

The background of the top section is a photograph of a large electrical substation with numerous high-voltage power lines and towers stretching across a dry, hilly landscape under a cloudy sky.

ENERGY Update

Spring 2017

*MISO'S MANDATORY
FORWARD CAPACITY MARKET
PROPOSAL REJECTED*

By Ali Al-Jabir, Senior Consultant

The Midcontinent Independent System Operator, Inc. (“MISO”) recently proposed a package of changes to its resource adequacy construct which would have applied to the retail choice areas of its footprint in Illinois and Lower Michigan, as well as any other area of MISO that might pursue retail choice in the future. As discussed in more detail herein, BAI analyzed MISO’s proposed changes and found them to be unnecessary, flawed, unduly discriminatory and harmful to retail customers. BAI worked with certain industrial customer interests in the MISO footprint to challenge these proposed changes. These efforts proved to be successful, as the Federal Energy Regulatory Commission (“FERC”) issued an order on February 2, 2017 that rejected MISO’s proposed changes in their entirety. This allowed industrial customers in retail choice areas of MISO, outside of Michigan, to avoid significant unnecessary increases in capacity costs.

Michigan Exception

As an aside, recently enacted Section 6w of [*Michigan Public Act 341*](#) includes provisions that effectively prohibit retail choice load in Michigan from using MISO’s current capacity auction and will likely require those customers to pay for capacity based on the average embedded generation costs of their incumbent utility.

INSIDE THIS ISSUE

- ***MISO’s Mandatory Forward Capacity Market Proposal Rejected***
- ***SNL OTC Global Holdings Forward Power Prices***
- ***Forecasted Natural Gas and Electricity Prices***
- ***2016 and 2017 Electric Rate Case Decisions***
- ***Pending Retail Electric Rate Cases***
- ***Electric Industrial Shopping***
- ***New Zero Emissions Standards to Raise Energy Bills***

Despite its serious flaws, MISO’s proposal would have established a forward capacity auction for retail choice load. While its forward capacity auction would have, by design, produced unreasonably high capacity market prices, those prices would have still been well below the current average embedded capacity cost of the major investor-owned electric utilities within the MISO portion of Lower Michigan. If the forward capacity auction had been approved by FERC, Section 6w would have permitted the Michigan Public Service Commission to decide whether Alternative Electric Suppliers would be allowed to use that forward capacity auction to supply retail choice customers at a price substantially lower than the average embedded capacity cost of the incumbent utilities of those customers.

Rationale for MISO's Capacity Market Reform Proposal

The MISO region currently conducts an annual capacity auction to establish capacity market clearing prices for the upcoming planning year. This auction does not incorporate certain capacity market features that are characteristic of the organized capacity markets in PJM and New England, such as an administratively determined downward sloping demand curve, minimum offer price rules or multi-year forward capacity auctions.

Over the past two years, MISO engaged in a stakeholder process to modify its current capacity market auction design, with such modifications targeted only to those portions of MISO where there is a significant amount of retail choice load. Currently, this only includes the MISO portions of Illinois and Lower Michigan (MISO Load Resource Zones 4 and 7).

MISO's push to change the capacity market design was rooted in its perception that generation reserve margins are shrinking in the MISO footprint as coal-fired generating units retire due to environmental regulations and as merchant generation resources of various fuel types retire or transmit power out of MISO and into PJM due to economic conditions. MISO believes that these developments may create a serious risk of capacity shortfalls in the near term. MISO is concerned that the risk of such shortfalls is particularly high in those areas of the MISO footprint with competitive retail choice because those areas depend on wholesale market price signals to facilitate generation investment and retirement decisions.

MISO suggested that its current annual, prompt year capacity auction does not provide the long-term capacity price signals that it believes are required to ensure sufficient generation investment in competitive retail choice areas or to send efficient price signals for generation retirement decisions in such areas. MISO also indicated that it believes the vertical demand curve that is employed in its current capacity market design is inadequate for retail choice areas because it produces excessive capacity price volatility and does not provide a dependable price signal that accurately reflects the marginal value of reliability as reserve margins shrink over time. For these reasons, in MISO's view, the current market design cannot ensure resource adequacy in the areas of its footprint where there is a significant amount of retail choice load.

Description of MISO's Proposed Changes

MISO's proposal, the Competitive Retail Solution ("CRS"), was filed by MISO with FERC in November 2016 in Docket No. ER17-284-000. The proposal would have created a forward capacity auction for the areas of MISO where there is a significant amount of retail choice load. Based on current state laws, this means that the CRS would have only applied to MISO portions of Illinois and Lower Michigan. The remainder of the MISO footprint that is subject to traditional rate regulation would have continued to operate under MISO's existing annual, prompt year capacity auction mechanism, called the Planning Resource Auction ("PRA").

MISO's proposed capacity market reforms were largely modeled after the forward capacity markets that are currently operational in the PJM and New England systems. MISO proposed that these capacity market reforms would have an effective date of March 1, 2017 in order to ensure their implementation in time for MISO's 2018/2019 Planning Year.

