STATE OF OHIO
BEFORE THE
PUBLIC UTILITIES COMMISSION

CASE NO. 23-301-EL-SSO

IN THE MATTER OF THE APPLICATION OF OHIO EDISON COMPANY, THE CLEVELAND ELECTRIC ILLUMINATING COMPANY, AND THE TOLEDO EDISON COMPANY FOR AUTHORITY TO ESTABLISH A STANDARD SERVICE OFFER PURSUANT TO R.C. 4928.143 IN THE FORM OF AN ELECTRIC SECURITY PLAN

DIRECT TESTIMONY OF
DENNIS W. GOINS, PH.D.
ON BEHALF OF NUCOR STEEL MARION, INC.

October 23, 2023

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INTRODUCTION AND QUALIFICATIONS

Q. PLEASE STATE YOUR NAME, OCCUPATION, AND BUSINESS ADDRESS.

A. My name is Dennis W. Goins. I operate Potomac Management Group, an economics and management consulting firm. My business address is 2828 Moorings Way SC, Southport, North Carolina 28461.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL AND PROFESSIONAL BACKGROUND.

A. I received a Ph.D. degree in economics and a Master of Economics degree from North Carolina State University. I also earned a B.A. degree with honors in economics from Wake Forest University. I began my professional career as a staff economist at the North Carolina Utilities Commission (NCUC). Since leaving the NCUC, I have worked as an economic and management consultant to firms and organizations in the private and public sectors. My assignments focus primarily on policy, planning, and pricing issues involving firms that operate in energy markets. For example, I have conducted detailed analyses of product pricing, cost of service, rate design, and interutility planning, operations, and pricing issues; prepared analyses related to utility mergers, transmission access and pricing, and the development of competitive markets; evaluated and developed regulatory incentive mechanisms applicable to utility operations; and assisted clients in analyzing and negotiating operating agreements and energy supply contracts.

I have submitted testimony and affidavits and provided technical assistance in more than 250 proceedings before state and federal agencies as an expert in cost of service, rate design, competitive market issues, regulatory policy, and utility planning and operating practices. These agencies include the Federal Energy Regulatory Commission (FERC), the Government Accountability Office, state courts in Iowa, Montana, and West Virginia, and regulatory agencies in Alabama, Arizona, Arkansas, Colorado, Florida, Georgia, Hawaii, Idaho, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Minnesota, Mississippi, Missouri, New Jersey, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, South Carolina, Texas, Utah, Vermont, Virginia, West Virginia, Wyoming, and the District of Columbia.[1]

Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS PROCEEDING?

A. I am testifying on behalf of Nucor Steel Marion, Inc., which is located in Marion, Ohio. The Nucor facility—a large retail industrial consumer served by Ohio Edison Company—produces steel by recycling steel scrap in electric arc furnaces.

[1] *See* Ex. DWG-1.

Q. ARE YOU SPONSORING ANY EXHIBITS TO ACCOMPANY YOUR DIRECT TESTIMONY?

A. Yes. I am sponsoring the following exhibits:

- Exhibit DWG-1 – Qualifications of Dennis W. Goins, Ph.D.
- Exhibit DWG-2 – Responses to Selected Data Requests.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to present results from my review and evaluation of selected elements in the fifth Electric Security Plan (ESP V) submitted by Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company (collectively, FirstEnergy) on April 5, 2023.

Q. WHAT INFORMATION DID YOU REVIEW IN CONDUCTING YOUR EVALUATION?

A. I reviewed FirstEnergy's ESP V application, including supporting testimony, responses to certain discovery requests in this case, and case-related information available on the Commission's website. I also reviewed testimony and the Commission's decisions in FirstEnergy's previous electric security plan (ESP) and market rate offer (MRO) proceedings (Case Nos. 08-935-EL-SSO, 08-936-EL-SSO, 09-906-EL-SSO, and 14-1297-EL-SSO) in which I testified. Finally, I reviewed publicly available information related to the issues in my testimony.

CONCLUSIONS AND RECOMMENDATIONS

Q. WHAT CONCLUSIONS HAVE YOU REACHED?

A. Based on my review and evaluation of FirstEnergy's ESP V, I have concluded the following:

1. FirstEnergy proposes to continue its current interruptible rate—Economic Load Response (ELR) Rider—for the eight-year term

(delivery years 2024/2025 through 2031/2032) of ESP V, albeit with two significant modifications.

- FirstEnergy proposes reducing the aggregate monthly interruptible credit available to ELR customers from the current $10 per kW of curtailable (interruptible) load[2] to $3 per kW during the last year of ESP V. The 70-percent reduction will occur in annual $1 per kW step-downs of the aggregate credit beginning in delivery year 2025/2026.[3]
- Under the current Rider ELR interruptible program, FirstEnergy acts as the curtailment service provider (CSP) for ELR customers. FirstEnergy proposes eliminating its CSP role in ESP V by requiring each Rider ELR customer to participate in PJM demand response programs through a third-party CSP.[4]

2. Reducing the interruptible credits available to ELR customers and requiring them to participate in the PJM markets via third-party CSPs will make Rider ELR less attractive to customers and, as a result, will undermine the stability and effectiveness of the interruptible rate.

3. FirstEnergy currently recovers non-market-based transmission costs and charges it incurs (for example, PJM transmission-related costs and charges) through the non-bypassable Non-Market-Based Services Rider (Rider NMB). Rider NMB is currently applicable to all FirstEnergy customers except those participating in the Rider NMB Pilot Program that was approved in ESP IV.[5] In this case, FirstEnergy proposes to end the Rider NMB Pilot, but offer a new Rider NMB rate

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[2] The current $10 per kW aggregate monthly curtailable credit is comprised of a $5 per kW credit under Rider ELR and a $5 per kW credit under Economic Development Rider (Rider EDR), part (b).
[3] *See* Direct Testimony of Brandon S. McMillen on behalf of Ohio Edison, The Cleveland Electric Illuminating Company, The Toledo Edison Company (McMillen Direct) at 12.
[4] *Id*.
[5] Commercial and industrial customers with interval or advanced meters that participate in the Rider NMB Pilot Program are allowed to opt out of Rider NMB. They can obtain either directly or through a competitive retail electric service (CRES) provider required transmission and ancillary services in PJM.

(NMB 2) that mimics the rate and billing mechanism applicable to participants in the NMB Pilot. Under FirstEnergy's proposal, the Rider NMB 2 rate will be applicable to all commercial and industrial customers with interval or advanced meters, and billing will reflect each customer's contribution to the Network Service Peak Load (NSPL). All other customers without interval or advanced meters (primarily residential, lighting, and small commercial customers) will be subject to the proposed Rider NMB 1 rate.

