating; the selection process for expert testimony; and taxation issues regarding pipeline developers.
- Next, OPSB will open a formal rulemaking docket and hold public workshops to solicit ideas from interested parties.

- OPSB will then issue draft rules and solicit formal public comments prior to issuing final rules. OMAEG attended the workshops and will make recommendations for improvement to the rules as appropriate, including an improved transmission siting process in an attempt to control the costs of supplemental transmission projects being passed on to customers.
- **PUCO Sought Comments on Electric Vehicle Charging Service**
  - The PUCO is seeking comments on whether an entity that provides electric vehicle charging (EV) service is a “public utility” subject to the jurisdiction of the PUCO. The PUCO explained that its Staff has consistently taken the position that entities that provide EV charging services are neither electric light companies nor public utilities in this state, but the PUCO has never decided this specific issue.
  - Interested persons filed comments and reply comments on March 23, 2020 and April 7, 2020, respectively.
  - The majority of stakeholders asserted that providers of EV charging services are not public utilities subject to the PUCO’s jurisdiction while Duke and AEP Ohio stated charging operators may be public utilities in certain scenarios and encouraged EDU involvement in the development of the EV charging market and infrastructure.
- **The PUCO Approved Energy Harbor’s Certification as CRES & CRNGS Suppliers (Case Nos. 20-550-GA-CRS; 0-1742-EL-CRS)**
  - On May 6, 2020, the PUCO approved Energy Harbor LLC’s, formerly FirstEnergy Solutions, applications for certification as Competitive Retail Electric Service (CRES) and Competitive Retail Natural Gas Service (CRNGS) providers.
- **The PUCO Approved Suvon’s CRES Power Broker & Aggregator Application (Case No. 20-0103-EL-AGG)**
  - On April 22, 2020, over the objections of many stakeholders raising concerns of corporate separation violations among the FirstEnergy companies, including the regulated utilities, the PUCO approved Suvon, LLC’s, also known as FirstEnergy Advisors, application for certification as a Competitive Retail Electric Service (CRES) power broker and aggregator.

### **Federal Actions**

#### **FERC:**

- **MOPR Expansion (Docket EL16-49)**

- On March 21, 2016, Dynegy and others filed a complaint against PJM requesting that the Minimum Offer Price Rule be expanded to apply to existing resources.
- The complaint aims to protect against AEP and FirstEnergy offering the subsidized affiliate generating units into the capacity market below costs, which will suppress capacity prices.
- Dominion, American Municipal Power, and others filed a motion to dismiss on mootness grounds given FERC’s order rescinding the waiver on affiliate sales restrictions granted to AEP, FirstEnergy, and their unregulated generating affiliates.
- The Independent Market Monitor claims that the issues are not moot given the Staff’s proposal adopted in the FirstEnergy ESP IV case for a DMR, and the pending DP&L DMR proposal.
- In a 3-2 decision, FERC found that PJM’s current tariff is unjust, unreasonable, and unduly discriminatory because it fails to account for state policies that subsidize favored sources of generation, thus disrupting the competitive wholesale market. FERC is now considering how to best address state subsidies provided to certain generation resources in order to avoid market disruption.
- OMAEG joined several other industrial consumer groups in filing comments and reply comments urging FERC to adopt measures to account for out-of-market subsidies. Those comments were filed on October 2, 2018 and November 6, 2018, respectively.
- On December 19, 2019, FERC ordered that subsidized generation resources (with some exceptions) could only bid into the wholesale capacity auctions subject to the FERC-determined Minimum Offer Price Rule (MOPR), which sets an offer price floor for each resource class. By broadening the definition of “subsidy,” more generation resources that bid into the PJM auctions are now subject to the MOPR.
- The OVEC plants, Ohio nuclear plants, HB 6-subsidized renewable facilities and possibly Sammis will be subject to MOPR.
- On April 16, 2020, FERC denied requests for rehearing and clarification of its Order, finding that PJM’s then-existing tariff was unjust and unreasonable.
- Shortly after, several parties, including Energy Harbor LLC, filed Petitions for Review in the D.C. Circuit Court regarding FERC’s orders establishing a replacement rate and denying requests for rehearing and clarification of the determination that the MOPR was unjust and unreasonable.

## **FERC Rulemaking**

- **Proposed Grid Reliability and Resiliency Rule (Docket RM18-1)**
  - FERC considered a rule proposed by the Secretary of Energy that would subsidize inefficient and failing coal plants in the name of promoting grid reliability and resiliency. In reality, however, the proposed rule would only act as a subsidy to prop up failing generators at the expense of electric customers.

- OMAEG filed comments opposing the proposed rule and supporting the arguments of other manufacturing coalitions.
- FERC agreed with OMAEG and others and rejected the proposed rule. FERC concluded that the record did not support the claim that the grid faces reliability or resiliency threats from the retirement of inefficient generation, and, even if a problem existed, FERC explained that the proposed solution was contrary to FERC's longstanding commitment to markets and market-based solutions and did not satisfy the legal requirements for the creation of a new rule. Instead, FERC defined resiliency and sought comments and data from the regional transmission organizations and independent system operators regarding their resiliency challenges on a regional basis.
- Rehearing is pending.
- **Proposed PJM Tariff Revisions to Address Impacts of State Public Policies (Docket ER18-1314)**
  - On April 9, 2018, PJM filed an application to address state public policies. PJM advocated for two different approaches to addressing these issues.
  - The PUCO filed comments advocating the rejection of PJM's approach and retention of the status quo. The PUCO noted that capacity market has recently been overhauled and that PJM has not substantiated its comments. The PUCO further pointed out that PJM failed to provide cost impacts on customers. The PUCO advocates that PJM should maintain the status quo until a better approach is found.
  - OMAEG joined several other industrial and commercial customer groups in filing comments and reply comments that urged FERC to adopt measures that account for out-of-market payments received by some generation resources under policies pursued by individual states. These anticompetitive payments disrupt the competitive wholesale market that, when left undisturbed, works to benefit customers.
- **Grid Resilience in RTOs and ISOs (Docket AD18-7)**
  - FERC opened this proceeding to evaluate bulk power system resilience. PJM filed comments that advocated a broader approach to system resilience and asserting that PJM should be involved in improving resilience.
  - The PUCO filed reply comments that supported PJM's position in favor of a broader approach to system resilience, but also urged FERC to avoid adopting PJM proposals without acknowledging the state and local role in the process. The PUCO believes that resilience is already considered in existing reliability standards and does not want ratepayers to be burdened by a new approach to resilience through increased charges without receiving any benefits.
- **FES Bankruptcy Proceeding**
  - On March 31, 2018, FirstEnergy Solutions Corporation (FES) filed for bankruptcy in the United States Bankruptcy Court.
  - FES announced an agreement that would provide for FES and its creditors to release all claims against FirstEnergy (including FirstEnergy's non-debtor affiliates, directors, employees, and professionals) in return for receiving \$1.645 billion in value flowing

- from FirstEnergy to FES. This agreement is contingent on approval by the boards of FirstEnergy Corp. and Allegheny Energy Supply Company LLC, as well as the United States Bankruptcy Court in the FES bankruptcy proceeding. While the specific claims that are being released have not yet been publicly described, the size of this proposal indicates that FirstEnergy must have significant concerns about litigation arising from its transactions with FES over the years. A version of this that released claims of FES and only other creditors who opted into the release was ultimately approved.
- FES filed a motion for approval of its sale to Exelon Generation Company (Exelon), the parent company of Constellation Energy, which was later withdrawn.
  - The bankruptcy court agreed to allow FES to abandon its contracts with two money-losing OVEC plants. This could cause OVEC charges for AEP, Duke, and DP&L customers to increase.
  - FES filed a term sheet that contained provisions of an agreement with the Official Committee of Unsecured Creditors, the Ad Hoc group of Pollution Control Notes, the Ad Hoc group of Mansfield bond holders, and certain holders of rejection damage claims. In the next few months, FES will file a Restructuring Support Agreement (RSA), which will contain FES' complete restructuring plan.
  - The judge rejected FES' proposed settlement release of FirstEnergy Corp. from its decommissioning and environmental obligations to the government. The judge determined that this proposed release made the plan unconfirmable, which means that FES had to develop a new plan for its exit from bankruptcy. This triggered the renegotiation of the FirstEnergy bankruptcy settlement.
  - FES submitted a new bankruptcy settlement plan. The judge refused to confirm the plan unless the unions voluntarily agreed to a new collective bargaining agreement or FES goes through the difficult process to reject a collective bargaining agreement.
  - FES union workers reported that they had reached an agreement with FES creditors to retain their pensions, wages, and benefits.
  - In a win for consumers in Ohio, the Sixth Circuit overturned the Bankruptcy Court decision that enjoined FERC from taking any actions with respect to the OVEC contract and that authorized rejection of the OVEC contract through bankruptcy.
  - The Sixth Circuit found the Bankruptcy Court's injunction on FERC was overly broad in prohibiting any action by FERC related to the OVEC contract and that the Bankruptcy Court erred in approving the rejection of the contract based solely on whether the OVEC contract was burdensome on FES.
  - The Sixth Circuit remanded the cases to the Bankruptcy Court to reconsider FES' attempt to walk away from the OVEC contract under a "heightened standard," taking into account the impact on the public (including customers) and not just whether the OVEC contract is burdensome on FES.
  - FES received final approval of its Bankruptcy Plan, which became effective February 27, 2020 after the bankruptcy court issued the final approval necessary on February 25, 2020, just days before FES' nuclear outage was scheduled. FES asked the court to issue an expedited ruling, claiming that it needed the plan to take effect prior to the

- scheduled nuclear outage on February 29, 2020. FES claimed (without providing detail) that a number of challenges existed, which could prevent the debtors from emerging from bankruptcy during a nuclear outage, if the plan was not approved prior to the outage. This means that FirstEnergy's shares in FES were cancelled and FES is now owned by the various bankruptcy creditors. After FES's Chapter 11 plan became effective, the company changed its name to Energy Harbor, LLC.
- On February 14, 2020, FERC authorized certain transactions to implement FES and its public utility subsidiaries' reorganization plan filed in the Northern District of Ohio's Bankruptcy Court regarding the disposition of facilities and acquisition of securities. FERC specifically stated that its order does not address FES' proposed rejection of certain FERC-jurisdictional power purchase agreements (OVEC) as part of its review under section 203 of the Federal Power Act ("FPA").
  - On May 18, 2020, FES entered into a proposed settlement with OVEC under which it would maintain its responsibilities under the OVEC agreement. This is scheduled to come before the bankruptcy court for approval on June 16, 2020.
  - **FERC Electric Transmission Incentives (Docket RM20-10-000)**
    - FERC recently released a Notice of Proposed Rulemaking (NOPR) which will almost certainly increase transmission rates for all electric consumers. The FERC NOPR proposes giving financial rewards to companies that build electric transmission projects. Specifically, the NOPR proposes allowing transmission owners to receive up to a 250-basis point adder to their current transmission return on equity. Since 2012, electric transmission costs have increased more than 52%. The FERC NOPR established a comment deadline of July 1, 2020.
    - In April 2020, OMAEG joined 60 other consumer groups in requesting an extension to protect customers from unwarranted transmission rate increases as customers deal with challenges associated with the COVID-19 emergency. The motion requests that FERC delay the comment process, by extending the comment deadline to the earlier of 30 days after the national emergency is lifted or October 1, 2020.
    - On May 15, 2020, FERC denied the request to delay and the deadline to comment on the NOPR remains July 1, 2020.

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COLUMBUS, OHIO 43215

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MEMORANDUM

**TO:** Ohio Manufacturers' Association Energy Group  
**FROM:** Kim Bojko, Carpenter Lipps & Leland LLP  
**DATE:** January 16, 2020  
**SUBJECT:** PUCO Authorizes FirstEnergy's Decoupling Rider

---

HB 6 authorized a utility to apply to implement a revenue decoupling mechanism to recover lost revenue as a result of implementing energy-efficiency or energy-conservation programs within thirty days of the effective date of the new law (October 22, 2019). If implemented, each utility's annual revenue will be compared against the 2018 baseline revenue of the utility. If annual revenue in a given calendar year is less (or greater) than the 2018 baseline revenue, the utility will charge (or credit) the difference to customers through the decoupling rider. Thus, if the economy takes a downturn and the utility receives less revenue from its customers, the utility will always be guaranteed to receive the same amount of revenue as it did in 2018, which will continue until the utility files a new base distribution rate case.

On November 21, 2019, FirstEnergy was the only utility to file an application for approval of a decoupling mechanism. OMAEG and others intervened in the matter and argued 1) the PUCO should ensure that there is no double recovery of costs through the decoupling mechanism, including lost distribution revenue; and 2) that the PUCO should only approve decoupling based on actual costs, not projections, and 3) that any refunds are passed back or credited to customers. The PUCO Staff released a report that revealed why 2018 was likely chosen in the legislative process and included in HB 6 as the baseline for the decoupling mechanism. Stakeholders surmised that a utility's revenues must have been high for that year, but it was not clear exactly why. The PUCO Staff report explained that 2018 was the warmest summer in history for two of the FirstEnergy utilities and the second warmest for the other. Therefore, 2018 produced high revenue for the three FirstEnergy utilities. Based upon this information, Staff recommended that FirstEnergy weather normalize rates to reflect average weather to avoid large discrepancies through the years and minimize any rate impacts to customers based upon the unusual high temperatures in 2018. This weather adjustment is regularly used in ratemaking proceedings to normalize rates and is sound policy.

This week, the PUCO granted FirstEnergy's request for a decoupling mechanism and established a decoupling rider (called Rider CSR). The Commission approved FirstEnergy's application as filed, **rejecting** Staff's recommendation to weather normalize the 2018 baseline revenue due to the unusual

high temperatures in 2018. Staff's approach would have minimized the possibility of creating a large decoupling rider to make up for the difference in revenue between future years and 2018. Although Commissioner Conway expressed his sympathy for Staff's view, the PUCO did not order FirstEnergy to weather normalize the baseline. FirstEnergy will now be guaranteed to receive the level of revenues that it received in 2018 (during the warmest summer in history) each and every year, regardless of its operating and maintenance costs and the actual revenue received from customers for base distribution rates.