The salient features of the CRS capacity market design can be summarized as follows:

- A new Forward Resource Auction ("FRA") for retail choice areas that would procure capacity three years in advance of the prompt year.
- An administratively determined, variable, downward sloping demand curve for capacity that would apply only to the FRA.
- In lieu of participation in the FRA, entities that serve loads in competitive retail choice areas could submit a Forward Fixed Resource Adequacy Plan ("FFRAP") that would demonstrate that they have procured sufficient capacity outside of the FRA to meet their requirements over a three-year forward time horizon.
- As an alternative to participating in the FRA, state regulators would be permitted to develop a Prevailing State Compensation Mechanism ("PSCM") that would ensure compliance with MISO's resource adequacy standards by imposing forward capacity procurement requirements on entities operating within their respective state jurisdictions and by also dictating the compensation levels for procuring such forward capacity.

The CRS proposal likely would have led to significant unnecessary cost increases in the market price for capacity for retail choice loads in MISO. The analysis of MISO's own consultants that was presented in MISO's filing indicated that the proposal would have forced retail choice loads to pay capacity prices on average that are approximately \$85 per MW-day (or about 80%) higher than the capacity prices paid by non-retail choice loads within MISO. It would also have required those retail choice loads to acquire 4% more capacity than non-retail choice loads.

Flaws in MISO's CRS Proposal

BAI worked with the attorneys representing the Coalition of MISO Transmission Customers ("CMTC") and the Illinois Industrial Energy Consumers ("IIEC") to protest the CRS proposal at FERC. The protest filed by CMTC and IIEC on December 14, 2016, along with BAI's supporting affidavits, identified a number of critical flaws with MISO's proposal. Because of these problems, CMTC and IIEC asked FERC to reject MISO's proposal because it was not just and reasonable and because it was unduly discriminatory.

The flaws in MISO's proposal can be summarized as follows:

- 1) MISO's proposal would have inefficiently bifurcated the existing MISO resource adequacy construct by introducing the FRA only for the competitive retail choice areas of its footprint while continuing the existing PRA for the remainder of the footprint. This bifurcation would have prevented efficient price convergence across the footprint, increased market concentration and reduced market efficiency.*
- 2) MISO proposed to give priority access to the MISO transmission system to non-retail choice loads over retail choice loads. This would have discriminated against retail choice loads and would have further driven up the price differential between the FRA and PRA capacity price results.*
- 3) MISO did not demonstrate that its current prompt year capacity auction mechanism had failed to satisfy the need for capacity resources in MISO as a whole or in retail choice areas of MISO in particular.*
- 4) MISO overstated the reliance of retail choice load serving entities ("LSEs") on the PRA and therefore the*

potential impacts of its claimed PRA imperfections on resource adequacy in the MISO footprint.

5) MISO overstated the risk of a capacity shortage during the 2018/2019 Planning Year, both for MISO as a whole and for competitive retail choice areas in particular.

6) The CRS proposal was intentionally designed to require retail choice loads to pay higher average capacity prices than non-retail choice loads. This rendered the proposal unduly discriminatory because it would have resulted in disparate treatment of customers across the MISO footprint.

7) The CRS proposal would have effectively eliminated the bilateral forward capacity market in MISO during the three years prior to the planning year.

8) The CRS would have imposed unreasonable barriers to resource participation in the FRA.

Finally, the PSCM component of the CRS proposal would have permitted state regulatory commissions to determine and set the wholesale price of capacity within their portions of the MISO footprint, outside of the PRA and FRA. Thus, the PSCM would have effectively ceded the FERC's exclusive jurisdiction to establish the wholesale rates for electricity in interstate commerce to a state entity, in violation of federal law and established precedent.