Q. WHAT DO YOU RECOMMEND ON THE BASIS OF YOUR CONCLUSIONS?

A. I recommend that the Commission do the following:

1. Retain Rider ELR in its current form through the term of ESP V and reject FirstEnergy's proposed reductions to the Rider ELR and Rider EDR(b) curtailable credits. In order to ensure a stable and reliable supply of interruptible capacity over the term of ESP V, the Rider ELR and EDR(b) credits should remain at their current levels through the term of the ESP.
2. If the Commission decides to reduce the $10 per kW aggregate monthly curtailable credit, I recommend that the aggregate reduction not begin prior to June 1, 2025, be limited to no more than 20 percent over the term of ESP V, and never result in an aggregate credit that is less than 80 percent of the market clearing price in PJM's Base Residual Auction (BRA) for the applicable delivery year.
3. Reject FirstEnergy's proposal to require Rider ELR customers to participate in the PJM markets through third-party CSPs. FirstEnergy should continue to bid Rider ELR load into the PJM capacity markets and serve as the single point of contact for interruptions for Rider ELR customers.

4. Approve FirstEnergy's proposal to establish the Rider NMB 2 rate using the NSPL pricing mechanism currently used in the Rider NMB Pilot Program. In the alternative, the Commission should allow the NMB Pilot Program to continue for the term of ESP V.

RIDER ELR

Q. WHAT IS INTERRUPTIBLE SERVICE?

A. Interruptible service is a separately identifiable nonfirm product that allows a service provider to interrupt or curtail customer loads when an emergency occurs or when system reliability is otherwise impaired.

Q. DOES FIRSTENERGY CURRENTLY OFFER INTERRUPTIBLE SERVICE UNDER RIDER ELR?

A. Yes. Rider ELR was first approved in Case No. 08-935-EL-SSO to replace various interruptible rates offered by FirstEnergy's operating companies. Rider ELR has been incorporated—subject to modifications—in each of FirstEnergy's subsequent ESPs.

Q. PLEASE DESCRIBE THE CURRENT RIDER ELR IN MORE DETAIL.

A. Rider ELR requires each participating customer to curtail load above the customer's designated Firm Load during an Emergency Curtailment Event that endangers service reliability to firm customers. An Emergency Curtailment Event may be called when (i) the particular FirstEnergy operating company, (ii) a regional transmission organization (for example, PJM), and/or (iii) a transmission operator (for example, ATSI) determines that an emergency condition exists that may jeopardize the integrity of the distribution or transmission system. When the emergency event is called by PJM, Rider ELR customers must curtail down to their Firm Load within 30 minutes, unless PJM has granted an exception to allow a customer more time to curtail. When the emergency event is called by a FirstEnergy utility, customers must curtail down to their Firm Load within two hours.

Rider ELR customers currently receive a monthly $5 per kW credit for each kW of Curtailable Load under Rider ELR. They also receive a $5 per kW monthly economic development credit under Rider EDR—resulting in a total monthly credit of $10 per kW. Rider ELR customers are subject to significant penalties if they fail to curtail down to their designated firm loads during an Emergency Curtailment Event. These penalties include forfeiture of all Rider ELR credits received in the prior year (including Rider EDR credits), and possible removal from Rider ELR.

Although Rider ELR has undergone modifications in earlier ESP cases, the credit and the rate's other core elements have been in place since FirstEnergy's first ESP was approved, resulting in a stable, long-term, and reliable source of interruptible capacity for the FirstEnergy utilities for well over a decade.

Q. WHAT BENEFITS DOES RIDER ELR PROVIDE?

A. The interruptible load under Rider ELR provides a significant reliability benefit, and the rate also helps promote economic development and job retention in Ohio.

Q. PLEASE DESCRIBE THE RELIABILITY BENEFIT IN MORE DETAIL.

A. Rider ELR interruptible load can be curtailed quickly during a system emergency and kept off-line to help preserve system reliability and possibly avoid the need for rolling blackouts affecting firm customers. Rider ELR was most recently deployed during Winter Storm Elliott. On December 24, 2022, a Rider ELR event lasting almost 10 hours was called by PJM[6] when a significant portion of generating capacity within PJM was unavailable to

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[6] Ex. DWG-2, FirstEnergy's Response to OCC Set 5-INT-006(e).

meet peak demands due to severe weather conditions. However, FirstEnergy notes that during this PJM emergency, all ELR customers successfully curtailed down to or below their PJM-registered firm service level.[7] Similarly, during the Polar Vortex event that occurred in 2014 during FirstEnergy's ESP IV, Rider ELR customers were called for one mandatory curtailment and several voluntary ones.[8] In years when PJM does not initiate an ELR curtailment, Rider ELR customers are subject to testing requiring them to curtail for at least one hour, thereby confirming their curtailment capability.

The reliability benefit provided by Rider ELR customers is likely to increase in coming years as capacity markets and utilities simultaneously transition to increased reliance on intermittent non-thermal generating sources to displace carbon-based energy sources and deal with increased demands related to electrification. For example, PJM has expressed concern that during this energy transition, its reserve margins could decline if load growth and generating resource retirements outpace the entry of new resources into PJM markets.[9] Moreover, PJM's market monitor has raised concerns about whether new entry gas-fired resources and renewables will be able to replace capacity lost through thermal resource retirements in PJM between now and 2030.[10] Demand response resources such as Rider ELR interruptible load can help to mitigate the potential risk of resource inadequacy during this energy transition.

[7] *Id*. at FirstEnergy's Response to OCC Set 5-INT-006(g).
[8] Case No. 14-1297-EL-SSO, In the Matter of the Application of Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company for Authority to Provide for a Standard Service Offer Pursuant to R.C. 4928.143 in the Form of an Electric Security Plan, Direct Testimony of Steven E. Strah, Company Ex. 13 at 9-10.
[9] PJM, *Energy Transition in PJM: Resource Retirements, Replacements & Risks* (February 24, 2023) at 1-2.
[10] Monitoring Analytics, LLC, *State of the Market Report for PJM, Volume 1: Introduction* (March 9, 2023) at 1. The market monitor's concerns focus on the potential lack of adequate pipeline capacity to serve new gas-fired generation and the intermittent nature (and low capacity value) of renewable resources.

Q. HAS RIDER ELR EVER BEEN DEPLOYED BY A FIRSTENERGY UTILITY DURING A NON-PJM EVENT?

A. Yes. Rider ELR customers are currently subject to curtailment not only during an Emergency Curtailment Event called by PJM, but also by a FirstEnergy distribution company to address local reliability issues that would not be addressed by PJM. For example, in 2011 Ohio Edison curtailed a subset of Rider ELR customers to address a local reliability emergency. During the 2014 Polar Vortex, Rider ELR customers not only were curtailed during the mandatory PJM curtailment mentioned earlier, but were also asked to voluntarily curtail to maintain the reliability of the distribution system.

Q. DOES INTERRUPTIBLE LOAD NEED TO BE CURTAILED TO PROVIDE A BENEFIT?

A. No. Even if interruptible load is never called, or is called infrequently, it still provides a necessary and important reliability benefit. Interruptible load is similar to insurance. People who buy homeowner's insurance hope to never have to use it. But homeowners are willing to pay for this product because they do not want to be without insurance if it is needed. Interruptible load provides a similar insurance benefit to help deal with unplanned local or region-wide emergency events.