## Executive Team

Dr. Joseph Bowring  
President

Dr. Bowring is the President of Monitoring Analytics. Since 1999, Dr. Bowring has been the Independent Market Monitor for PJM, responsible for all market monitoring activities of PJM Interconnection. He has extensive experience in applied energy and regulatory economics. Dr. Bowring is regularly called upon to testify before state and federal regulators. He has a PhD in Economics from the University of Massachusetts. Dr. Bowring has taught economics as a member of the faculty at Bucknell University and Villanova University. He has served as senior staff economist for the New Jersey Board of Public Utilities and as Chief Economist for the New Jersey Department of the Public Advocate's Division of Rate Counsel. Dr. Bowring has also worked as an independent consulting economist.

## Our Role as PJM Market Monitor

### Monitoring Analytics is the Independent Market Monitor for PJM Interconnection

Since 1999, the PJM Market Monitoring Unit has been responsible for promoting a robust, competitive and nondiscriminatory electric power market in PJM by implementing the PJM Market Monitoring Plan. Under the PJM Market Monitoring Plan, the PJM Market Monitoring Unit has been responsible for monitoring compliance with the rules, standards, procedures, and practices of PJM markets. We observe and comment on actual and potential design flaws in market rules, standards, and procedures, and identify structural problems in PJM markets that may inhibit robust and competitive markets. We monitor the potential of market participants to exercise undue market power, the behavior of market participants that is consistent with attempts to exercise market power and the market performance that results from the interaction of market structure with participant behavior. We monitor the actions of PJM and the impact of those actions on market outcomes.

Monitoring Analytics collects available data, designs market metrics based on the available data and proposes the collection and creation of new data items as necessary. Monitoring Analytics develops and employs metrics and analytic tools applicable to market structure, participant behavior and market performance. Monitoring Analytics analyzes measures of market structure, participant conduct and market performance, including market size, concentration, residual supply index, price-cost markup, net revenue and price. Where established metrics and thresholds do not exist or do not apply, Monitoring Analytics has the expertise to develop new metrics based in the actual operations of markets. For example, Monitoring Analytics developed and led the effort to implement the three pivotal supplier test as a structural test for market power in PJM. This test incorporates detailed real-time information on market structure, the demand for constraint relief and the availability of generating units to respond in order to measure the structural competitiveness of power markets. Monitoring Analytics analyzes the impact of PJM's operation of the market on market results. For example, Monitoring Analytics monitors PJM's implementation and application of the three pivotal supplier test in PJM's energy market and in PJM's capacity market (RPM), reviews PJM's implementation of interface pricing, reviews PJM's operation of the RPM auction and validates the RPM auction results and reviews PJM's operation of

ancillary services markets. We have published the results of our reviews of PJM's impact on markets and communicate regularly with PJM and PJM members on these issues.

Monitoring Analytics, in its role as the Independent Market Monitor for PJM, has monitored and reported on PJM's administration of its Financial Transmission Rights (FTR) auction and its Monthly Balance of Planning Period FTR auction since their inception. Monitoring Analytics has also monitored PJM's administration of the secondary bilateral market to allow participants to buy and sell existing FTRs. In this role, Monitoring Analytics has examined the auctions and markets for FTRs in terms of their structure, the behavior of the participants and the performance of the auctions and markets. Monitoring Analytics examines supply and demand fundamentals, credit issues, patterns and concentration of ownership, trade volumes, prices, revenue, revenue adequacy, participant bids, market structure test results, the application of offer bid caps and other relevant metrics. The results of these monitoring efforts can be seen in Monitoring Analytics' State of the Market reports.

# Potential Impacts of the MOPR Order

The Independent Market Monitor for PJM

March 20, 2020

## Summary

The Independent Market Monitor for PJM (IMM or MMU) analyzed in detail the expected impacts of the December 19, 2019, Minimum Offer Price Rule (MOPR) Order (December 19<sup>th</sup> Order) on the PJM Reliability Pricing Model (RPM) Base Residual Auction (BRA) for the 2022/2023 Delivery Year.<sup>1</sup> Based on the analysis, the IMM concludes that the December 19<sup>th</sup> Order is not expected to have an impact on the clearing prices and auction revenues in the 2022/2023 RPM BRA.

The IMM does not include detailed Locational Deliverability Area (LDA) prices or cleared quantities in this report for confidentiality reasons. Including detailed pricing and quantity information would be equivalent to the IMM using confidential information about offers to forecast the prices in the 2022/2023 BRA.

The conclusions of the IMM analysis do not mean that the IMM expects that prices in the 2022/2023 BRA will be unchanged from the 2021/2022 BRA. For example, the IMM found that market power was exercised in the 2021/2022 BRA.<sup>2</sup> The IMM filed a complaint with the Commission asserting that the market seller offer cap is overstated.<sup>3</sup> That complaint has not been ruled on. The outcome of the complaint could have a standalone impact on clearing prices in the 2022/2023 BRA. The IMM's report on the 2021/2022 BRA concluded that market power resulted in a \$1.2 billion increase in customer payments compared to the competitive level. Those overpayments would be eliminated if the Commission modifies the market seller offer cap as requested. The offer behavior of participants could have a significant impact on clearing prices in the 2022/2023 BRA. The significant changes in the PJM auction parameters and the corresponding changes in the capacity market demand curve plus the changes in the supply curve can have significant impacts on the prices in the 2022/2023 BRA even without new MOPR rules. The IMM impact analysis addressed the differences in the 2022/2023 BRA prices that would result from application of the new MOPR rules.

<sup>1</sup> *PJM Interconnection, L.L.C. et al.*, 169 FERC ¶ 61,239.

<sup>2</sup> Participant behavior and market performance were evaluated as not competitive in the 2021/2022 RPM Base Residual Auction. See Monitoring Analytics, LLC, "Analysis of the 2021/2022 RPM Base Residual Auction - Revised," <[http://www.monitoringanalytics.com/reports/Reports/2018/IMM\\_Analysis\\_of\\_the\\_20212022\\_RPM\\_BRA\\_Revised\\_20180824.pdf](http://www.monitoringanalytics.com/reports/Reports/2018/IMM_Analysis_of_the_20212022_RPM_BRA_Revised_20180824.pdf)> (August 24, 2018).

<sup>3</sup> Complaint of the Independent Market Monitor for PJM, in Docket No. EL19-47-000 (February 21, 2019).

## Analysis

The analysis included a base case which used the offers from the 2021/2022 RPM Base Residual Auction, the last cleared capacity market. The capacity market supply curve was adjusted for retirements and must offer exceptions, projected new supply, and updated offer caps for the 2022/2023 Delivery Year. The capacity market demand curve was updated using the 2022/2023 planning parameters. The current MOPR rules were applied.<sup>4 5</sup>

The MOPR impact analysis applied the new MOPR rules defined in the December 19<sup>th</sup> Order to the base case supply. No changes were made to Fixed Resource Requirement (FRR) elections. The MOPR changes included expanding the MOPR to cover existing capacity resources and state subsidized capacity resources; establishing a competitive exemption for new and existing resources other than natural gas fired resources while also retaining the unit specific exception process for those that do not qualify for the competitive exemption; defining limited categorical exemptions for renewable resources participating in renewable portfolio standards (RPS) programs, self supply, Demand Resources (DR), Energy Efficiency EE resources, and capacity storage; expanding the region subject to MOPR from only modeled LDAs to the entire RTO; and increasing the default offer price floor from 90 percent to 100 percent of the applicable net CONE or net Avoidable Cost Rate (ACR) values.<sup>6</sup>

Comparing the MOPR impact case to the base case, the IMM concludes that the December 19<sup>th</sup> Order is not expected to have an impact on the clearing prices and auction revenues in the 2022/2023 RPM BRA. This conclusion is based on a detailed analysis of all the capacity market inputs, a full simulation of the auction, and is a result,

<sup>4</sup> PJM's current MOPR refers to the MOPR reinstated in 2017 following the remand from the D.C. Circuit in *NRG Power Marketing, LLC v. FERC*. 862 F.3d 108 (D.C. Cir. 201) (*NRG*); see *PJM Interconnection, L.L.C.*, 161 FERC ¶ 61,252 (2017) (2017 MOPR Remand Order).

<sup>5</sup> Effective December 8, 2017, FERC issued an order on remand rejecting PJM's MOPR proposal in Docket No. ER13-535, and as a result, the rules that were in effect prior to PJM's December 7, 2012, MOPR filing were reinstated. These changes include eliminating the Competitive Entry and Self Supply Exemptions and retaining only the Unit Specific Exception request; narrowing the region subject to MOPR from the entire RTO to only modeled LDAs; eliminating the 20.0 MW threshold for applicability; decreasing the screen from 90 percent to 100 percent of the applicable net CONE values; redefining the applicability criteria to exclude nuclear, coal, IGCC, hydroelectric, wind and solar facilities; modifying the duration of mitigation criteria from clearing in a prior delivery year to clearing in any delivery year; and changing the procedural deadlines.

<sup>6</sup> Existing for MOPR purposes means capacity that has previously cleared an RPM auction. New for MOPR purposes means capacity that has not previously cleared an RPM auction.

in part, of the impact of the categorical exemptions, the fact that the treatment of gas fired resources does not change significantly, and the competitiveness of unit specific offers for existing subsidized nuclear resources.

The possibility of impacts on the inclusion of renewable resources in the capacity market in the longer term is a function of the competitiveness of renewables. If renewables are competitive, they will be included in the capacity market at appropriate MW levels. Although preliminary estimates of the default MOPR floor prices for new renewables are relatively high, those estimates are based on existing renewable facilities in PJM and based on standard assumptions about technologies, financing costs, capacity factors and revenues. Renewables suppliers assert convincingly that many new renewables are competitive now and will demonstrate that fact through requests for unit specific exceptions to default MOPR floor prices.<sup>7</sup> Renewables suppliers also assert that they will become even more competitive in the future and for the 2024/2025 RPM BRA.

## **Others' Estimates**

There have been estimates of the impact of the December 19<sup>th</sup> Order on capacity market prices in the near term. The two primary ones are from Commissioner Glick's dissent in the December 19<sup>th</sup> Order and from the testimony of Grid Strategies in Illinois. Neither are based on supportable, detailed analysis of the capacity market.

## **Commissioner Glick**

Commissioner Glick estimated that the impact of the December 19<sup>th</sup> Order would be to increase the capacity payments by \$2.4 billion per year or more.<sup>8</sup> Commissioner Glick's estimated impact has been cited by commenters.<sup>9 10 11 12 13 14 15 16 17</sup>

<sup>7</sup> "Minimum Offer Price Rule Unit-Specific Inputs," Gabel Associates; presented to the PJM MIC MOPR Special Session on February 28, 2020.

<sup>8</sup> 169 FERC ¶ 61,239 (Glick, Commissioner, *dissenting*).

<sup>9</sup> "Request for Rehearing of FirstEnergy Solutions Corp.," Docket No. ER18-1314-000, et al. (January 17, 2020) at footnote 57.

<sup>10</sup> "Request for Rehearing of the Office of the Attorney General of Maryland," Docket No. ER18-1314-000, et al., (January 21, 2020) at 14.

<sup>11</sup> "Petition for Rehearing of New Jersey Division of Rate Counsel, Office of the People's Counsel for the District of Columbia, and the Maryland Office of People's Counsel," Docket No. ER18-1314-000, et al., (January 21, 2020) at footnote 3 and footnote 106.

<sup>12</sup> "Request for Rehearing and Clarification of the American Public Power Association, American Municipal Power, Inc., and the Public Power Association of New Jersey," Docket No. ER18-1314-000, et al., (January 21, 2020) at footnote 191.

The Commissioner explained the \$2.4 billion calculation in footnote 92 of the dissent:

“Our estimate of the cost impact of today’s order is a ‘back-of-the-envelope’ calculation. I assume that all previously-cleared nuclear power plants that receive zero-emissions credits in Illinois and New Jersey (totaling 6,670 MW) are unlikely to clear the next auction. I also assume there would be a 25 percent reduction of the demand response resources that previously cleared the Base Residual Auction. See *supra* Section III.B.3.a. Together, these resources total 9,340 MW of capacity. I relied on PJM’s finding that “[a]dding less than 2% of zero-priced supply to the area outside MAAC, for example, reduces clearing prices in the RTO by 10%” which provides some insight to the slope of the demand curve and the associated price sensitivity. See PJM Transmittal Letter, Docket No. ER18-1314-000, at 28 (2018). Applying this slope to the last capacity auction clearing price of \$140/MW-day and removing 9,300 MW, assuming all else remains constant, the capacity clearing price could increase \$40/MW-day resulting in a cost of \$2.4 billion. See PJM Interconnection, 2021/2022 RPM Base Residual Auction Results, <https://www.pjm.com/-/media/markets-ops/rpm/rpm-auction-info/2021-2022/2021-2022-base-residual-auction-report.ashx> (last visited Dec. 19, 2019).”

The calculation was an effort to estimate the impact of the order with very limited information. The calculation depends on explicit assumptions which are not correct:

- <sup>13</sup> “Request for Rehearing of Clean Energy Advocates,” Docket No. ER18-1314-000 et al., (January 21, 2020) at 25.
- <sup>14</sup> “Request for Rehearing of the Office of the Attorney General for the District of Columbia,” Docket No. ER18-1314-000, et al., (January 21, 2020) at 19.
- <sup>15</sup> “Comments of EDF Renewables, Inc. in Support of the Request for Rehearing and Clarification of the Clean Energy Associations,” Docket No. ER18-1314-000, et al., (January 21, 2020) at 13.
- <sup>16</sup> “Request for Rehearing and/or Clarification of Exelon Corporation,” Docket No. ER18-1314-000, et al., (January 21, 2020) at 1 and 22.
- <sup>17</sup> “Request for Rehearing and Clarification of the Maryland Public Service Commission,” Docket No. ER18-1314-000, et al., (January 21, 2020) at footnote 4.

1. The assumption that the total capacity associated with “previously-cleared nuclear power plants that receive zero-emissions credits in Illinois and New Jersey” equals 6,670 MW is not correct. Table 1 shows installed capacity (ICAP) and unforced capacity (UCAP) of these nuclear resources in the 2021/2022 BRA.<sup>18</sup>

**Table 1 Capacity of subsidized PJM nuclear resources in Illinois and New Jersey**

2. The assumption that the December 19<sup>th</sup> Order would result in a 25 percent reduction in cleared demand resources is not supported. The December 19<sup>th</sup> Order provided for a categorical exemption for existing demand resources.
3. The assumption about the slope of the demand curve is based on a PJM filing.<sup>19</sup> The dissent recognized that this is a back of the envelope calculation. The PJM analysis referenced supply and demand outside the MAAC LDA. But most (72 percent) of the referenced nuclear resources are in MAAC, and demand resources are spread across all LDAs. In addition, the relationship between offered quantity and clearing prices is generally nonlinear and discontinuous due to the nested LDA structure, capacity transfer limits between LDAs, and inflexible offer parameters.
4. The estimated price impact uses the 2021/2022 BRA as the baseline rather than a baseline adjusted for known changes to the PJM markets on both the supply side and the demand side.