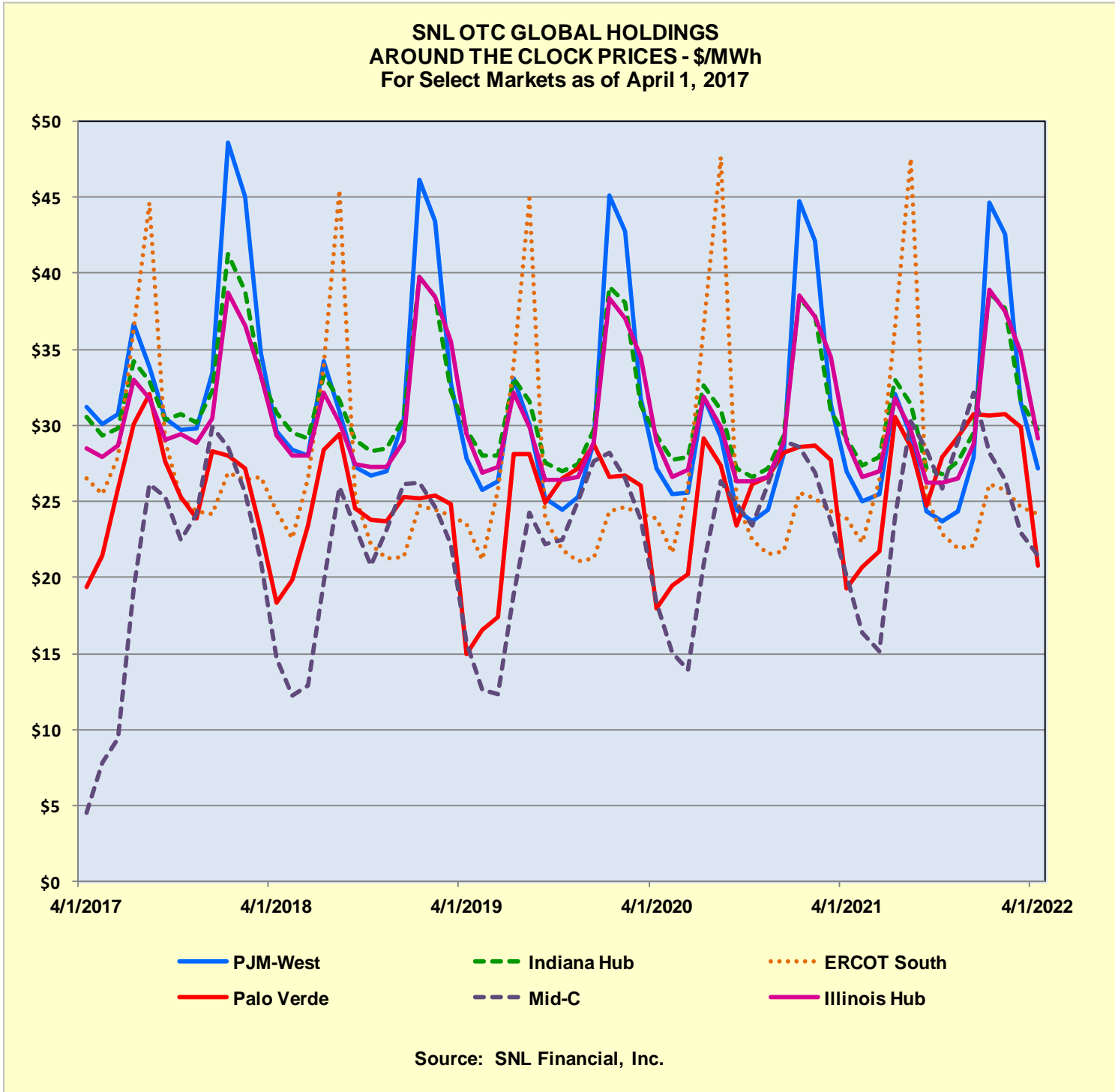
FERC Decision

On February 2, 2017, the FERC responded to the positions advanced by CMTC and IIEC and other parties by issuing a decision rejecting the CRS proposal in its entirety. In its order rejecting the proposal, the FERC generally agreed with some of the criticisms that CMTC and IIEC raised in their protest and BAI's supporting affidavits. In particular, the FERC expressed concerns regarding the inefficiencies associated with bifurcating the MISO capacity market and the problems surrounding the allocation of transmission capability between the PRA and FRA.

For industrial customers within MISO, outside of Michigan, who either currently have retail choice or may have it in the future, this result allows these customers to avoid significant unnecessary cost increases that would have resulted from MISO's CRS proposal.

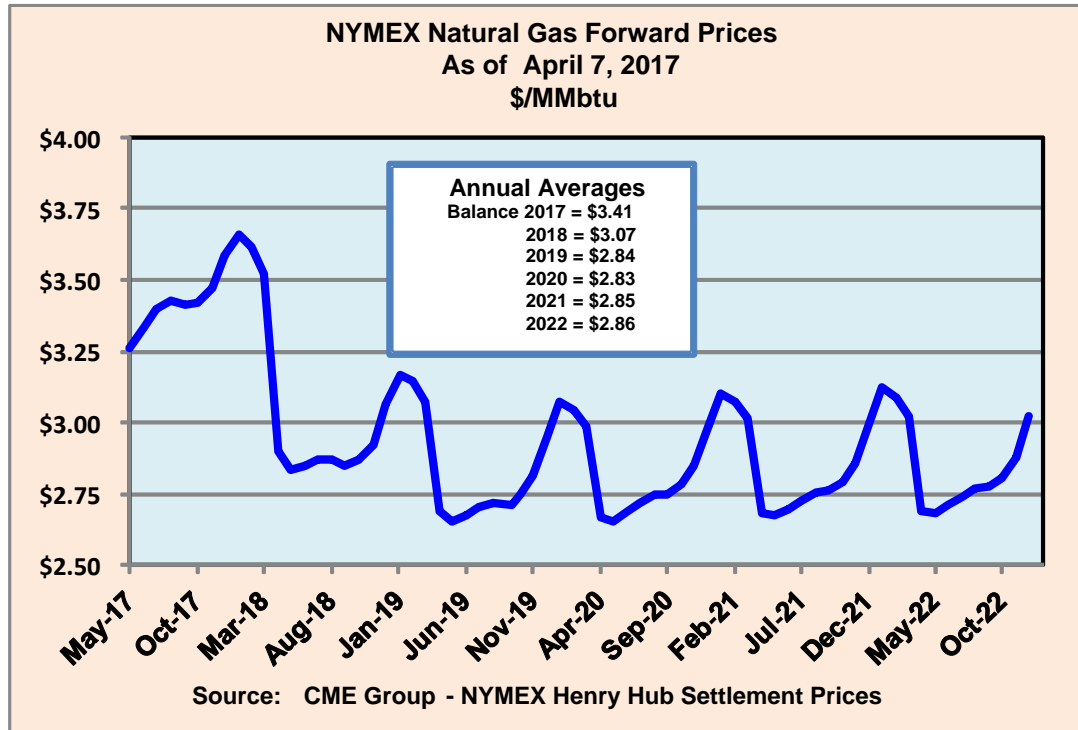
[\(Refer to page 11 to read about the author\)](#)