Q. PLEASE DISCUSS THE ECONOMIC DEVELOPMENT BENEFITS PROVIDED BY RIDER ELR.

A. Rider ELR customers are typically large energy-intensive industrial customers, many of which began taking interruptible service long before adoption of the ESP framework. Electric energy is a major operating cost for these customers, and low, stable electricity prices are vital for their continued operation in Ohio. Rider ELR helps such customers lower their electricity costs if they are willing to accept lower-quality curtailable service. However, to participate on Rider ELR, customers must be willing to incur costs and adjust their processes to be able to respond quickly to curtailment notices. Curtailments are disruptive, may result in lost production, and can lead to severe financial penalties if an ELR customer does not curtail when called to do so. Despite these costs and risks, a stable Rider ELR program can be attractive to energy-intensive customers with curtailable production processes, enhance their competitiveness in domestic and global markets, and promote job retention and potential growth. In short, Rider ELR helps meet the goal codified in Ohio's public utility statute to "facilitate the state's effectiveness in the global economy."[11]

Q. HAS THE COMMISSION PREVIOUSLY RECOGNIZED THE BENEFITS OF RIDER ELR?

A. Yes. The Commission has consistently recognized the need for and benefits of Rider ELR in FirstEnergy's standard service offer rate plans. In the last ESP case, the Commission found that Rider ELR provides reliability and economic development benefits to customers.[12] The Commission also recognized that Rider ELR is intended to promote the state's effectiveness in the global economy and noted that Rider ELR was approved as part of FirstEnergy's first ESP and has been continued in every subsequent FirstEnergy ESP.[13]

Q. DOES FIRSTENERGY PROPOSE TO CONTINUE RIDER ELR IN ESP V?

A. Yes. However, as I noted earlier, FirstEnergy proposes two significant changes to Rider ELR. More specifically, FirstEnergy proposes to:

- Reduce the aggregate monthly Rider ELR and Rider EDR(b) curtailable credits over the term of the ESP from $10 per kW to $3 per kW. The reductions begin in the 2025/2026 delivery year when the

[11] Ohio Revised Code, Section 4928.02(N).
[12] Case No. 14-1297-EL-SSO, Opinion and Order (March 31, 2016) at 94.
[13] *Id*.

monthly Rider ELR and Rider EDR(b) credits are each reduced by $0.50 per kW to $4.50 per kW. The same $0.50 per kW reductions will occur annually to each credit component through the 2031/2032 delivery year when the monthly Rider ELR and Rider EDR(b) credits will each be $1.50 per kW of curtailable load.[14]

- Require Rider ELR customers to participate in PJM demand response programs through a third-party CSP. FirstEnergy currently undertakes the role of CSP for Rider ELR customers.

Q. DO YOU SUPPORT THESE PROPOSED CHANGES?

A. No. Both changes are unnecessary and rely heavily on the assumption that current low capacity prices in PJM will continue for the next decade. The proposed changes would reduce the value of the program to ELR customers and increase the likelihood of customers leaving the program.

Q. DO INTERRUPTIBLE CUSTOMERS FACE UNCERTAINTY REGARDING POTENTIAL CHANGES IN PJM'S CAPACITY MARKET DURING ESP V?

A. Yes. As I noted, there has been a rapid retirement of dispatchable generation recently in PJM with an associated increase in intermittent renewable resources clearing in capacity auctions. Moreover, the capacity market construct in PJM continues to be in flux. As FirstEnergy explains in its third quarter 2023 *Perspective on PJM's Wholesale Markets* report, PJM and stakeholders continue to discuss capacity market reforms, including a complete redesign of PJM's current capacity market proposed by PJM's market monitor.[15] Numerous proposals by PJM and other stakeholders were considered but none garnered enough support to be approved in PJM's stakeholder process. On October 13, 2023, PJM filed

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[14] McMillen Direct at 12.

[15] Case No. 14-1297-EL-SSO, Quarterly Report Update, *FirstEnergy's Perspective on PJM's Wholesale Electricity Markets: 2023* (September 1, 2023) at 1-2.

two proposals with FERC to modify its capacity market rules to enhance grid reliability during the coming energy transition. One proposal focuses on PJM's offer cap and capacity performance rules. The other focuses on enhancing PJM's resource adequacy risk modeling, capacity accreditation processes, and capacity resource testing requirements.

Q. WHAT RATIONALE DOES FIRSTENERGY PROVIDE FOR ITS PROPOSED STEP-DOWN OF THE RIDER ELR CURTAILABLE CREDITS?

A. According to FirstEnergy Witness McMillen, the proposed step-down better aligns the cost of the program with market pricing. Moreover, Witness McMillen asserts that the proposed reductions are reasonable because they provide rate reductions to non-ELR customers that pay for the credits, mitigate rate shock to participating Rider ELR customers, and continue support for economic development and demand response for local emergencies.[16]

Q. WOULD FIRSTENERGY'S PROPOSED CREDIT STEP-DOWN BRING THE CREDITS CLOSER TO CURRENT CAPACITY PRICES IN PJM?

A. Yes. Whether this is a good outcome is debatable.

Q. WHAT CONCERNS DO YOU HAVE WITH FIRSTENERGY'S PROPOSAL TO MOVE RIDER ELR CREDITS CLOSER TO CURRENT CAPACITY PRICES IN PJM?

A. I have four concerns. First, a one-year snapshot of PJM capacity prices masks the volatility of those prices over time and provides minimal information regarding where those capacity prices will go during the eight-year term of ESP V. Second, relying on short-term capacity prices to set interruptible credits is not the best way to incent energy-intensive customers

[16] McMillan Direct at 13.

with curtailable loads to make long-term commitments to incur the business expense and risk of participating in interruptible demand response programs such as Rider ELR. Third, PJM capacity prices do not reflect any value associated with FirstEnergy's control of Rider ELR loads during local emergency events. Fourth, PJM capacity prices do not reflect any economic development value attributable to Rider ELR—value that this Commission has affirmed in prior ESP cases.

Q. HAVE CAPACITY MARKET PRICES IN PJM BEEN VOLATILE DURING ESP IV?

A. Yes. PJM's capacity market is known as the Reliability Pricing Model (RPM). Market-clearing prices for capacity resources in future delivery years are determined in PJM's annual RPM Base Residual Auction. For the delivery years in FirstEnergy's ESP IV, BRA capacity prices for the ATSI transmission zone have ranged from $34.13 per MW-day in 2023/2024 to $171.33 in 2021/2022. The average BRA capacity price for the ATSI zone for delivery years in ESP IV is approximately $104 per MW-day.[17] Excluding the last two delivery years of ESP IV, the average capacity price was around $124 per MW-day, demonstrating the price suppression effect of extremely low capacity prices in recent RPM auctions.[18]

The low capacity price trend continued in the 2024/2025 BRA that took place in February 2023 when capacity prices for the ATSI zone fell to $28.92 per MW-day.[19] Both capacity prices and capacity offered (excluding Energy Efficiency Resources) have declined in each of the last three BRAs. Demand response resources clearing in the auction declined by 451 MW.[20]

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[17] *See* PJM BRA capacity prices at https://www.pjm.com/-/media/markets-ops/rpm/rpm-auction-info/rpm-auctions-resource-clearing-price-summary.ashx.
[18] *Id*.
[19] *Id*.
[20] For a description of the auction results, see *PJM Capacity Auction Procures Adequate Resources* (February 27, 2023), at https://insidelines.pjm.com/pjm-capacity-auction-procures-adequate-resources/.