## ***Grid Strategies***

Grid Strategies published a report, “Consumer Impacts of FERC Interference with State Policies,” on August 26, 2019, that concluded that the consumer cost due to an expanded MOPR could be as high as \$5.7 billion.<sup>20</sup> The IMM response to that Grid Strategies report

<sup>18</sup> To protect confidentiality, the UCAP is calculated using PJM’s class weighted average EFORD values for nuclear resources <<https://www.pjm.com/planning/resource-adequacy-planning/resource-reports-info.aspx>>.

<sup>19</sup> Docket No. ER18-1314-000. “Attachment 1 to Affidavit of Adam J. Keech 2018-2021 BRA Scenario Analysis,” included with PJM’s Capacity Repricing or in the Alternative MOPR-Ex Proposal: Tariff Revisions to Address Impacts of State Public Policies.

<sup>20</sup> “Consumer Impacts of FERC Interference with State Polices: An Analysis of the PJM Region,” Grid Strategies LLC, (August 26, 2019) <<https://gridprogress.files.wordpress.com/2019/>

noted that the broad and incorrect conclusions in the Grid Strategies report were attributable to a conflation of the IMM's analysis of the PJM extended resource carve out proposal (RCO) with all proposals to modify PJM capacity market rules.<sup>21</sup> <sup>22</sup> Grid Strategies repeated this error in testimony to the Illinois legislature.<sup>23</sup> The testimony stated with respect to the cost of MOPR that the "Independent Market Monitor for PJM, while a proponent of broad MOPR application, has stated, ""If only half the units at risk of retirement were subsidized, the increase would be \$1.6 billion (17.4 percent).""<sup>24</sup> The full statement from the IMM response shows that Grid Strategies used the IMM's calculation of a \$1.6 billion cost increase for one scenario under the PJM RCO proposal as the basis for a broad conclusion about the impact of the December 19<sup>th</sup> Order.<sup>25</sup> The IMM report shows that the impact of the PJM RCO proposal, if all units at risk of retirement were subsidized to remain in the market, would be an \$8.4 billion increase (90.8 percent), almost doubling capacity market payments. If only half the units at risk of retirement were subsidized, the increase would be \$1.6 billion (17.4 percent).

The IMM's analysis of the PJM RCO proposal is not relevant to evaluating the impacts of the December 19<sup>th</sup> Order. The PJM RCO proposal incorporated resource specific FRR using a two stage clearing mechanism that established the capacity obligation in stage 1 and the clearing price in stage 2 and lost opportunity payments to resources that cleared in stage 2 but would not receive a capacity obligation. The Commission explicitly rejected the PJM RCO proposal. The expanded MOPR policy established in the December 19<sup>th</sup> Order and the PJM RCO proposal are not comparable.

[08/consumer-impacts-of-ferc-interference-with-state-policies-an-analysis-of-the-pjm-region.pdf](https://www.monitoringanalytics.com/reports/Market_Messages/08/consumer-impacts-of-ferc-interference-with-state-policies-an-analysis-of-the-pjm-region.pdf)>.

<sup>21</sup> "IMM Response to Grid Strategies Report," Monitoring Analytics LLC. (September 17, 2019) <[http://www.monitoringanalytics.com/reports/Market\\_Messages/IMM\\_Response\\_to\\_Grid\\_Strategies\\_Report\\_201909217.pdf](http://www.monitoringanalytics.com/reports/Market_Messages/IMM_Response_to_Grid_Strategies_Report_201909217.pdf)>.

<sup>22</sup> See "MOPR/FRR Sensitivity Analyses of the 2021/2022 Base Residual Auction," Monitoring Analytics, LLC, (September 26, 2018) at 18. <[http://www.monitoringanalytics.com/reports/Reports/2018/IMM\\_MOPR\\_FRR\\_Sensitivity\\_Analyses\\_Report\\_20180926.pdf](http://www.monitoringanalytics.com/reports/Reports/2018/IMM_MOPR_FRR_Sensitivity_Analyses_Report_20180926.pdf)>.

<sup>23</sup> "Testimony before Illinois State Senate, Energy and Public Utilities Committee," Rob Gramlich, Grid Strategies LLC (March 5, 2020).

<sup>24</sup> Id. at 1.

<sup>25</sup> "IMM Response to Grid Strategies Report," Monitoring Analytics LLC, (September 17, 2019) at 1. <[http://www.monitoringanalytics.com/reports/Market\\_Messages/IMM\\_Response\\_to\\_Grid\\_Strategies\\_Report\\_201909217.pdf](http://www.monitoringanalytics.com/reports/Market_Messages/IMM_Response_to_Grid_Strategies_Report_201909217.pdf)>.

# **Natural Gas Update OMA Energy Committee**

**Richard Ricks  
NiSource/Columbia Gas of Ohio  
May 21, 2020**

# 2019/2020 Ohio Winter Degree Days: 12 % Warmer

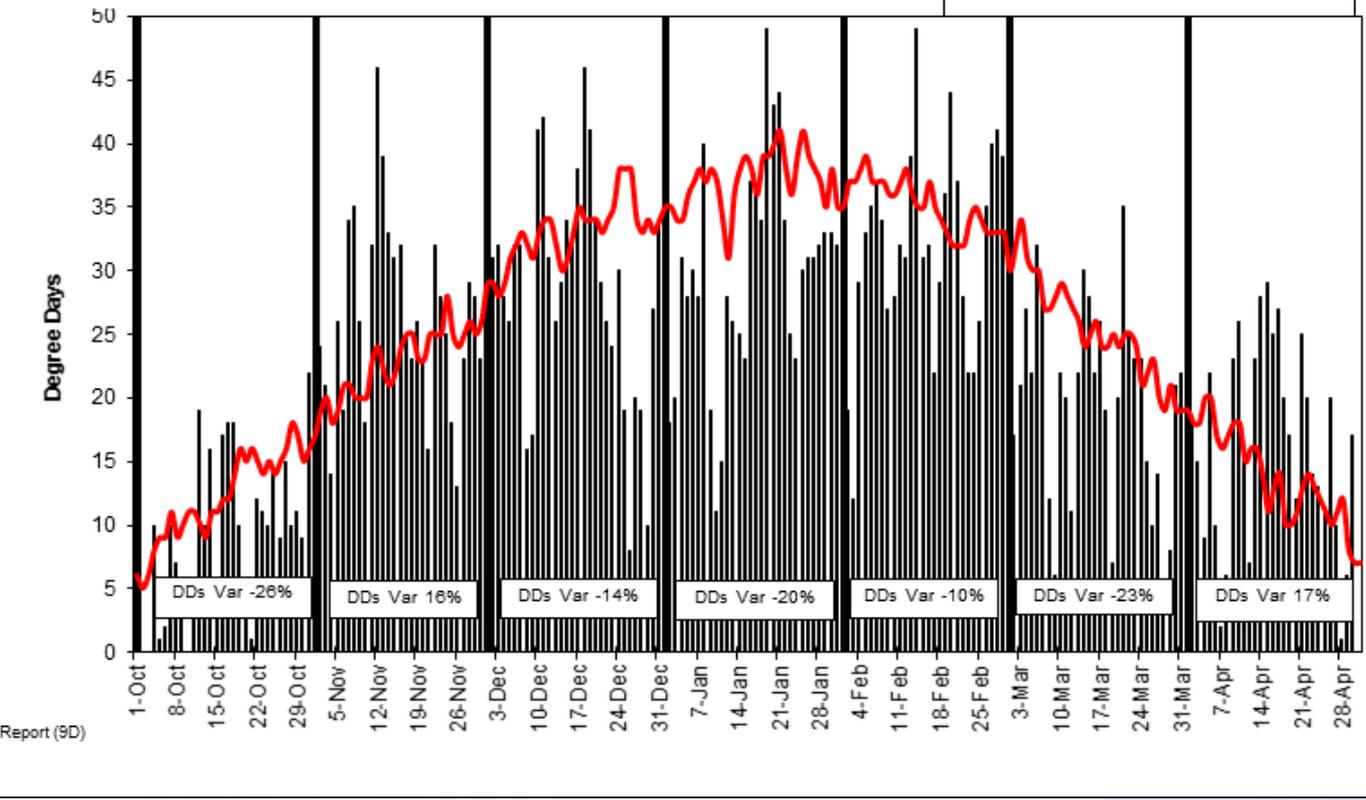
**COLUMBIA GAS OF OHIO, INC.**

Created 5/13/2020 11:35:18 AM

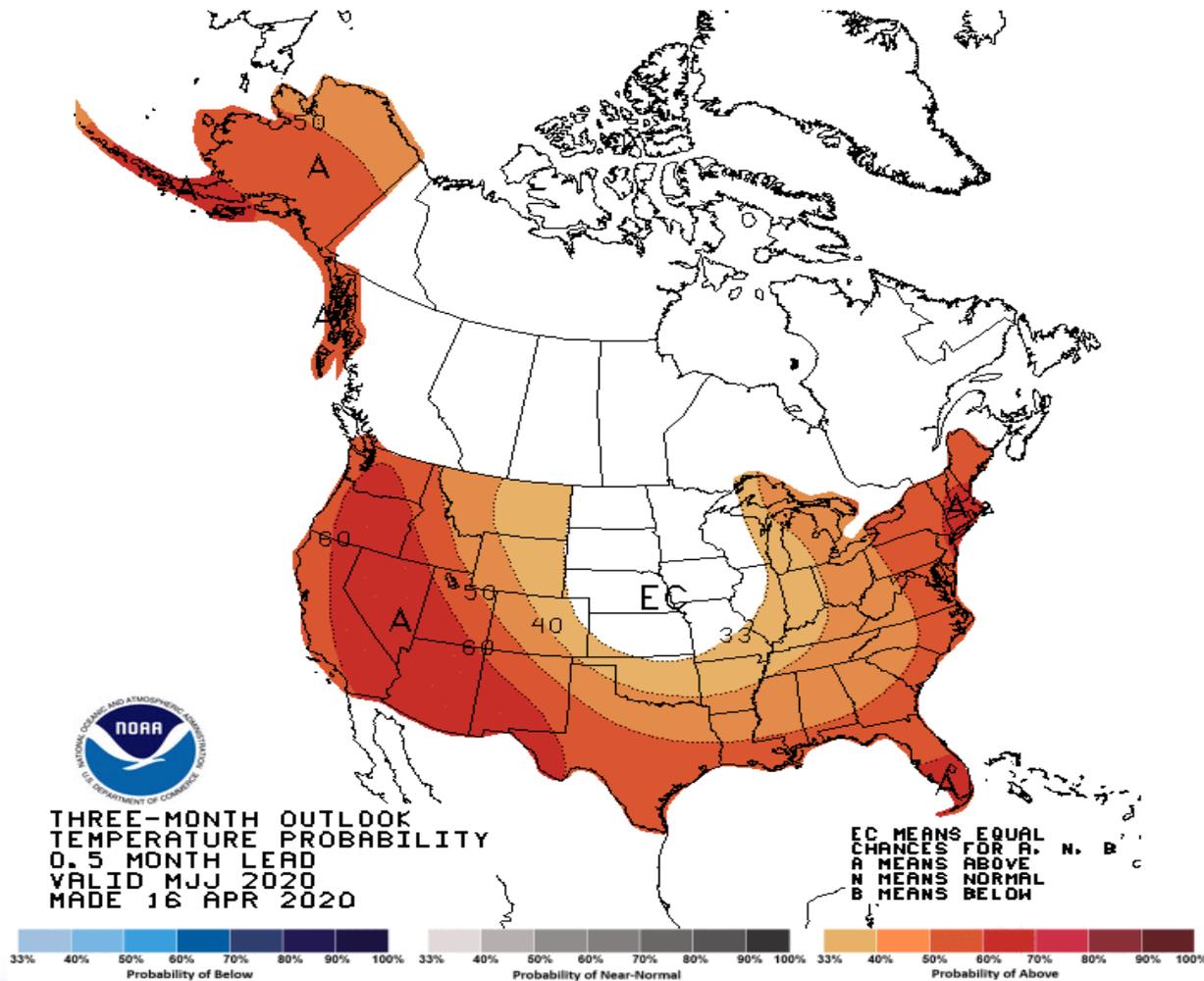
Winter Season 2019/2020 Normal vs. Actual Heating Degree Days

Oct-Apr Winter-To-Date Variance: -11%
Nov-Mar Winter-To-Date Variance: -12%

Balance Temperature = 65



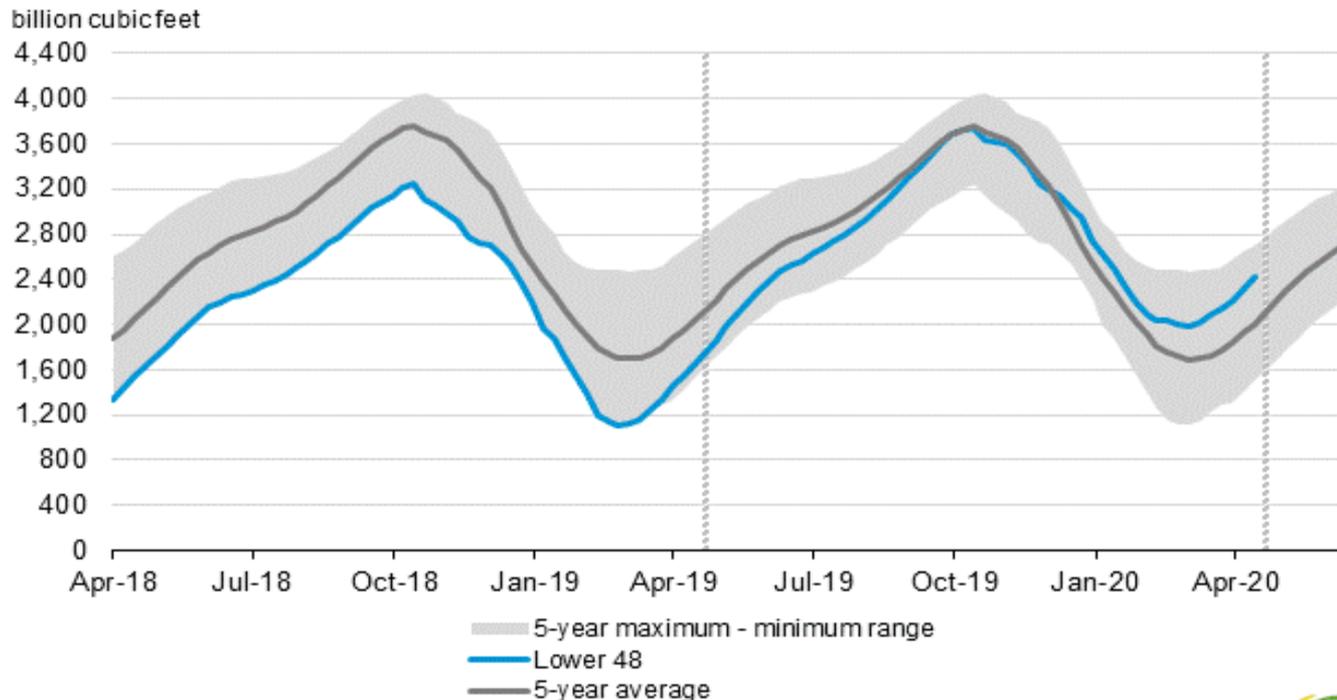
# NOAA Temperature Outlook: May, June, & July 2020



# Storage – Above the 5 Yr Average

Working gas in storage was 2,422 BCF as of Friday, May 8, 2020, according to EIA estimates. This represents a net increase of 103 BCF from the previous week. Stocks were 799 BCF higher than last year at this time and 413 BCF above the five-year average of 2,009 BCF. At 2,422 BCF, total working gas is within the five-year historical range.