SNL OTC GLOBAL HOLDINGS FORWARD POWER PRICES

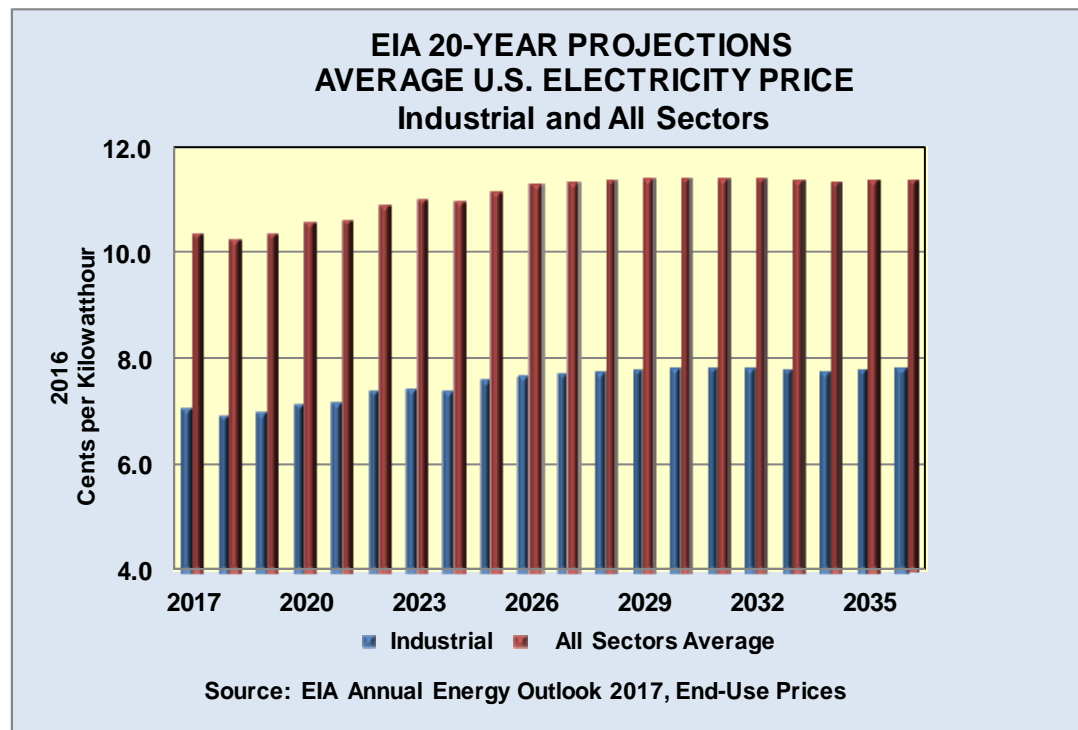


FORECASTED NATURAL GAS AND ELECTRICITY PRICES

Natural gas projections for the remainder of 2017 indicate an upward movement toward a \$3.50-\$3.60/MMbtu range by year-end. A five-year peak of approximately \$3.66/MMbtu is projected for January 2018. Thereafter, prices move downward and remain in the \$2.80/MMbtu range through 2022.



The U.S. Energy Information Administration (EIA) is forecasting industrial electricity prices to remain constant through 2036 while averaging between 6.9¢ and 7.8¢/kWh.



ELECTRIC RATE CASES AUTHORIZED INCREASES IN 2016 AND 2017 TO DATE

Utility	Order Date	Company Requested (\$ millions)	Commission Authorized (\$ millions)
ARIZONA			
Tucson Electric Power Co.*	02/24/17	109.5	81.5
UNS Electric Inc.	08/18/16	5.1	5.1
ARKANSAS			
Entergy Arkansas Inc.	02/23/16	268.5	219.7
Entergy Arkansas Inc.*	12/06/16	67.7	54.4
CALIFORNIA			
Liberty Utilities	12/01/16	11.4	8.3
San Diego Gas & Electric Co.	06/23/16	91.9	3.0
COLORADO			
Black Hills Colorado Electric	12/19/16	14.4	0.6
CONNECTICUT			
United Illuminating Co.	12/14/16	98.3	57.4
FLORIDA			
Florida Power & Light Co.*	11/29/16	1,304.6	811.0
Gulf Power Co.*	04/04/17	106.8	62.0
GEORGIA			
Georgia Power Co.	12/20/16	70.0	N/A
IDAHO			
Avista Corp.	12/28/16	15.4	6.3
ILLINOIS			
Ameren Illinois*	12/06/16	(8.7)	(8.8)
Commonwealth Edison Co.*	12/06/16	135.7	130.9
INDIANA			
Indianapolis Power & Light Co.*	02/24/17	91.7	N/A
Indianapolis Power & Light Co.*	03/16/16	65.6	29.6
Northern Indiana Public Service Co.*	07/18/16	119.5	72.5
KANSAS			
Empire District Electric Co.	01/10/17	6.4	N/A
Westar Energy Inc.*	09/24/15	250.9	185.3
MAINE			
Emera Maine	12/19/16	7.2	3.0
MARYLAND			
Baltimore Gas and Electric Co.	06/03/16	115.6	44.1
Delmarva Power & Light Co.	02/15/17	57.0	38.3
Potomac Electric Power Co.	11/15/16	102.8	52.5
MASSACHUSETTS			
Fitchburg Gas & Electric Light	04/29/16	3.8	2.1
Massachusetts Electric Co.	09/30/16	201.9	169.7
MICHIGAN			
Consumers Energy Co.*	02/28/17	208.2	113.3
DTE Electric Co.*	01/31/17	325.2	184.3
Upper Peninsula Power Co.	09/08/16	8.5	4.6
MINNESOTA			
Otter Tail Power Co.	03/02/17	14.6	12.0
MISSOURI			
Empire District Electric Co.*	08/10/16	33.4	20.4
KCP&L Greater Missouri Op Co.*	09/28/16	59.3	3.0
Ameren Missouri*	03/08/17	206.4	92.0