Q. ARE THE EXTREMELY LOW CAPACITY PRICES FROM RECENT CAPACITY AUCTIONS SUSTAINABLE?

A. I have made no independent assessment of how capacity prices might move in PJM in the next few years. However, what is clear is that recent capacity prices have significantly diverged from the level indicated by the net cost of new entry (Net CONE) required to sustain a robust and reliable capacity resource base. For example, the ATSI Net CONE values used in the last four base residual auctions (2021-22, 2022-23, 2023-24, and 2024-25) were \$306.87 per MW-day, \$230.50 per MW-day, \$263.07 per MW-day, and \$279.35 per MW-day, respectively.[21] In addition, as I mentioned earlier, PJM is now concerned with future reliability due to factors such as generation retirements, load growth tied to electrification, and the market penetration of intermittent resources. If these factors combine to lower reliability significantly in PJM, the most likely result would be an increase in capacity prices.

Q. ARE STABLE CURTAILABLE CREDITS NECESSARY TO ENCOURAGE CUSTOMERS TO PARTICIPATE IN DEMAND RESPONSE PROGRAMS SUCH AS RIDER ELR?

A. In my opinion, yes. Customers are less likely to make a long-term commitment to be interruptible (including accepting the costs and risks associated with such a commitment) if an interruptible credit they receive varies dramatically from year to year. A stable credit is the best way to secure a long-term commitment from energy-intensive industrial customers willing to be interruptible. In addition, FirstEnergy's proposal to "phase down Rider ELR" will likely cause existing ELR customers to consider leaving Rider ELR altogether—especially in the later years of ESP V when curtailable credits fall to their lowest levels.

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[21] *See* PJM Capacity Market (RPM), RPM Base Residual Auction Planning Parameters, available at https://pjm.com/markets-and-operations/rpm.aspx.

Q. DO PJM CAPACITY PRICES REFLECT ANY VALUE ASSOCIATED WITH FIRSTENERGY'S PROPOSAL TO RETAIN CONTROL OF RIDER ELR LOAD FOR LOCAL EMERGENCIES?

A. No. Under its proposal, FirstEnergy will retain control of Rider ELR load during local distribution system emergencies even though it will require ELR customers to register their curtailable load in a PJM demand response program through a third-party CSP. In other words, under Rider ELR customers may be curtailed in response to a PJM event or in response to a local reliability problem identified by a FirstEnergy utility. PJM capacity prices do not reflect any value that FirstEnergy gets from this local control of Rider ELR curtailable load.

Q. DO PJM CAPACITY PRICES REFLECT ANY ECONOMIC DEVELOPMENT VALUE ATTRIBUTABLE TO RIDER ELR CURTAILABLE LOAD?

A. No. A key purpose of Rider ELR is to promote economic development and manufacturing jobs retention. The availability of cost-based interruptible service helps retain large, energy-intensive industrial customers that provide jobs and tax revenues in Ohio's communities—a fact that should not be forgotten in considering FirstEnergy's proposed modifications to Rider ELR.

Q. SHOULD THE COMMISSION APPROVE FIRSTENERGY'S PROPOSED STEP-DOWN OF RIDER ELR CREDITS IN ESP V?

A. No. The Commission has approved the current level of credits since FirstEnergy's initial ESP case, and FirstEnergy has not provided a strong rationale for its step-down proposal. Given the need for continued robust interruptible programs in the coming years, the Rider ELR credits should be retained at least at their current level for the term of ESP V.

Q. IN THE EVENT THE COMMISSION DECIDES TO REDUCE THE AGGREGATE RIDER ELR CREDIT, SHOULD IT ADOPT FIRSTENERGY'S STEP-DOWN PROPOSAL?

A. No. If the Commission wants to retain Rider ELR but also reduce the aggregate curtailable credit, it should take a much less aggressive approach than FirstEnergy proposes. In my opinion, assuming the Commission decides to reduce the aggregate Rider ELR credit, I would recommend the following guidelines: (1) step-down the monthly aggregate credit from $10 per kW of curtailable load to no less than $8 per kW over the term of ESP V, and (2) ensure that the aggregate Rider ELR credit for each delivery year remains at least equal to 80 percent of the capacity auction clearing price for the relevant delivery year. This approach would help ensure the viability of Rider ELR during the transition period in electricity markets in general, and PJM's capacity market in particular.

Q. IN ADDITION TO ITS PROPOSED CREDIT STEP-DOWN, HAS FIRSTENERGY PROPOSED ANY OTHER MAJOR CHANGE TO RIDER ELR?

A. Yes. FirstEnergy has proposed requiring Rider ELR customers to participate in a PJM demand response program through a third-party CSP. Currently FirstEnergy acts as a CSP intermediary between Rider ELR customers and PJM. FirstEnergy bids Rider ELR load into the PJM capacity market and a portion of the revenue FirstEnergy receives from PJM for the ELR load is credited back to FirstEnergy's non-ELR customers. FirstEnergy also currently serves as the single point of contact for Rider ELR customers for curtailments, regardless of whether the curtailment is initiated by PJM or a FirstEnergy utility.

Under its Rider ELR proposal, FirstEnergy will no longer serve as the CSP for Rider ELR customers. Instead, FirstEnergy will now require Rider ELR customers to participate in a PJM demand response program through a third-party CSP. As a result, FirstEnergy will no longer bid Rider ELR load into PJM capacity auctions and will no longer receive payments from PJM that can be credited back to non-ELR customers. FirstEnergy will also neither provide notice to Rider ELR customers of PJM-initiated curtailments nor be responsible for any Rider ELR activities related to emergency curtailment events called by PJM.

Q. WHY IS FIRSTENERGY PROPOSING THIS MODIFICATION?

A. FirstEnergy indicates the modification will make the administration of Rider ELR more efficient by eliminating the need for FirstEnergy to serve as CSP for a small number of customers. In addition, FirstEnergy suggests the changes will enable Rider ELR customers to participate in multiple PJM demand response programs.[22]

Q. DO YOU AGREE WITH THIS PROPOSED CHANGE?

A. No. FirstEnergy has offered no compelling reason to abandon its current role as the CSP for Rider ELR customers. FirstEnergy has performed this role since the inception of Rider ELR.[23] Furthermore, FirstEnergy has historically bid selected energy efficiency programs into PJM markets, and proposes to continue to do so during ESP V.[24] If FirstEnergy plans to continue performing CSP-like functions for customers participating in other programs, there is no reason why it should not also continue performing its CSP role for Rider ELR customers. In addition, having the relevant FirstEnergy operating company serve as the single point of contact for curtailments—whether triggered by a PJM event or by a local emergency—will avoid confusion and decrease the likelihood a customer will miss or misunderstand a curtailment notice.

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[22] Direct Testimony of Edward B. Stein on behalf of Ohio Edison, The Cleveland Electric Illuminating Company, The Toledo Edison Company at 5.
[23] Ex. DWG-2, FirstEnergy's Response to Nucor Set 1-INT-0004(b).
[24] *Id.* at FirstEnergy's Response to Nucor Set 1-INT-0004(g) and (h).