Working gas in underground storage compared with the 5-year maximum and minimum



Source: U.S. Energy Information Administration

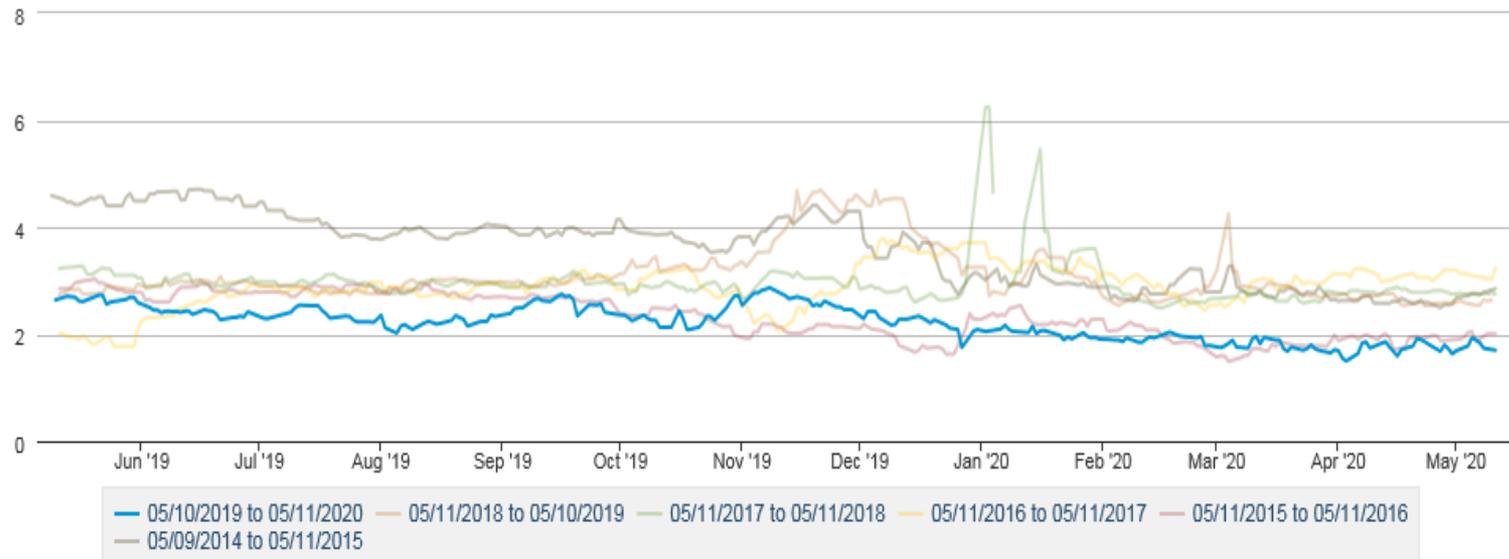


# NYMEX Prompt Month Settlement – 5 Years

## Henry Hub Natural Gas Spot Price

 DOWNLOAD

Dollars per Million Btu

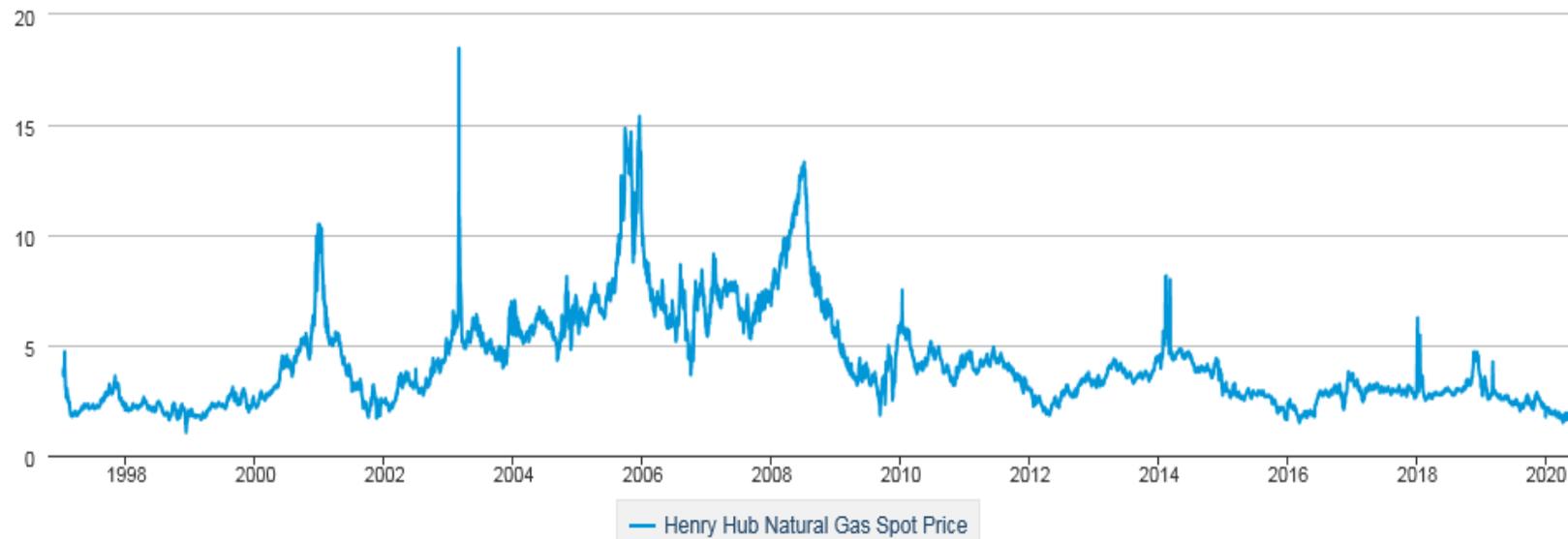


# NYMEX Prompt Month Settlement History

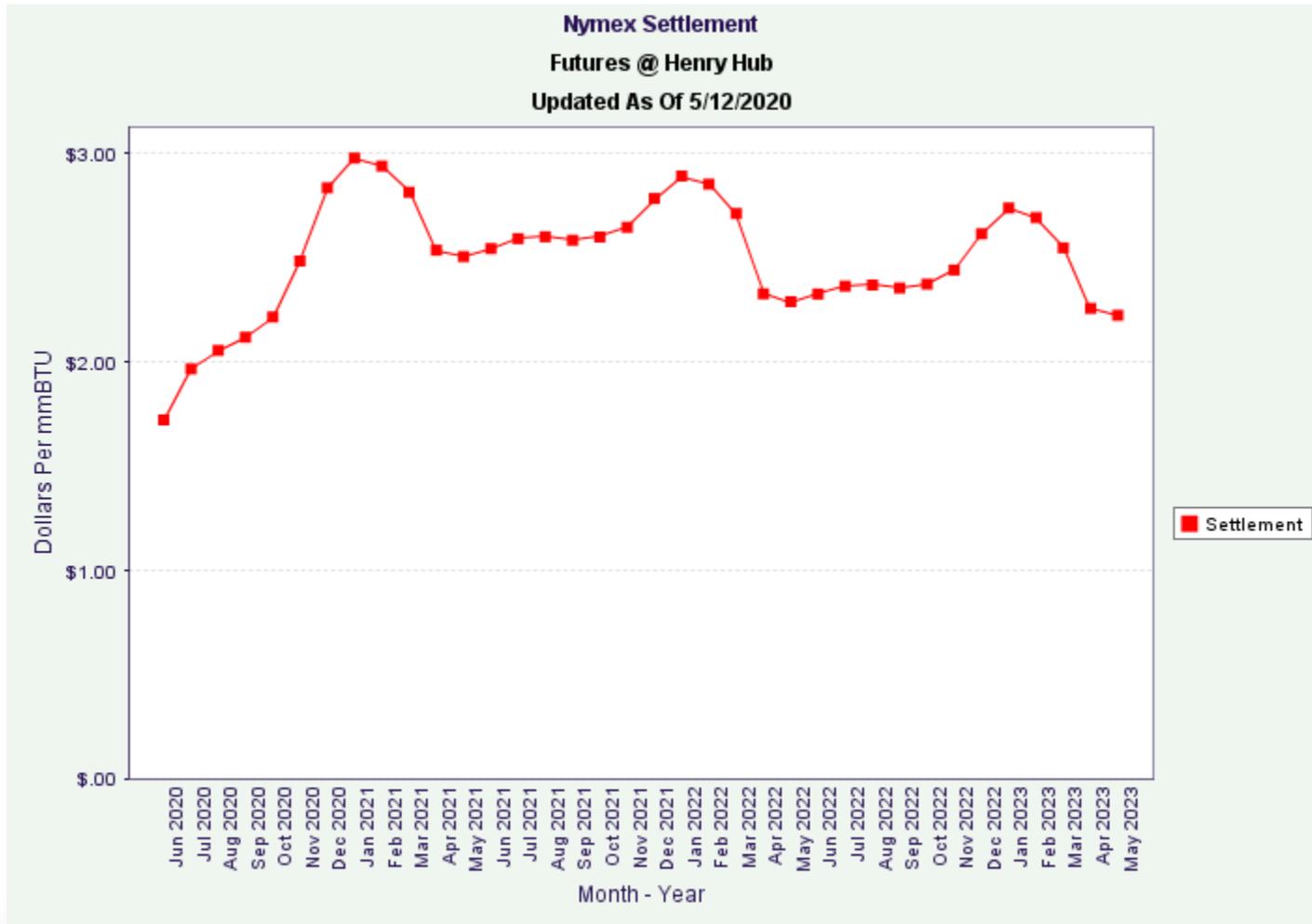
## Henry Hub Natural Gas Spot Price

 DOWNLOAD

Dollars per Million Btu



# NYMEX Futures Settlement: 05/12/2020 – \$3 back on chart



# NYMEX Term Pricing: 5-18-2020 – Little Higher

<u>TERM</u>	<u>PRICE 3-6-20</u>	<u>PRICE 5-18-20</u>
3 month	\$1.76	\$1.80 (+\$0.04)
6 month	\$1.84	\$1.98 (+\$0.14)
12 month	\$2.07	\$2.37 (+\$0.30)
18 month	\$2.10	\$2.44 (+\$0.34)

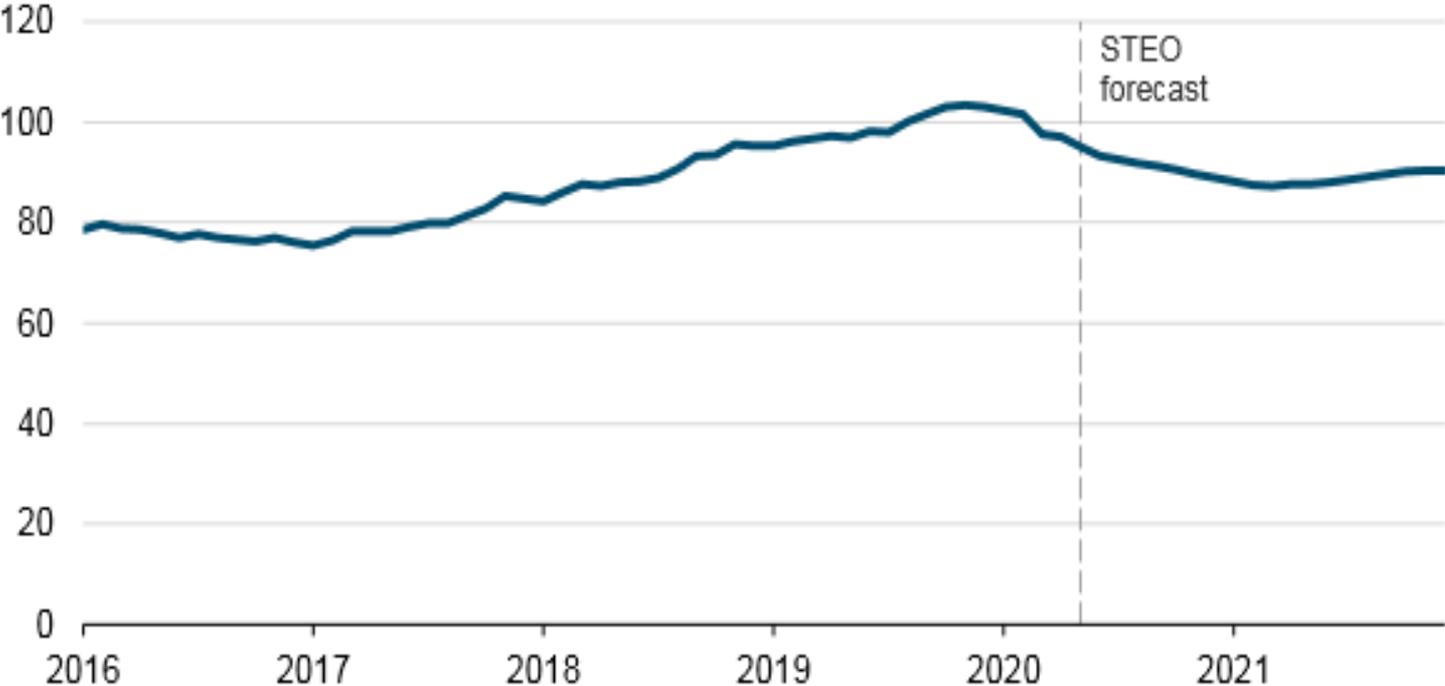
# Select Hub Pricing – March 6, 2020 – Little Lower