Utility	Order Date	Company Requested (\$ millions)	Commission Authorized (\$ millions)
MONTANA			
MDU Resources Group Inc.	03/25/16	11.8	7.4
NEVADA			
Sierra Pacific Power Co.	12/22/16	21.6	(2.9)
NEW JERSEY			
Atlantic City Electric Co.	08/24/16	79.4	45.0
Jersey Central Power & Light Co.*	12/12/16	142.1	80.0
Rockland Electric Co.	02/22/17	9.6	1.7
NEW MEXICO			
El Paso Electric Co.	06/08/16	6.4	1.1
Public Service Co. of New Mexico*	09/28/16	123.5	61.2
Southwestern Public Service Co.	08/10/16	45.4	23.5
NEW YORK			
Consolidated Edison Co. of NY*	01/24/17	479.6	194.5
NY State Electric & Gas Corp.	06/15/16	123.8	29.6
Rochester Gas & Electric Corp.	06/15/16	42.5	3.0
NORTH CAROLINA			
Virginia Electric & Power Co.*	12/22/16	46.8	34.7
NORTH DAKOTA			
MDU Resources Group Inc.	01/05/16	15.4	15.1
OKLAHOMA			
Oklahoma Gas and Electric Co.*	03/20/17	149.5	8.8
Public Service Co. of Oklahoma*	11/10/16	84.4	14.5
PENNSYLVANIA			
Metropolitan Edison Co.	01/19/17	140.2	90.5
Pennsylvania Electric Co.	01/19/17	158.8	94.6
Pennsylvania Power Co.	01/19/17	42.0	27.5
West Penn Power Co.	01/19/17	98.2	60.6
SOUTH CAROLINA			
Duke Energy Progress LLC	12/07/16	79.0	56.2
South Carolina Electric & Gas	10/19/16	74.2	64.4
TENNESSEE			
Kingsport Power Co.	08/09/16	12.1	8.6
TEXAS			
El Paso Electric Co.	08/18/16	63.3	40.7
Southwestern Public Service Co.*	01/26/17	71.9	35.2
VIRGINIA			
Appalachian Power Co.	12/30/16	3.4	3.3
Kentucky Utilities Co.	02/02/16	7.2	5.5
WASHINGTON			
Avista Corp.*	12/15/16	48.9	0.0
Avista Corp.	01/06/16	33.2	(8.1)
PacifiCorp	09/01/16	20.3	13.7
WEST VIRGINIA			
Appalachian Power Co.	06/30/16	108.3	55.1
Monongahela Power Co.	12/09/16	64.9	25.0
WISCONSIN			
Madison Gas and Electric Co.	11/09/16	6.9	(3.3)
Northern States Power Co.	10/26/16	28.3	24.5
Wisconsin Power and Light Co.	11/18/16	12.9	9.4
WYOMING			
MDU Resources Group Inc.	01/18/17	3.2	2.7

***BAI involvement**

Includes 2017 electric cases authorized through April 19, 2017.

Sources: SNL Financial, Regulatory Research Associates and various state regulatory commissions.

PENDING
RETAIL ELECTRIC RATE CASES

Utility	Filing Date	Company Requested Rate Increase (\$ millions)
ALASKA Alaska Electric Light Power	09/16/16	5.7
ARIZONA Arizona Public Service Co.*	06/01/16	433.4
ARKANSAS Oklahoma Gas and Electric Co.	08/25/16	16.5
CALIFORNIA Pacific Gas & Electric Co. Southern California Edison Co.	09/01/15 09/01/16	260.0 221.9
DELAWARE Delmarva Power & Light Co.*	05/17/16	60.2
DISTRICT OF COLUMBIA Potomac Electric Power Co.*	06/30/16	76.8
HAWAII Hawaii Electric Light Co. Hawaiian Electric Co.*	09/19/16 12/16/16	19.3 125.0
IDAHO Idaho Power Co.*	10/21/16	28.5
ILLINOIS Ameren Illinois* Commonwealth Edison Co.*	04/13/17 04/13/17	(15.4) 99.9
IOWA Interstate Power & Light Co.*	04/03/17	175.5
KANSAS Kansas City Power & Light Co. Westar Energy Inc.*	11/09/16 10/26/16	(2.8) 17.4
KENTUCKY Kentucky Utilities Co. Louisville Gas & Electric Co.*	11/23/16 11/23/16	103.1 93.6
MARYLAND Potomac Electric Power Co.	03/24/17	68.6