Q. IS THERE ANOTHER PROBLEM WITH FIRSTENERGY'S PROPOSAL?

A. Yes. Under its proposal, non-ELR customers would no longer see rate reductions linked to revenue FirstEnergy receives for Rider ELR load that FirstEnergy successfully offers in PJM's capacity auctions. For example, during the current ESP IV, FirstEnergy has credited over $17 million in Rider ELR-related capacity revenue it received from PJM back to its non-ELR customers.[25] In addition, in March-August 2023, FirstEnergy received approximately $11.4 million in payments from PJM associated with the Winter Storm Elliott emergency event I discussed earlier, 80 percent of which should be credited back to customers.[26] This revenue credit stream would be lost unnecessarily if FirstEnergy relinquished its CSP role for Rider ELR load.

Q. WHAT DO YOU RECOMMEND?

A. I recommend that the Commission reject FirstEnergy's proposal to no longer serve as CSP for Rider ELR customers. Rider ELR customers should continue committing their demand response capabilities to FirstEnergy and FirstEnergy should continue bidding Rider ELR curtailable load in PJM's capacity auctions. Moreover, FirstEnergy should be required to continue sharing with non-ELR customers the PJM revenue payments it receives related to Rider ELR capacity and also acting as the primary interface with Rider ELR customers during curtailment events.

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[25] *Id.* at FirstEnergy's Response to PUCO DR-006(i).
[26] *Id.* at FirstEnergy's Response to OELC Set 1-INT-014(g).

RIDER NMB

Q. PLEASE DESCRIBE RIDER NMB AND THE NMB PILOT PROGRAM.

A. Rider NMB is a non-bypassable rate mechanism used to recover non-market-based transmission and transmission-related charges that PJM passes through to FirstEnergy. Costs recovered through Rider NMB include network integration transmission service costs, regional transmission expansion plan costs, and the cost of various ancillary services. The Rider NMB rate design applicable to commercial and industrial customers is based on each customer's monthly billing demand (maximum noncoincident demand).

In FirstEnergy's ESP IV, the Commission approved the Rider NMB Pilot Program under which participating customers could opt out of Rider NMB and instead be subject to PJM transmission charges passed through by a competitive retail electric service provider. Unlike the Rider NMB rate design, pilot program participants are billed for PJM transmission costs based on their individual contributions to NSPL—that is, the average of the five highest hourly transmission peaks during the previous year.

Q. WHAT IS THE BENEFIT OF NSPL PRICING FOR CUSTOMERS PARTICIPATING IN THE PILOT?

A. NSPL pricing provides a more cost-related price signal to which customers can respond. Since pricing in the NMB Pilot Program is based on each customer's individual NSPL, a pilot program customer has an incentive to minimize NSPL and thereby reduce billed transmission costs.

Q. HAS FIRSTENERGY PROPOSED ANY CHANGES TO RIDER NMB AND THE PILOT PROGRAM?

A. Yes. FirstEnergy proposes to redesign Rider NMB and eliminate the NMB Pilot Program. Specifically, FirstEnergy proposes to modify Rider NMB by introducing a new NMB 2 rate for commercial and industrial customers that have interval or advanced meters. The NMB 2 rate includes a monthly charge applied to each customer's NSPL. In other words, the NMB 2 rate design incorporates the same type of pricing mechanism available to customers currently participating in the NMB Pilot.

Q. IS FIRSTENERGY'S NMB 2 PROPOSAL REASONABLE?

A. Yes. FirstEnergy's NMB 2 rate design attempts to link the cost of PJM's transmission network to factors that actually drive the cost—that is, NSPLs. As a result, the proposed NMB 2 rate design represents a significant improvement over the current Rider NMB rate design in which cost recovery is linked to each commercial or industrial customers' monthly maximum demand. Simply stated, the NMB 2 rate design with NSPL pricing better reflects cost causation and encourages customers to reduce demand at peak times. By responding to these improved price signals, customers can reduce FirstEnergy's transmission cost responsibility and their monthly Rider NMB charges.

Q. WHAT DO YOU RECOMMEND?

A. I recommend that the Commission approve FirstEnergy's NMB 2 proposal. In the alternative, if the NMB 2 proposal is not adopted, the NMB Pilot Program should be continued through the term of the proposed ESP. The program should be open to all current participants as well as to other interested customers who have the appropriate metering.

Q. DOES THIS COMPLETE YOUR DIRECT TESTIMONY?

A. Yes.

QUALIFICATIONS OF
DENNIS W. GOINS

PRESENT POSITION

Economic Consultant, Potomac Management Group, Southport, NC

PREVIOUS POSITIONS

- Vice President, Hagler, Bailly & Company, Washington, DC
- Principal, Resource Consulting Group, Inc., Cambridge, MA
- Senior Associate, Resource Planning Associates, Inc., Cambridge, MA
- Economist, North Carolina Utilities Commission, Raleigh, NC

EDUCATION

College	Major	Degree
Wake Forest University	Economics	BA
North Carolina State University	Economics	ME
North Carolina State University	Economics	PhD

RELEVANT EXPERIENCE

Dr. Goins specializes in pricing, planning, and market structure issues affecting firms that buy and sell products in electricity and natural gas markets. He has extensive experience in developing product pricing strategies, setting rates for energy-related products and services, negotiating power supply and natural gas contracts for private and public entities, evaluating competitive market conditions, and analyzing power and fuel requirements, prices, market operations, and transactions. He has participated in more than 200 cases as an expert on cost of service, rate design, competitive market issues, utility restructuring, power market planning and operations, utility mergers, and management prudence before the Federal Energy Regulatory Commission, the General Accounting Office (now the Government Accountability Office), the First Judicial District Court of Montana, the Circuit Court of Kanawha County, West Virginia, the Linn County District Court of Iowa, and regulatory commissions in Alabama, Arizona, Arkansas, Colorado, Florida, Georgia, Hawaii, Idaho, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Minnesota, Mississippi, Missouri, New Jersey, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, South Carolina, Texas, Utah, Vermont, Virginia, West Virginia, Wyoming, and the

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District of Columbia. He has also prepared an expert report on behalf of the United States regarding electricity pricing and contract issues in a case before the United States Court of Federal Claims.