<u>HUB LOCATION</u>	<u>3-6-20</u>	<u>5-18-20</u>	
Henry Hub	\$1.74	\$1.60	<b>(-\$0.14)</b>
Houston Ship Channel	\$1.65	\$1.61	<b>(-\$0.04)</b>
TCO Pool	\$1.50	\$1.37	<b>(-\$0.13)</b>
Dominion South Point	\$1.40	\$1.17	<b>(-\$0.23)</b>
TETCO M-2	\$1.41	\$1.13	<b>(-\$0.28)</b>
TGP Zone 4	\$1.37	\$1.03	<b>(-\$0.34)</b>

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

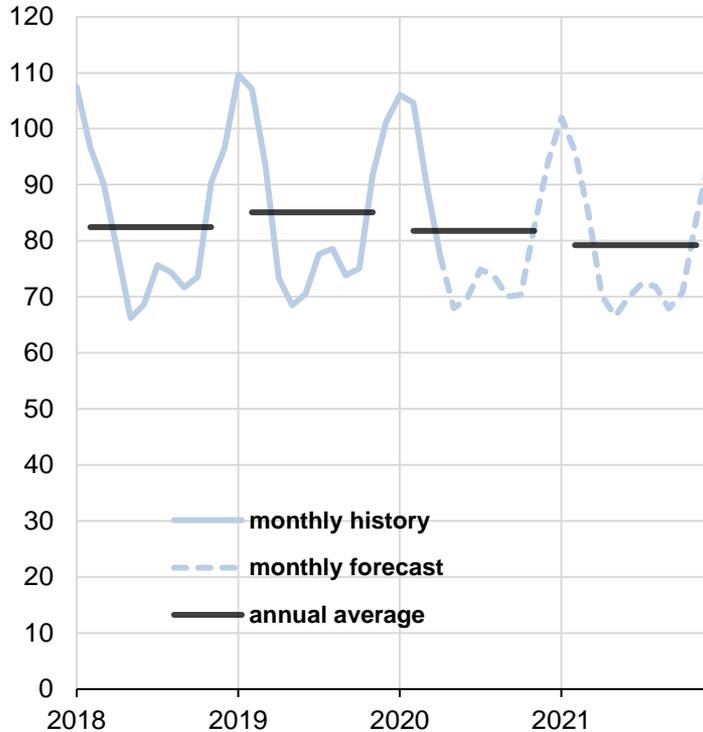
# EIA predicts Natural Gas Production Slow Down in 2020

Monthly U.S. marketed natural gas production (2016-2021)  
billion cubic feet per day

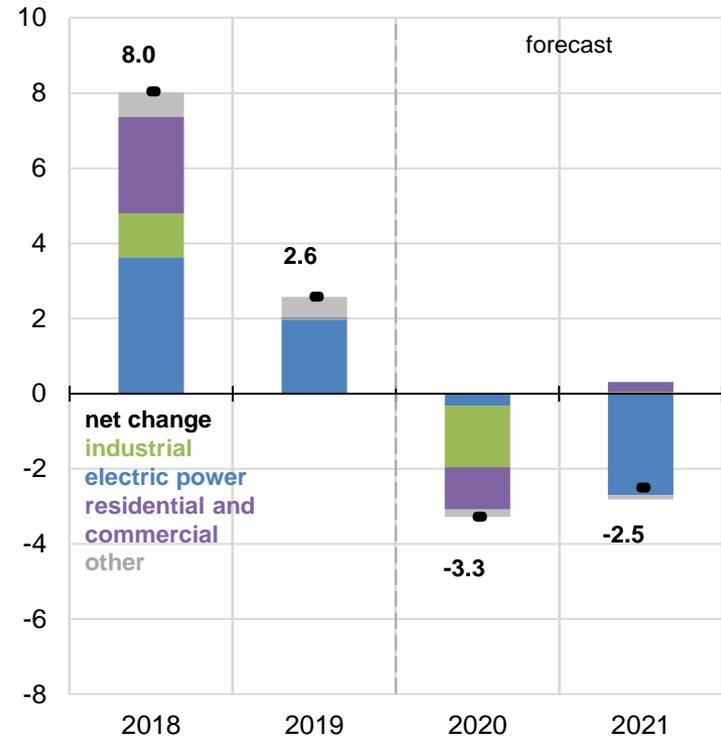


# EIA predicts Natural Gas Consumption Slow Down in 2020

**U.S. natural gas consumption**  
billion cubic feet per day



**Components of annual change**  
billion cubic feet per day

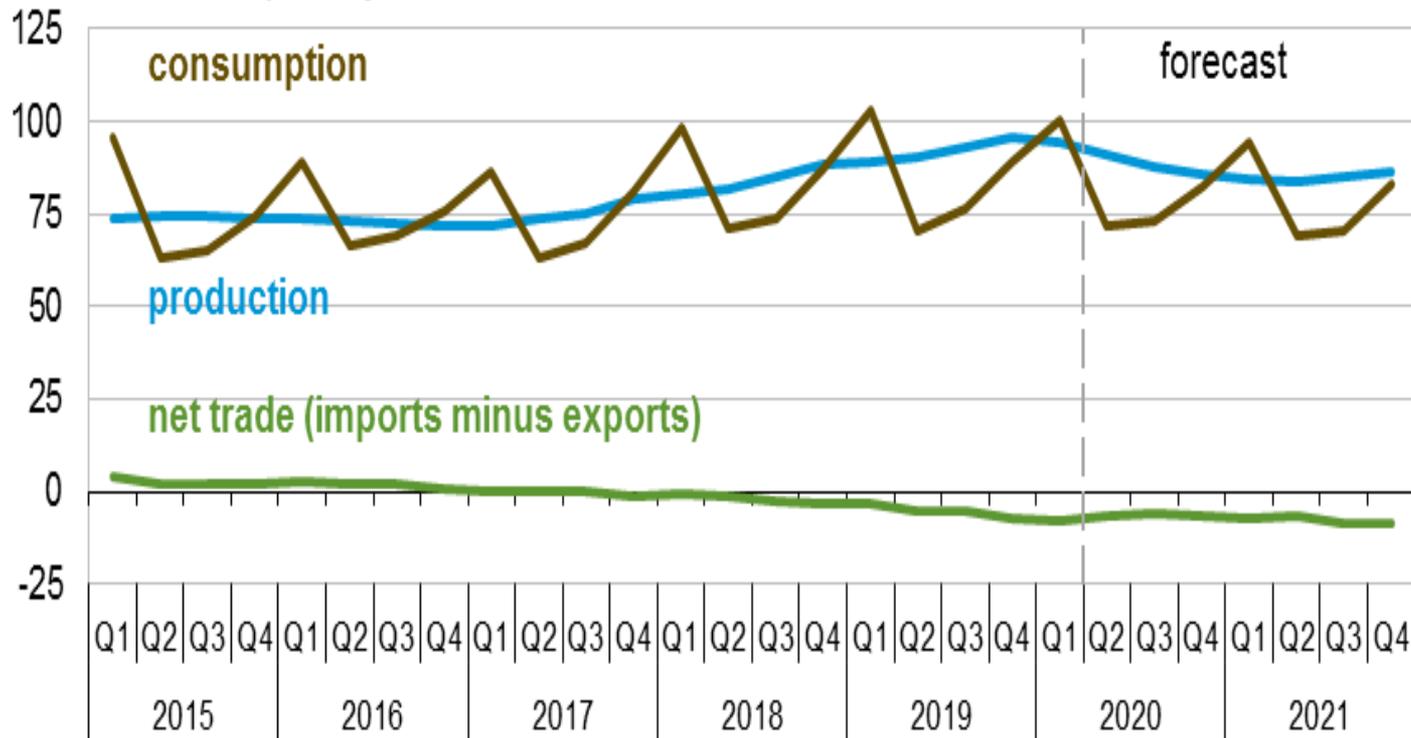


Source: Short-Term Energy Outlook, May 2020



# US Natural Gas Supply, Demand, & Export - Tempering

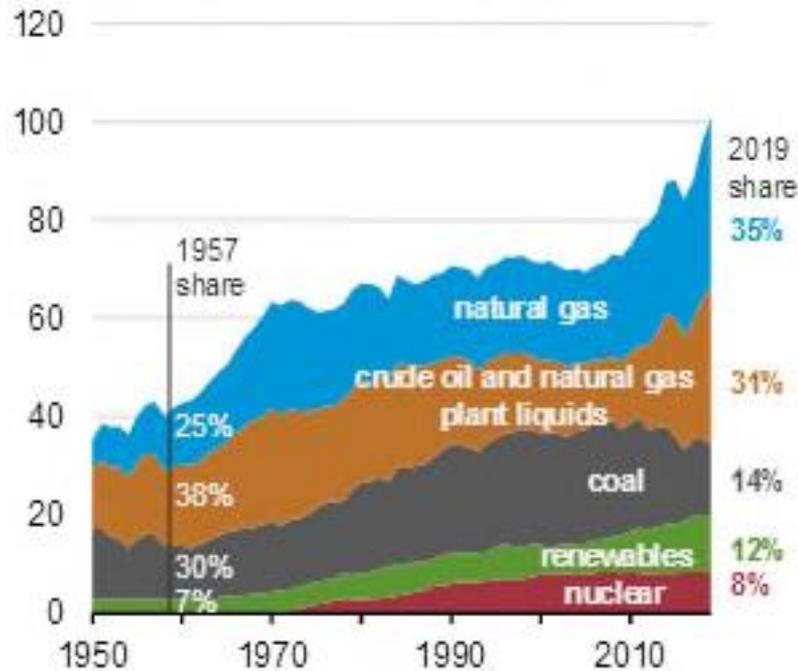
U.S. natural gas production, consumption, and net imports  
billion cubic feet per day



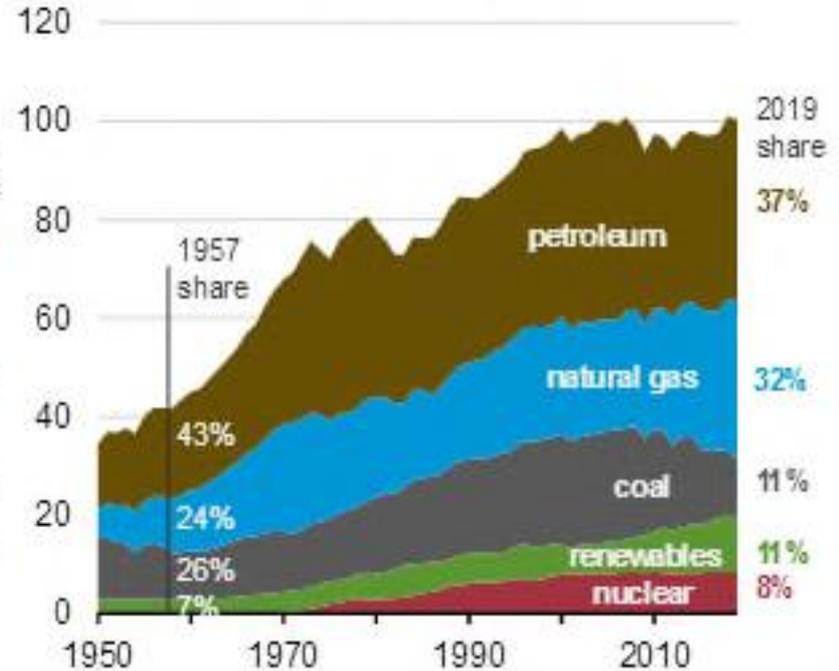
# Historical US Total Energy Production & Consumption – Gas & Renewables Growing

U.S. total energy production and consumption (1950-2019)

production by source  
quadrillion British thermal units (quads)

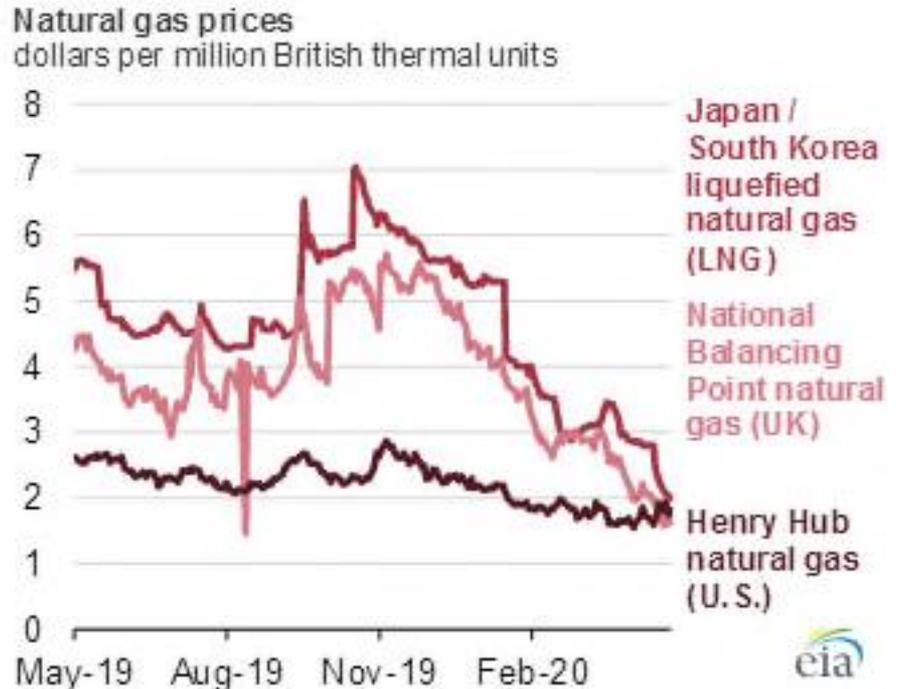
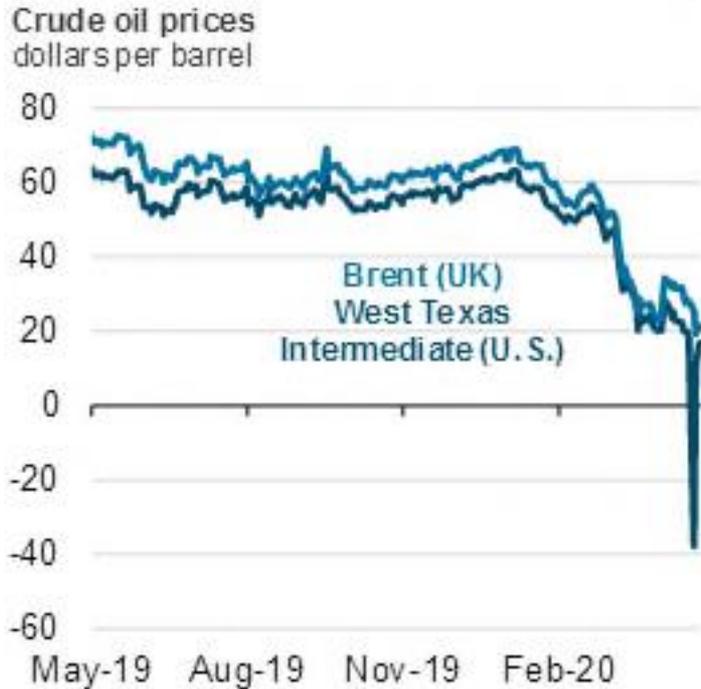


consumption by source  
quadrillion British thermal units (quads)