Utility	Filing Date	Company Requested Rate Increase (\$ millions)
MASSACHUSETTS NSTAR Electric Co. Western Massachusetts	01/17/17 01/17/17	60.2 35.7
MICHIGAN Consumers Energy Co.* DTE Electric Co.*	03/31/17 04/19/17	172.8 230.9
MINNESOTA ALLETE (Minnesota Power)* Northern States Power Co.	11/02/16 11/02/15	38.8 297.1
MISSOURI Kansas City Power & Light Co.*	07/01/16	90.1
NEW HAMPSHIRE Liberty Utilities/Granite State Unitil Energy Systems Inc.	04/29/16 04/29/16	5.7 6.6
NEW JERSEY Atlantic City Electric Co.	03/30/17	70.2
NEW MEXICO Public Service Co. of NM* Southwestern Public Service Co.*	12/07/16 11/01/16	99.2 41.4
NORTH DAKOTA MDU Resources Group	10/14/16	14.1
OHIO Dayton Power and Light Co.* Duke Energy Ohio Inc.	11/30/15 03/02/17	65.8 15.4
OREGON Portland General Electric Co.	02/28/17	99.9
TEXAS El Paso Electric Co.* Oncor Electric Delivery Co.* Sharyland Utilities* Southwestern Electric Power Co.*	02/13/17 03/17/17 04/29/16 12/16/16	42.5 316.9 1.4 105.9
VIRGINIA Appalachian Power Co. (RAC-EE) Appalachian Power Co. (VM-RAC)	08/31/16 11/17/16	5.1 14.5
WASHINGTON Puget Sound Energy Inc.*	01/13/17	148.7

***BAI involvement**

Includes 2017 electric pending cases as of April 19, 2017

Sources: SNL Financial, Regulatory Research Associates and various state regulatory commissions.

ELECTRIC RETAIL INDUSTRIAL CUSTOMER SHOPPING

As stated in the Texas 2017 Scope of Competition in Electric Markets Report issued January 2017, “Texas remains the national leader in competitive electric markets.” Other states with successful retail choice programs include Illinois, Maryland, Massachusetts, New Jersey, New York, Ohio and Pennsylvania. No additional states implemented a competitive retail choice program in 2016.

STATES WITH FULL CUSTOMER CHOICE

STATE	PERCENT	STATE	PERCENT	STATE	PERCENT
CONNECTICUT		MASSACHUSETTS		OHIO	
Connecticut Light & Power	N/A	National Grid	89.3%	AEP-Ohio	68.7%
United Illuminating	N/A	Northeast Utilities	90.6%	Cleveland Electric	88.6%
DELAWARE		NStar	79.7%	Dayton Power & Light	82.4%
Delmarva Power & Light	33.3%	UNITIL	84.6%	Duke Energy	72.4%
DISTRICT OF COLUMBIA		NEW HAMPSHIRE	N/A	Ohio Edison	82.2%
Potomac Electric Power Co.	36.4%	NEW JERSEY (>1,000 kW)		Toledo Edison	88.1%
ILLINOIS		Atlantic City Electric	88.2%	PENNSYLVANIA	
Ameren IL (1MW or Greater)		Jersey Central Power & Light	86.3%	Duquesne Light	63.4%
Rate Zone I	88.4%	Public Service Electric & Gas	87.0%	MetEd	85.2%
Rate Zone II	91.0%	Rockland Electric	90.0%	PECO Energy	92.0%
Rate Zone III	86.3%	NEW YORK (NonRes LG-TOU)		Penelec	86.5%
ComEd 400 kW & Above	91.6%	Central Hudson	79.1%	Penn Power	95.3%
MAINE (Statewide)	87.8%	Con Edison	91.2%	PPL	87.8%
MARYLAND (Large C&I)		New York State Electric & Gas	79.5%	UGI	40.3%
Baltimore Gas & Electric	95.5%	Niagara Mohawk	70.0%	West Penn Power	91.2%
Delmarva Power & Light	98.7%	Orange & Rockland	28.6%	RHODE ISLAND	
Potomac Edison	93.5%	Rochester Gas & Electric	93.6%	National Grid	N/A
Potomac Electric Power Co.	84.6%			TEXAS	N/A

STATES WITH LIMITED CHOICE

STATE	PERCENT
MICHIGAN	
Consumers Energy	10% CAP
Detroit Edison	10% CAP
MONTANA	N/A
NEVADA	N/A
OREGON	
Pacific Power & Light	3.5%
Portland General	15.7%
VIRGINIA	N/A
WASHINGTON	N/A

Notes:

- California’s Direct Access Load Caps have been met under the adopted utility service area caps.
- Consumers Energy and Detroit Edison caps were fully subscribed in 2016.
- Above figures are based on data provided by various state regulatory commission websites.
- Data not available for Connecticut, Montana, Nevada, New Hampshire, Rhode Island, Texas, Virginia and Washington.

NEW ZERO EMISSIONS STANDARDS TO RAISE ENERGY BILLS

By Jessica York, Consultant

A zero emissions standard (“ZES”), or clean energy standard (“CES”), is a type of electricity portfolio standard which requires electric utilities to supply specific portions of their annual electricity sales from qualified non-renewable energy sources, such as nuclear power. While such standards purport to promote the development of new clean energy sources, diversify energy supply, and protect the environment, they are coming under fire for being used simply as a means to subsidize the continued operation of uneconomic nuclear generation facilities.

Challenges facing the nuclear power industry include low wholesale electricity prices, due to a variety of factors, including low-cost natural gas, low growth or reduction in electricity demand, and federal and state incentives for the development of renewable generation. These factors have put several nuclear plants across the country at risk of closing before the end of their approved operating licenses. Absent legislative or regulatory interventions, market conditions would determine whether uncompetitive generation assets would continue to operate or would exit. However, because nuclear facilities represent a reliable source of clean, base load energy, employ thousands of workers, and boost local economies, legislative and regulatory steps are being taken to artificially, i.e., outside of normal market functioning, support their continued operation.