PARTICIPATION IN REGULATORY, ADMINISTRATIVE, AND COURT PROCEEDINGS

1. Washington Gas Light Company, before the Maryland Public Service Commission, Case No. 9704 (2023), on behalf of the General Services Administration, re cost of service and retail rate design.
2. Washington Gas Light Company, before the District of Columbia Public Service Commission, Formal Case No. 1169 (2022), on behalf of the General Services Administration, re cost of service and retail rate design.
3. Washington Gas Light Company, before the District of Columbia Public Service Commission, Formal Case No. 1162 (2020), on behalf of the General Services Administration, re cost of service and retail rate design.
4. Potomac Electric Power Company, before the District of Columbia Public Service Commission, Formal Case No. 1156 (2019), on behalf of the General Services Administration, re cost of service, retail rate design, and alternative forms of regulation.
5. AltaGas Ltd., *et al*., before the Maryland Public Service Commission, Case No. 9449 (2018), on behalf of the Department of Defense and all other Federal Executive Agencies, re Settlement Agreement in merger of AltaGas and WGL Holdings, Inc.
6. AltaGas Ltd., *et al*., before the District of Columbia Public Service Commission, Formal Case No. 1142 (2017), on behalf of the Department of Defense and all other Federal Executive Agencies, re merger of AltaGas and WGL Holdings, Inc.
7. Kentucky Utilities, Inc., before the Kentucky Public Service Commission, Case No. 2016-00370 (2017), on behalf of the Kentucky Industrial Utility Customers, re interruptible rates.
8. Louisville Gas and Electric Company, Inc., before the Kentucky Public Service Commission, Case No. 2016-00371 (2017), on behalf of the Kentucky Industrial Utility Customers, re interruptible rates.
9. Potomac Electric Power Company, before the District of Columbia Public Service Commission, Formal Case No. 1139 (2016), on behalf of the General Services Administration, re cost of service and retail rate design.
10. Dominion North Carolina Power, before the North Carolina Utilities Commission, Docket No. E-22, Sub 532 (2016), on behalf of Nucor Steel-Hertford, re cost of service and retail rate design.

11. Washington Gas Light Company, before the District of Columbia Public Service Commission, Formal Case No. 1137 (2016), on behalf of the General Services Administration, re cost of service and retail rate design.
12. Baltimore Gas and Electric Company, before the Maryland Public Service Commission, Case No. 9406 (2016), on behalf of the Department of Defense and all other Federal Executive Agencies, re Baltimore City conduit tax and retail rate design.
13. PECO Energy Company, before the Pennsylvania Public Utility Commission, Docket No. R-2015-2468981 (2015), on behalf of the General Services Administration, re retail distribution standby electric service.
14. Consolidated Edison of New York, Inc., before the New York Public Service Commission, Case No. 15-E-0050 (2015), on behalf of the General Services Administration, re retail delivery service cost recovery.
15. PJM Interconnection, LLC, before the Federal Energy Regulatory Commission, Docket No. ER15-623-000 (2015), on behalf of the Department of Defense/Federal Executive Agencies, re RPM market design and capacity performance resources.
16. Ohio Edison *et al*., before the Public Utilities Commission of Ohio, Case No. 14-1297-EL-SSO, (2014), on behalf of Nucor Steel Marion, Inc., re standard service offer and demand response.
17. Potomac Electric Power Company, before the District of Columbia Public Service Commission, Formal Case No. 1121 (2014), on behalf of the General Services Administration, re infrastructure cost allocation and surcharge design.
18. Consolidated Edison of New York, Inc., *et al*., before the New York Public Service Commission, Case No. 14-M-0101 (2014), on behalf of the General Services Administration, re *Reforming the Energy Vision* issues.
19. Potomac Electric Power Company, before the District of Columbia Public Service Commission, Formal Case No. 1116 (2014), on behalf of the General Services Administration, re infrastructure cost allocation and surcharge design.
20. Potomac Electric Power Company *et al.*, before the Maryland Public Service Commission, Case No. 9361 (2014), on behalf of the General Services Administration, re Exelon-PHI merger issues.
21. Potomac Electric Power Company *et al*., before the District of Columbia Public Service Commission, Formal Case No. 1119 (2014), on behalf of the General Services Administration, re Exelon-PHI merger issues.

22. Potomac Electric Power Company, before the District of Columbia Public Service Commission, Formal Case No. 1114 *et al*. (2014), on behalf of the General Services Administration, re retail dynamic pricing.
23. Entergy Texas, Inc., before the Public Utilities Commission of Texas, PUC Docket No. 41791 (2013), on behalf of Texas Cities, re cost of service and retail rate design.
24. Entergy Gulf States Louisiana, before the Louisiana Public Service Commission, Docket No. U-32707 (2013), on behalf of the Department of Energy, re retail cost recovery.
25. Entergy Texas, Inc., before the Public Utilities Commission of Texas, PUC Docket No. 40979 (2013), on behalf of Texas Cities, re analysis of JSP PPA termination.
26. Potomac Electric Power Company, before the District of Columbia Public Service Commission, Formal Case No. 1103 (2013), on behalf of the General Services Administration, re retail delivery service cost recovery.
27. Consolidated Edison of New York, Inc., before the New York Public Service Commission, Case No. 13-E-0030 (2013), on behalf of the General Services Administration, re retail delivery service cost recovery.
28. Ohio Edison *et al*., before the Public Utilities Commission of Ohio, Case No. 11-5201-EL-RDR *et al*., (2013), on behalf of the Ohio Energy Group and Nucor Steel Marion, Inc., re alternative energy rider.
29. Potomac Electric Power Company, before the Maryland Public Service Commission, Case No. 9311 (2013), on behalf of the General Services Administration, re retail cost recovery.
30. Ohio Edison *et al*., before the Public Utilities Commission of Ohio, Case No. 12-2190-EL-POR *et al*., (2012), on behalf of the Ohio Energy Group and Nucor Steel Marion, Inc., re energy efficiency and peak demand reduction portfolios.
31. Dominion North Carolina Power, before the North Carolina Utilities Commission, Docket No. E-22, Sub 485 (2012), on behalf of Nucor Steel-Hertford, re fuel rate adjustment.
32. Kentucky Utilities, Inc., before the Kentucky Public Service Commission, Case No. 2012-00221 (2012), on behalf of the Kentucky Industrial Utility Customers, re interruptible rates.
33. Louisville Gas and Electric Company, Inc., before the Kentucky Public Service Commission, Case No. 2012-00222 (2012), on behalf of the Kentucky Industrial Utility Customers, re interruptible rates.

34. Dominion North Carolina Power, before the North Carolina Utilities Commission, Docket No. E-22, Sub 479 (2012), on behalf of Nucor Steel-Hertford, re cost of service and retail rate design.
35. Kansas City Power & Light Company, before the Missouri Public Service Commission, Case No. ER-2012-0174 (2012), on behalf of the U.S. Department of Energy (Federal Executive Agencies), re cost-of-service and rate design issues.
36. Potomac Electric Power Company, before the Maryland Public Service Commission, Case No. 9286 (2012), on behalf of the General Services Administration, re retail cost recovery.
37. Indiana Michigan Power Company, before the Indiana Utility Regulatory Commission, Cause No. 44075 (2012), on behalf of Steel Dynamics, Inc., re retail cost-of-service and fuel and purchased power cost recovery.
38. Entergy Texas, Inc., before the Public Utilities Commission of Texas, PUC Docket No. 39896 (2012), on behalf of Texas Cities, re cost of service and retail rate design.
39. Potomac Electric Power Company, before the District of Columbia Public Service Commission, Formal Case No. 1087 (2012), on behalf of the General Services Administration, re retail cost recovery.
40. Dominion North Carolina Power, before the North Carolina Utilities Commission, Docket No. E-22, Sub 474 (2011), on behalf of Nucor Steel-Hertford, re fuel rate adjustments.
41. Mid-Kansas Electric Company, before the Kansas Corporation Commission, Docket No. 11-GIME-597-GIE (2011), on behalf of Kansas Electric Power Cooperative, Inc., re local delivery service and operating agreements.
42. Duke Energy Corporation *et al.*, before the Federal Energy Regulatory Commission, Docket No. EC11-60-000 (2011), on behalf of the North Carolina Electric Membership Corporation, re merger-related market power issues.
43. Resale Power Group of Iowa *et al.*, before the Linn County District Court of Iowa, Case No. LACV 054271 (2011), on behalf of Central Iowa Power Cooperative, re compensation for unauthorized transmission access.
44. Columbus Southern Power Company *et al.*, before the Public Utilities Commission of Ohio, Case No. 11-346-EL-SSO *et al.*, (2011), on behalf of the OMA Energy Group., re standard service offer electric security plan rate design issues.