# Recent Unusual Pricing: Negative Oil & Low LNG Prices

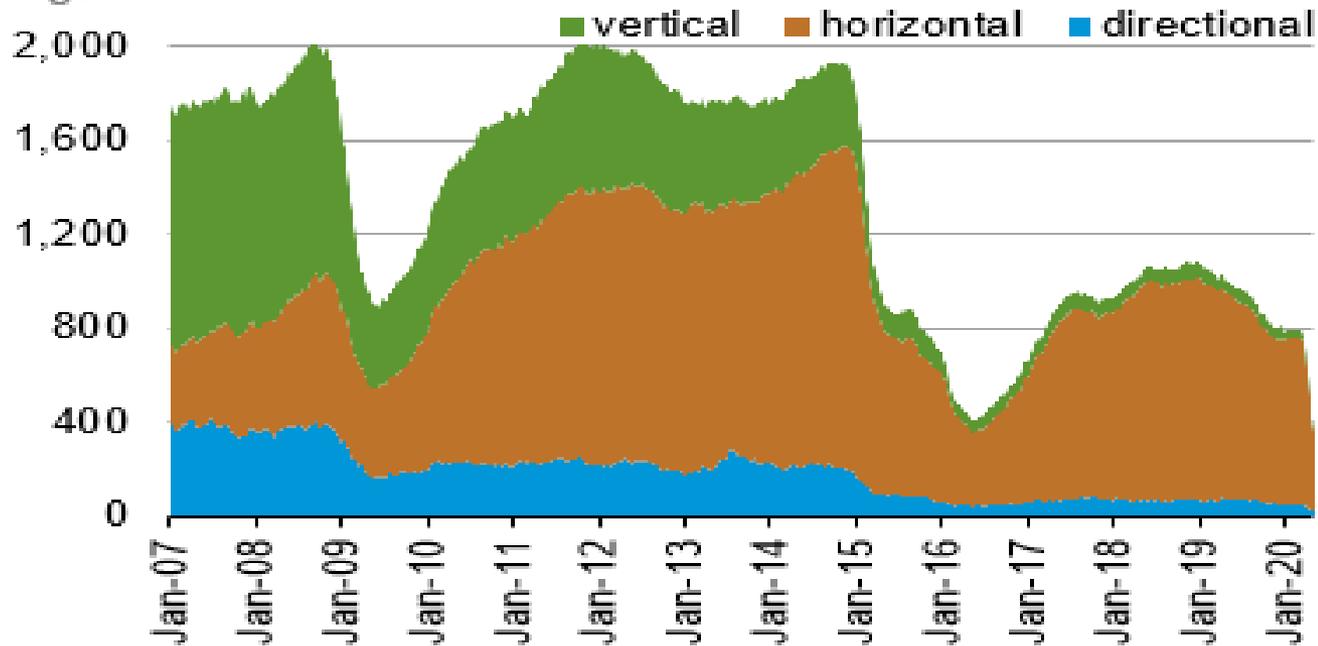
Daily prices of select international energy benchmarks (May 1, 2019-Apr 24, 2020)



# Oil & Gas Rig Count – Low – Price is too low

## Weekly total rig count

active rigs



Source: Baker Hughes Co.

# Oil & Gas Rig Count – Lots Lower – By the #s

## Rigs

	Tue, May 05, 2020	Change from	
		last week	last year
Oil rigs	292	-10.2%	-63.7%
Natural gas rigs	80	-1.2%	-56.3%

Note: Excludes any miscellaneous rigs

## Rig numbers by type

	Tue, May 05, 2020	Change from	
		last week	last year
Vertical	9	-18.2%	-80.0%
Horizontal	338	-9.6%	-61.2%
Directional	27	17.4%	-62.0%

# Recent Developments - Energy

- Continued pain in the Oil & Gas field; Pricing continues low
- Domestic Oil & Gas E&P entities continue to materially cut capital budgets
- COVID 19 materially reduced energy demand in addition to a warm 19/20 winter
- Oklahoma joins Arizona & Tennessee in preventing local governments from prohibiting the use of natural gas in buildings

# Thank You

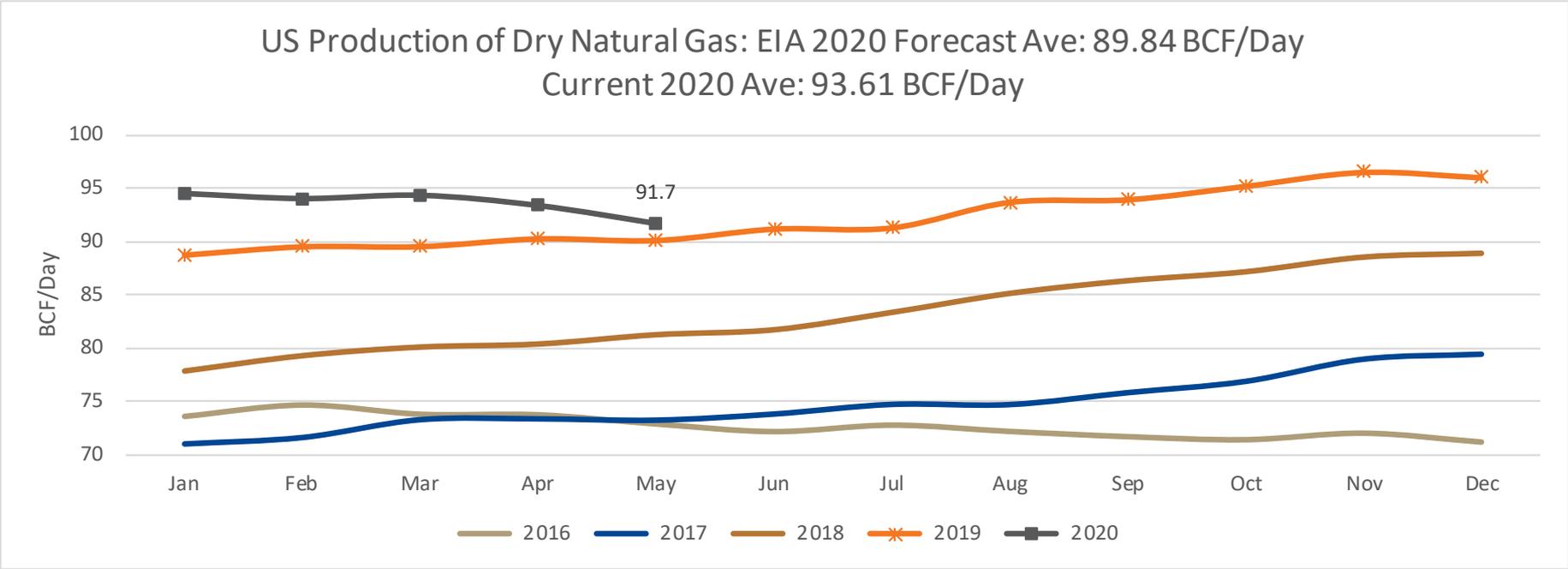
# Electricity Market Update

May 2020



scioto energy

# Natural Gas Production



# Dry Natural Gas Production

Monthly Dry Gas Production - Shale (BCF/Day)

03.01.20 Production Analysis

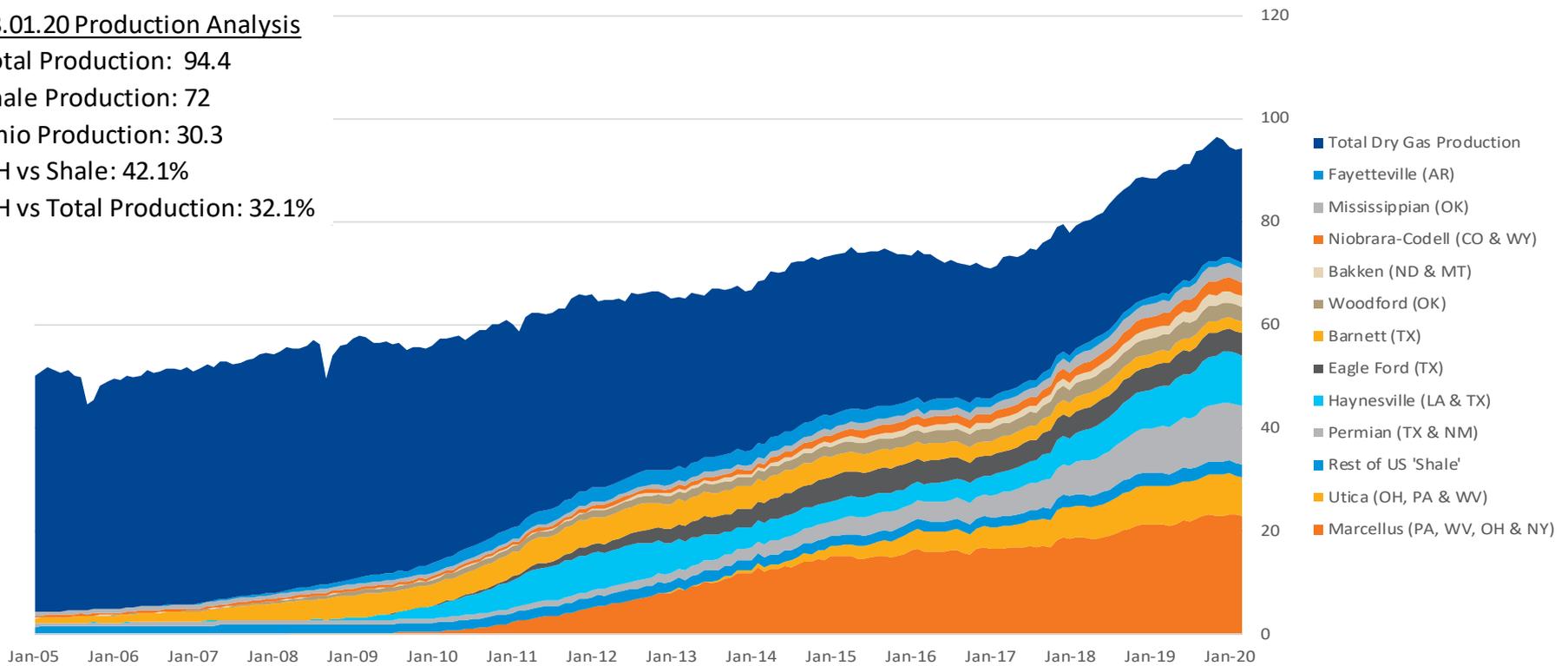
Total Production: 94.4

Shale Production: 72

Ohio Production: 30.3

OH vs Shale: 42.1%

OH vs Total Production: 32.1%

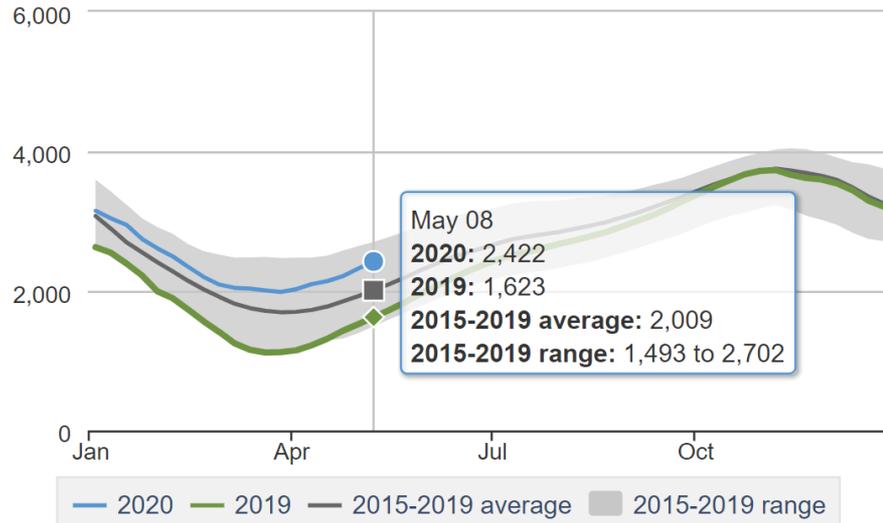


\*Updates Monthly

# Natural Gas Storage

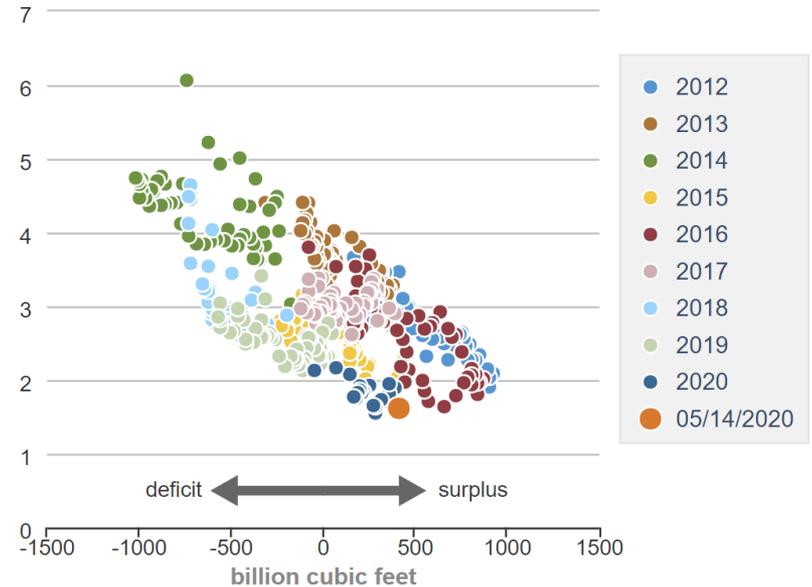
## Lower 48 weekly working gas in underground storage