While the U.S. Nuclear Regulatory Commission is responsible for federal oversight of nuclear technologies, states have the authority to enact policies that promote or hinder the development or operation of nuclear power generation. Illinois and New York are two states that, in 2016, enacted such policies to prevent the closure of uneconomic nuclear plants. Other states considering methods to delay the closure of at risk generation assets, or remove obstacles to the development of new nuclear facilities, include Connecticut, Kentucky, New Jersey, Pennsylvania, and Wisconsin.

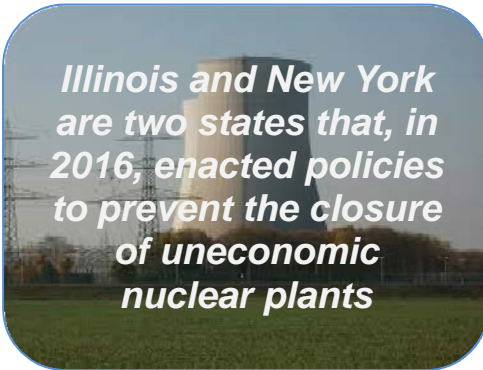
ZES or CES policies and the subsidization of uneconomic generation are problematic for several reasons. **First**, requiring a portion of statewide

annual energy sales to be sourced from certain types of generation unfairly promotes one form of supply over others and necessarily raises costs to consumers. This inhibits other energy technologies from competing effectively, as it prevents market conditions from controlling the entry and exit of generation resources and allowing the market to operate efficiently. This, in turn, can cause other energy technologies to seek their own forms of mandates and subsidies to more effectively compete, further raising costs to customers.

Second, the subsidization of uneconomic generation may have the effect of suppressing market capacity prices, ultimately leading to additional subsidies. In MISO and PJM, capacity prices for each planning year are established through an auction. A variety of generation resources bids into the auction at prices acceptable to their operation. The combination of resources that provides the total required capacity at the lowest possible price to consumers will clear the market, with the clearing price set by the most expensive resource needed to meet demand. All resources will receive capacity payments equal to the clearing price. There are concerns that ZES and CES policies will create incentives for uncompetitive resources to bid into the capacity

auction at below-cost prices. Thus, uneconomic generation could potentially displace less costly existing generation, suppress the market clearing price and fail to adequately compensate other market participants. This would create the need for additional subsidies, or force the early retirement of otherwise competitive resources, and fail to support the entry of new generation when more capacity is needed. The Federal Energy Regulatory Commission has recently acknowledged the interaction between such state policies and market operations and has announced a technical conference in **Docket No. AD17-11-000** to examine such issues. The technical conference is scheduled to take place on May 1-2 of this year.

Third, the subsidies provided to uneconomic resources under ZES or CES policies will be detrimental to economic energy resources, utilities and consumers. In the long run, out-of-market subsidies will impact wholesale markets for



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electricity. Subsidies will distort wholesale market price signals, and could lead to the exit of non-subsidized generators, absent subsidies of their own. This could result in reduced supply and drive up energy costs for utilities and customers.

As an example, beginning June 1, 2017, the ZES legislation in Illinois will require the Illinois Power Agency, which procures energy for Ameren Illinois and Commonwealth Edison supply customers, to enter into contracts with generation plants that are capable of producing Zero Emission Credits (“ZEC”) in an amount equal to about 16% of the utilities’ 2015 retail sales. The initial price for each ZEC will be \$16.50/MWh and eventually will increase by an additional \$1/MWh each year going forward. As a result, Exelon’s uneconomic Clinton and Quad Cities nuclear plants will remain operational for up to ten more years and will receive an annual subsidy of as much as \$235 million from delivery service customers, depending on wholesale energy and capacity prices.

In August 2016, the New York Public Service Commission (“NYPSC”) adopted a CES mandating that 50% of all electricity consumed in New York be from clean and renewable energy sources by 2030. The CES includes nuclear in addition to renewable generation, and will provide ZECs to economically struggling nuclear facilities in the state, specifically Fitzpatrick, R.E. Ginna and Nine Mile Point. The NYPSC’s order on the CES set the ZEC price at \$17.48/MWh for the first two years (2018 and 2019), resulting in a nuclear subsidy of approximately \$965 million. The ZEC price will be modified every two years over the 13-year implementation period. The subsidy could be as much as \$580 million per year by 2021, according to the NYPSC’s order.

Effective April 1, 2017, utilities and other suppliers will purchase the ZECs through contracts with New York State’s Energy Research and Development Authority, and then recover the costs from ratepayers through commodity charges on customer bills. According to the order adopting the CES, the NYPSC estimates an increase of about 1% for commercial and industrial customer bills. However, because the CES costs will be recovered on the basis of

volumetric energy consumption, the impact on large, higher load factor, commercial and industrial customers could be higher.

Similarly, Ohio legislators recently introduced a Zero Emission Nuclear Resource Program (“ZEN”) in Senate Bill 128 (“SB 128”), which would provide two of FirstEnergy’s struggling nuclear plants with annual revenues of about \$300 million for up to 16 years. Similar to the ZES legislation in Illinois and the CES ruling in New York, Ohio’s nuclear subsidies would be provided through ZEN credits that must be purchased by utilities at an initial cost of \$17 per credit. Utilities will recover the cost of ZENs from customers through a non-bypassable rider.