45. Appalachian Power Company and Wheeling Power Company, dba American Electric Power, before the Public Service Commission of West Virginia, Case No. 11-0274-E-GI (2011), on behalf of Steel of West Virginia, Inc., re expanded net energy cost rate issues.
46. Rocky Mountain Power Company, before the Wyoming Public Service Commission, Docket No. 20000-384-ER-10 (2011), on behalf of Cimarex Energy Company, QEP Field Services Company, and Kinder Morgan Interstate Gas Transmission, re utility rates, cost-of-service, and resource acquisition issues.
47. Duke Energy Indiana, Inc., before the Indiana Utility Regulatory Commission, Cause No. 43955 (2011), on behalf of Nucor Steel and Steel Dynamics, Inc., re utility-sponsored energy efficiency programs.
48. Kansas City Power & Light Company, before the Missouri Public Service Commission, Case No. ER-2010-0355 (2010), on behalf of the U.S. Department of Energy (Federal Executive Agencies), re cost-of-service and rate design issues.
49. Appalachian Power Company and Wheeling Power Company, dba American Electric Power, before the Public Service Commission of West Virginia, Case No. 10-0699-E-42T (2010), on behalf of Steel of West Virginia, Inc., re cost-of-service and rate design issues.
50. Entergy Arkansas, Inc., before the Arkansas Public Service Commission, Docket No. 10-010-U (2010), on behalf of Arkansas Electric Energy Consumers, Inc., re industrial opt out of utility-sponsored energy efficiency programs.
51. Indiana Michigan Power Company, before the Indiana Utility Regulatory Commission, Cause No. 38702 – FAC 62-S1 (2010), on behalf of Steel Dynamics, Inc., re fuel and purchased power cost recovery.
52. Dominion North Carolina Power, before the North Carolina Utilities Commission, Docket No. E-22, Sub 459 (2010), on behalf of Nucor Steel-Hertford, re cost of service and retail rate design.
53. Dominion North Carolina Power, before the North Carolina Utilities Commission, Docket No. E-22, Sub 461 (2010), on behalf of Nucor Steel-Hertford, re fuel rate adjustments.
54. Entergy Texas, Inc., before the Public Utilities Commission of Texas, PUC Docket No. 37744 (2010), on behalf of Texas Cities, re cost of service and retail rate design.
55. Kentucky Utilities, Inc., before the Kentucky Public Service Commission, Case No. 2009-00548 (2010), on behalf of the Kentucky Industrial Utility Customers, re interruptible rates.

56. Louisville Gas and Electric Company, Inc., before the Kentucky Public Service Commission, Case No. 2009-00549 (2010), on behalf of the Kentucky Industrial Utility Customers, re interruptible rates.
57. Ohio Edison *et al*., before the Public Utilities Commission of Ohio, Case No. 09-1948-EL-POR *et al*., (2010), on behalf of Nucor Steel Marion, Inc., re energy efficiency and peak demand reduction portfolios.
58. Kauai Island Utility Cooperative, before the Hawaii Public Utilities Commission, Docket No. 2009-0050 (2010), on behalf of Kauai Marriott Resort & Beach Club, re retail cost allocation and rate design issues.
59. Entergy Arkansas, Inc., before the Arkansas Public Service Commission, Docket No. 09-024-U (2009), on behalf of Arkansas Electric Energy Consumers, Inc., re power plant environmental retrofit.
60. Appalachian Power Company, before the Virginia State Corporation Commission, Case No. PUE-2009-00030 (2009), on behalf of Steel Dynamics, Inc., re retail cost allocation and rate design issues.
61. Ohio Edison *et al*., before the Public Utilities Commission of Ohio, Case No. 09-906-EL-SSO (2009), on behalf of Nucor Steel Marion, Inc., re market rate offer.
62. Dominion North Carolina Power, before the North Carolina Utilities Commission, Docket No. E-22, Sub 456 (2009), on behalf of Nucor Steel-Hertford, re fuel cost adjustment.
63. Appalachian Power Company, before the Virginia State Corporation Commission, Case No. PUE-2009-00068 (2009), on behalf of Steel Dynamics, Inc., re demand response programs.
64. Indiana Michigan Power Company, before the Indiana Utility Regulatory Commission, Cause No. 43750 (2009), on behalf of Steel Dynamics, Inc., re wind power purchased power agreement.
65. Entergy Arkansas, Inc., before the Arkansas Public Service Commission, Docket No. 07-085-TF (2009), on behalf of Arkansas Electric Energy Consumers, Inc., re energy efficiency cost recovery.
66. CenterPoint Energy Arkansas Gas, before the Arkansas Public Service Commission, Docket No. 07-081-TF (2009), on behalf of Arkansas Gas Consumers, Inc., re energy efficiency cost recovery.
67. South Carolina Electric & Gas Company, before the South Carolina Public Service Commission, Docket No. 2009-261-E (2009), on behalf of CMC Steel-SC, re DSM cost recovery surcharge.

68. Duke Energy Indiana, Inc., before the Indiana Utility Regulatory Commission, Cause No. 38707 FAC81 (2009), on behalf of Steel Dynamics, Inc., re fuel and purchased power cost recovery.
69. Potomac Electric Power Company, before the District of Columbia Public Service Commission, Formal Case No. 1076 (2009), on behalf of the General Services Administration, re retail cost allocation and standby rate design issues for distributed generation resources.
70. Appalachian Power Company, before the Virginia State Corporation Commission, Case No. PUE-2009-00039 (2009), on behalf of Steel Dynamics, Inc., re environmental and reliability cost recovery.
71. Indiana Michigan Power Company, before the Indiana Utility Regulatory Commission, Cause No. 38702 – FAC 63 (2009), on behalf of Steel Dynamics, Inc., re fuel and purchased power cost recovery.
72. Appalachian Power Company, before the Virginia State Corporation Commission, Case No. PUE-2009-302-00038 (2009), on behalf of Steel Dynamics, Inc., re fuel and purchased power cost recovery.
73. South Carolina Electric & Gas Company, before the South Carolina Public Service Commission, Docket No. 2008-302-E (2008), on behalf of CMC Steel-SC, re fuel and purchased power cost recovery.
74. South Carolina Electric & Gas Company, before the South Carolina Public Service Commission, Docket No. 2008-196-E (2008), on behalf of CMC Steel-SC, re base load review order for a nuclear facility.
75. Ohio Edison *et al*., before the Public Utilities Commission of Ohio, Case No. 08-935-EL-SSO *et al*. (2008), on behalf of Nucor Steel Marion, Inc., re standard service offer via an electric security plan.
76. Ohio Edison *et al*., before the Public Utilities Commission of Ohio, Case No. 08-936-EL-SSO (2008), on behalf of Nucor Steel Marion, Inc., re market rate offer via a competitive bidding process.
77. Alabama Power Company, before the Alabama Public Service Commission, Docket No. 18148 (2008), on behalf of CMC Steel Alabama, Nucor Steel Birmingham, Inc., and Nucor Steel Tuscaloosa, Inc., re energy cost recovery.
78. Entergy Texas, Inc., before the Public Utilities Commission of Texas, PUC Docket No. 35269 (2008), on behalf of Texas Cities, re jurisdictional allocation of system agreement payments.
79. Duke Energy Indiana, Inc., before the Indiana Utility Regulatory Commission, Cause No. 43374 (2008), on behalf of Nucor Steel and Steel Dynamics, Inc., re alternative regulatory plan.