billion cubic feet

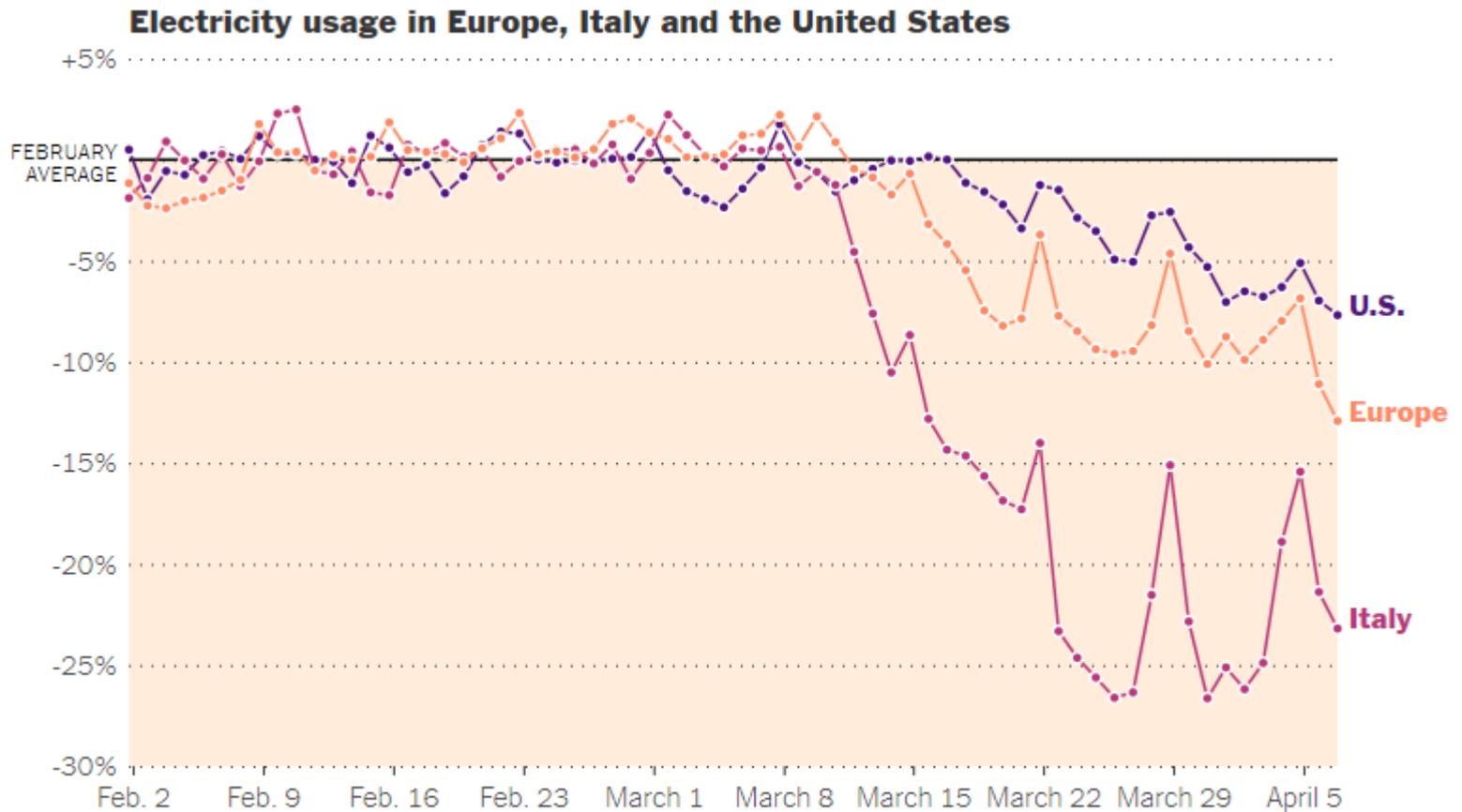


## Lower 48 weekly working gas stocks, minus five-year average, and near-month futures prices

price of gas at the Henry Hub in dollars per million British thermal units



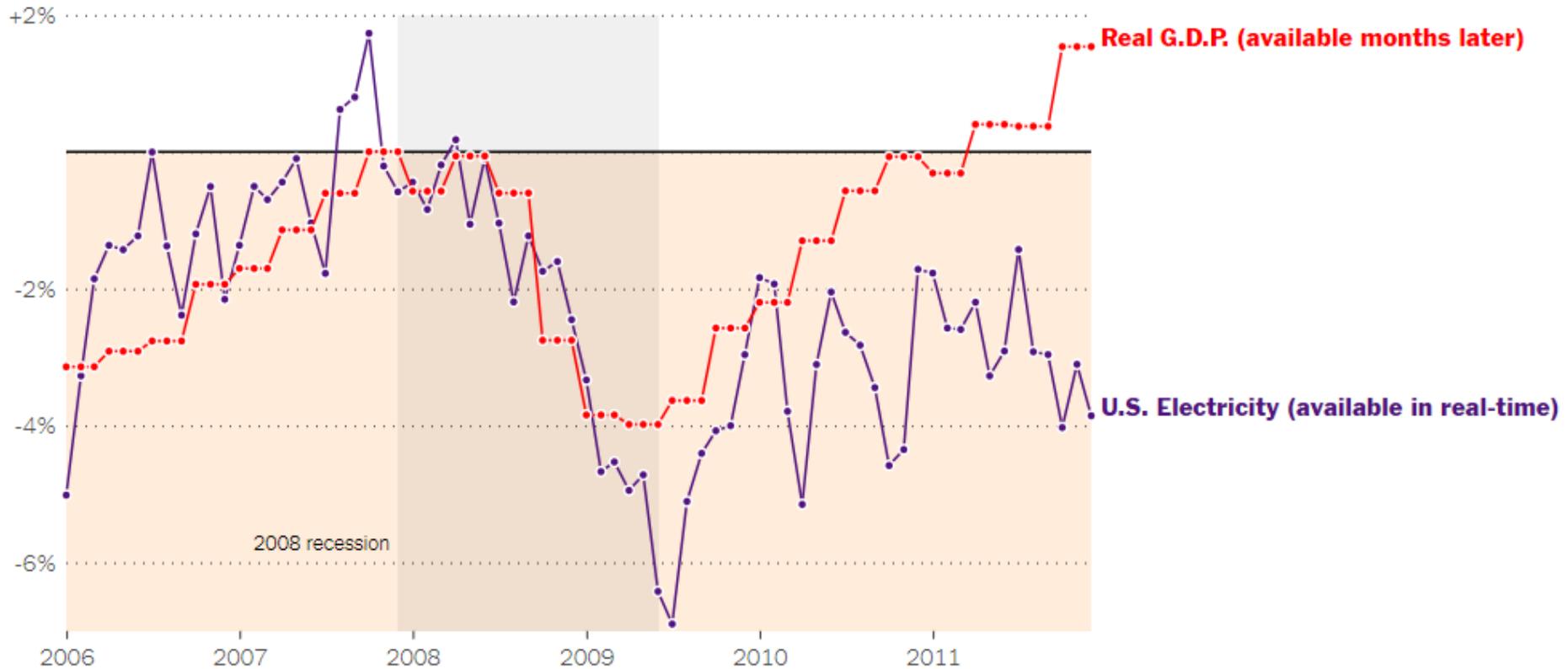
# COVID-19 Demand Impacts



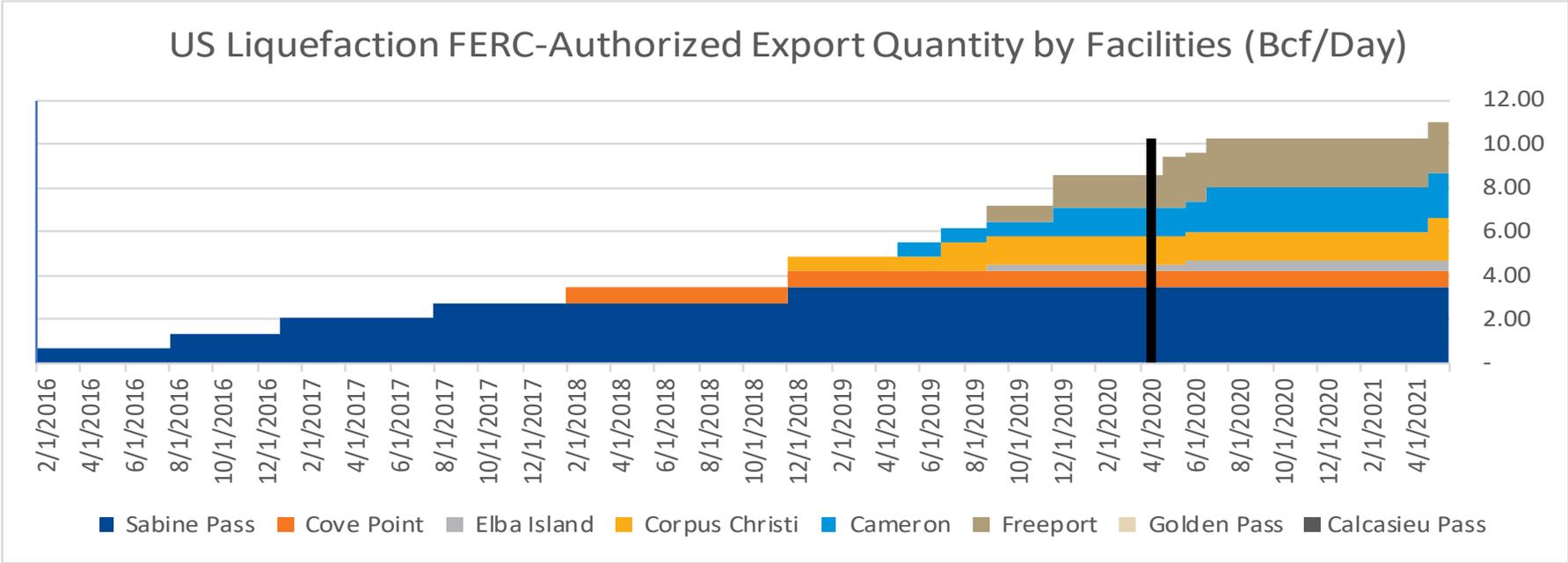
Source: European Network of Transmission System Operators for Electricity