The nuclear subsidy portions of Illinois’ ZES and New York’s CES are facing legal challenges, and Ohio’s SB 128 will likely encounter similar opposition. Opponents argue that the subsidies intrude on the Federal Energy Regulatory Commission’s (“FERC”) jurisdiction over wholesale energy markets, and that the subsidies provided by the ZEC programs artificially suppress power prices. Similar arguments have been made pertaining to proposed subsidies for non-nuclear at risk, and new generation assets in Maryland, New Jersey and Ohio. The Supreme Court agreed with these arguments, and overturned the Maryland PSC’s approval of such subsidies in ***Hughes v. Talen Energy Marketing*** and ***CPV Maryland LLC v. Talen Energy Marketing***. Proposed subsidies in New Jersey and Ohio experienced similar outcomes in Civil Action No. 11-745 (New Jersey), and FERC dockets EL16-33 and EL16-34 (Ohio).

Clean Energy and Zero Emission Standards will likely have a significant impact on wholesale energy markets, capacity auctions, utilities and consumers. Customers should remain informed of any proposals that would result in the subsidization of uneconomic generation assets in states where they operate. Additionally, if possible, customers should intervene or otherwise participate in the development of such policies in order to try to minimize the negative impacts that may occur.

[\(Refer to page 11 to read about the author\)](#)

THE AUTHORS

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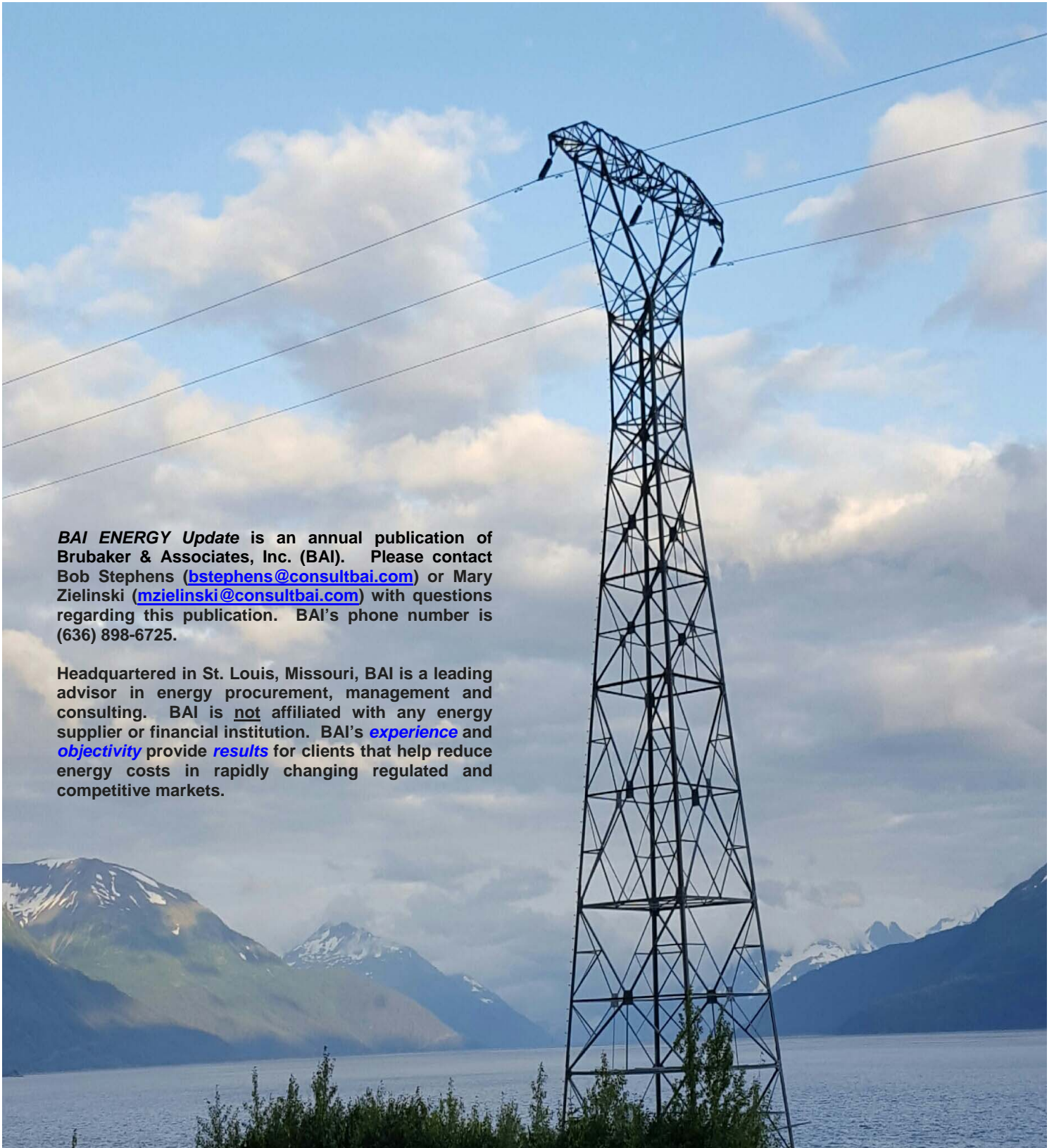
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