# COVID-19 Demand Impacts

## How electricity data compared with economic activity in 2008

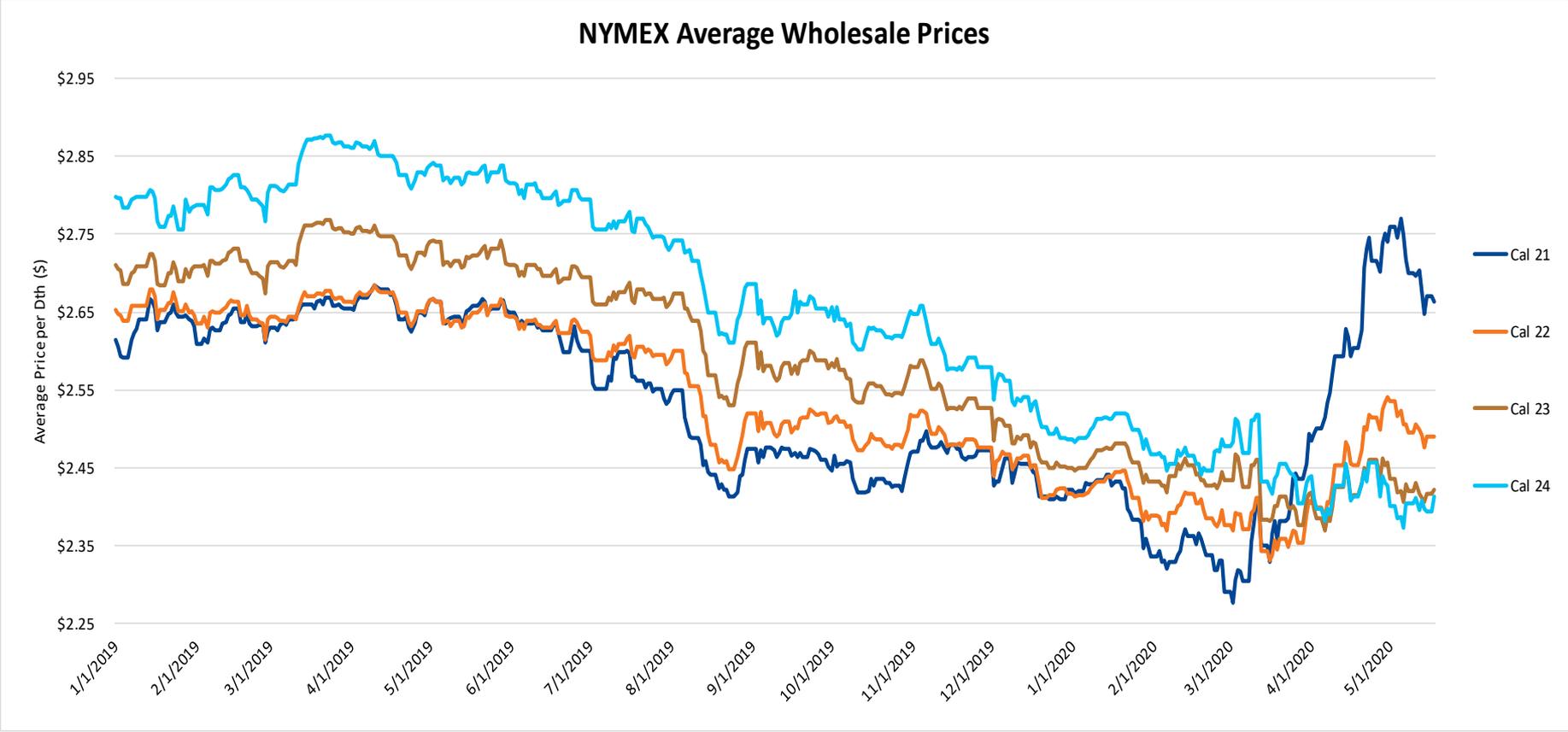


# LNG Projected Exports

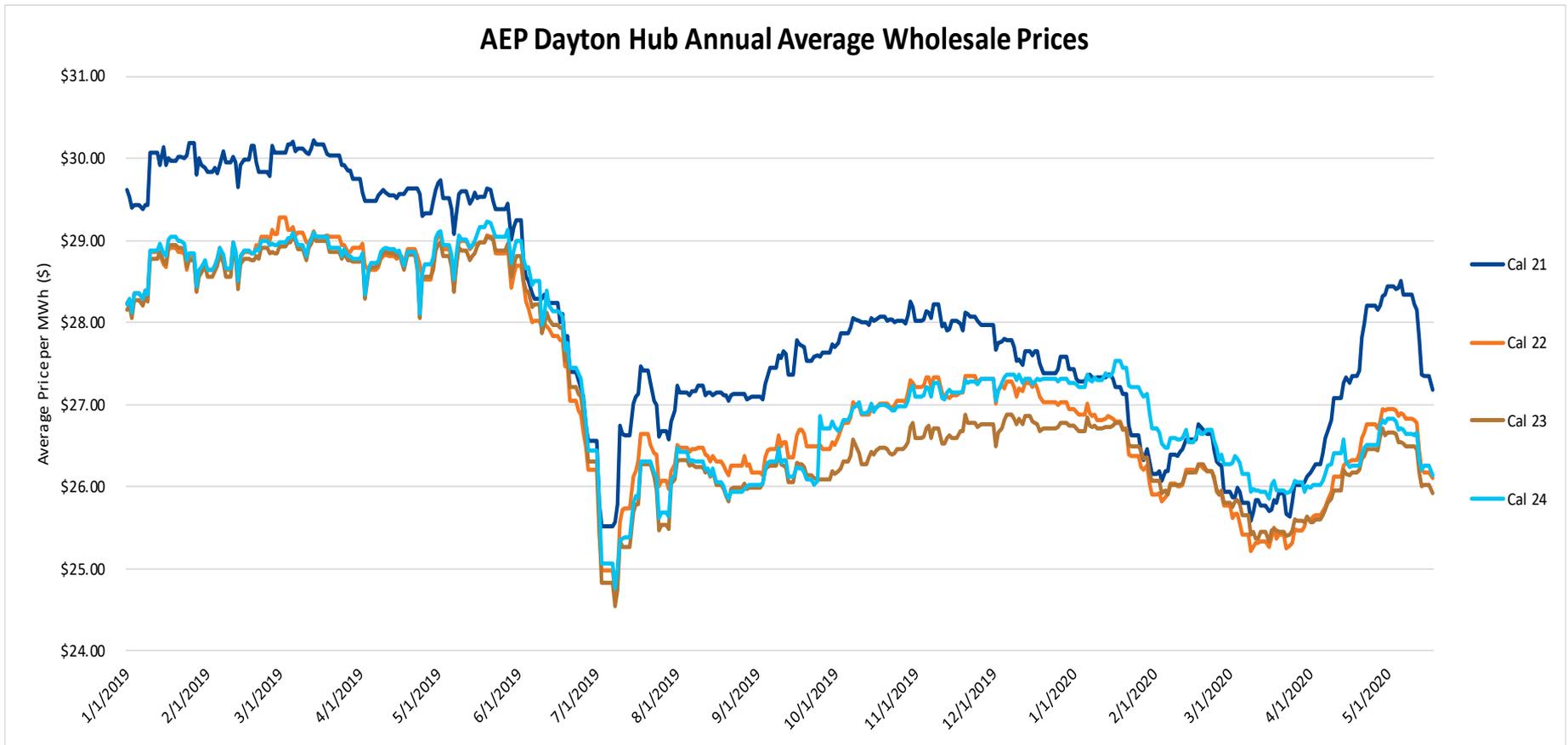


\*Updates Monthly

# NYMEX Natural Gas Forwards



# PJM AD Hub Electricity Forwards

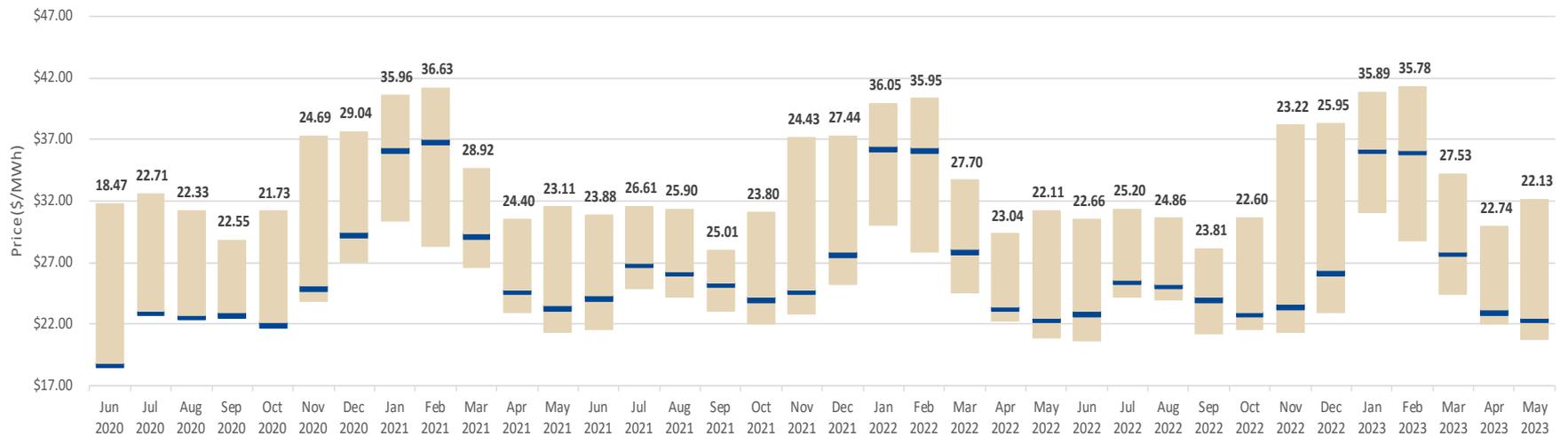


# PJM AD Hub Electricity Forwards

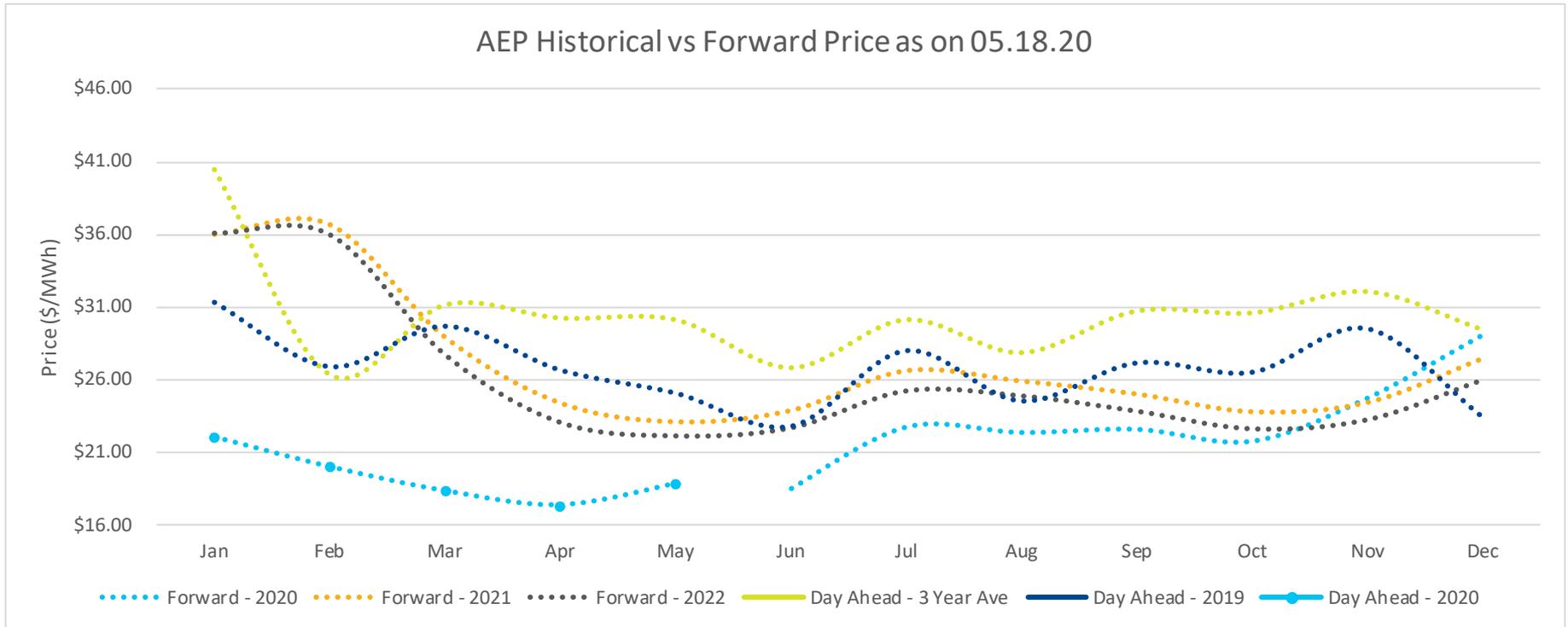
Power RTC \$ / MWh on 05.18.20					
From	1/1/2016	1/1/2017	1/1/2018	1/1/2019	1/1/2020
To	5/18/2020	5/18/2020	5/18/2020	5/18/2020	5/18/2020
Cal Year	2021	2022	2023	2024	2025
Current Price	\$ 27.17	\$ 26.10	\$ 25.92	\$ 26.13	\$ 26.93
Maximum Price	\$ 30.22	\$ 30.22	\$ 30.87	\$ 29.22	\$ 28.18
Minimum Price	\$ 25.51	\$ 24.69	\$ 24.54	\$ 24.75	\$ 26.70
Date of Maximum	3/14/2019	12/28/2017	3/25/2018	5/20/2019	1/17/2020
Date of Minimum	7/3/2019	7/8/2019	7/8/2019	7/8/2019	3/23/2020
Compared to Low	6.5%	5.7%	5.6%	5.6%	0.9%

# PJM AD Hub Electricity Forwards

Electric Monthly Price Trend Analysis: Current Prices  
Data Range: 11.30.17 - 05.18.20

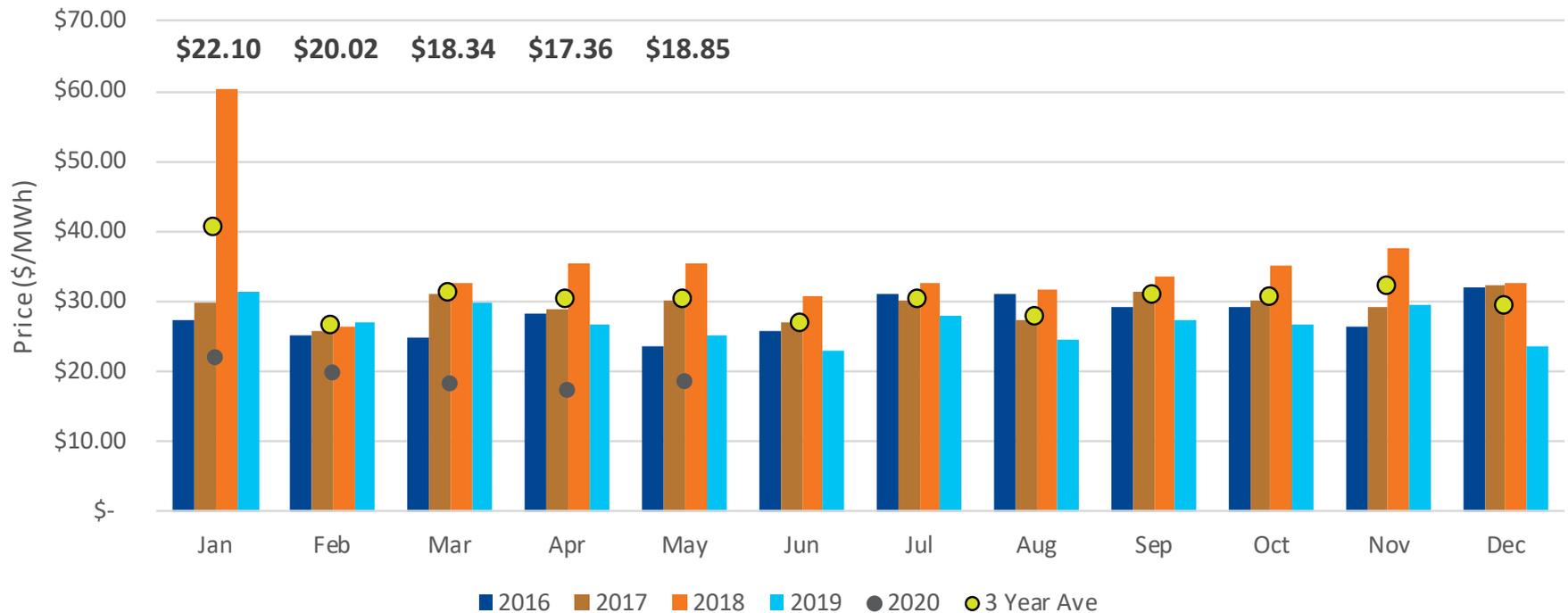


# PJM AD Hub Electricity Forwards



# PJM AD Hub Day Ahead LMP's

## DA LMP Averages with Monthly Average Pricing



\*Pricing listed is for 2019 averages

# PJM AD Hub Day Ahead LMP's

## Historical Day-Ahead Average Pricing Compared to 05.18.2020 Forward Pricing