80. Entergy Gulf States Inc., before the Public Utilities Commission of Texas, PUC Docket No. 34800 (2008), on behalf of Texas Cities, re affiliate transactions.

81. Commonwealth Edison Company, before the Illinois Commerce Commission, Docket No. 07-0566 (2008), on behalf of Nucor Steel Kankakee, Inc., re cost-of-service and rate design issues.

82. Ohio Edison *et al*., before the Public Utilities Commission of Ohio, Case No. 07-0551-EL-AIR *et al*. (2008), on behalf of Nucor Steel Marion, Inc., re cost-of-service and rate design issues.

83. Appalachian Power Company dba American Electric Power, before the Public Service Commission of West Virginia, Case No. 06-0033-E-CN (2007), on behalf of Steel of West Virginia, Inc., re power plant cost recovery mechanism.

84. Oncor Electric Delivery Company and Texas Energy Future Holdings Limited Partnership, before the Public Utilities Commission of Texas, PUC Docket No. 34077 (2007), on behalf of Nucor Steel - Texas, re acquisition of TXU Corp. by Texas Energy Future Holdings Limited Partnership.

85. Arkansas Oklahoma Gas Company, before the Arkansas Public Service Commission, Docket No. 07-026-U (2007), on behalf of West Central Arkansas Gas Consumers, re gas cost-of-service and rate design issues.

86. Idaho Power Company, before the Idaho Public Utilities Commission, Case No. IPC-E-07-08 (2007), on behalf of the U.S. Department of Energy (Federal Executive Agencies), re cost-of-service and rate design issues.

87. Potomac Electric Power Company, before the District of Columbia Public Service Commission, Formal Case No. 1056 (2007), on behalf of the General Services Administration, re demand-side management and advanced metering programs.

88. South Carolina Electric & Gas Company, before the South Carolina Public Service Commission, Docket No. 2007-229-E (2007), on behalf of CMC Steel-SC, re cost-of-service and rate design issues.

89. Potomac Electric Power Company, before the Maryland Public Service Commission, Case No. 9092 (2007), on behalf of the General Services Administration, re retail cost allocation and standby rate design issues for distributed generation resources.

90. Potomac Electric Power Company, before the District of Columbia Public Service Commission, Formal Case No. 1053 (2007), on behalf of the General Services Administration, re retail cost allocation and standby rate design issues for distributed generation resources.

91. Entergy Gulf States Inc., before the Public Utilities Commission of Texas, PUC Docket No. 32907 (2006), on behalf of Texas Cities, re hurricane cost recovery.
92. Entergy Gulf States Inc., before the Public Utilities Commission of Texas, PUC Docket No. 32710/ SOAH Docket No. 473-06-2307 (2006), on behalf of Texas Cities, re reconciliation of fuel and purchased power costs.
93. Florida Power & Light Company, before the Florida Public Service Commission, Docket No. 060001-EI (2006), on behalf of the U.S. Air Force (Federal Executive Agencies), re fuel and purchased power cost recovery.
94. Arizona Public Service Company, before the Arizona Corporation Commission, Docket No. E-01345A-05-0816 (2006), on behalf of the U.S. Air Force (Federal Executive Agencies), re retail cost allocation and rate design issues.
95. PacifiCorp (dba Rocky Mountain Power), before the Utah Public Service Commission, Docket No. 06-035-21 (2006), on behalf of the U.S. Air Force (Federal Executive Agencies), re rate design issues.
96. South Carolina Electric & Gas Company, before the South Carolina Public Service Commission, Docket No. 2006-2-E (2006), on behalf of CMC Steel-SC, re fuel and purchased power cost recovery.
97. Entergy Gulf States Inc., before the Public Utilities Commission of Texas, PUC Docket No. 31544/ SOAH Docket No. 473-06-0092 (2006), on behalf of Texas Cities, re transition to competition rider.
98. Idaho Power Company, before the Idaho Public Utilities Commission, Case No. IPC-E-05-28 (2006), on behalf of the U.S. Department of Energy (Federal Executive Agencies), re cost-of-service and rate design issues.
99. Alabama Power Company, before the Alabama Public Service Commission, Docket No. 18148 (2005), on behalf of SMI Steel-Alabama, re energy cost recovery.
100. Florida Power & Light Company, before the Florida Public Service Commission, Docket No. 050001-EI (2005), on behalf of the U.S. Air Force (Federal Executive Agencies), re fuel and capacity cost recovery.
101. Entergy Gulf States Inc., before the Public Utilities Commission of Texas, PUC Docket No. 31315/ SOAH Docket No. 473-05-8446 (2005), on behalf of Texas Cities, re incremental purchased capacity cost rider.
102. Florida Power & Light Company, before the Florida Public Service Commission, Docket No. 050045-EI (2005), on behalf of the U.S. Air Force (Federal Executive Agencies), re cost-of-service and interruptible rate issues.

103. Arkansas Electric Cooperative Corporation, before the Arkansas Public Service Commission, Docket No. 05-042-U (2005), on behalf of Nucor Steel and Nucor-Yamato Steel, re power plant purchase.
104. Arkansas Electric Cooperative Corporation, before the Arkansas Public Service Commission, Docket No. 04-141-U (2005), on behalf of Nucor Steel and Nucor-Yamato Steel, re cost-of-service and rate design issues.
105. Dominion North Carolina Power, before the North Carolina Utilities Commission, Docket No. E-22, Sub 412 (2005), on behalf of Nucor Steel-Hertford, re cost-of-service and interruptible rate issues.
106. Public Service Company of Colorado, before the Colorado Public Utilities Commission, Docket No. 04S-164E (2004), on behalf of the U.S. Air Force (Federal Executive Agencies), re cost-of-service and interruptible rate issues.
107. CenterPoint Energy Houston Electric, LLC, *et al.*, before the Public Utility Commission of Texas, PUC Docket No. 29526 (2004), on behalf of the Coalition of Commercial Ratepayers, re stranded cost true-up balances.
108. PacifiCorp, before the Utah Public Service Commission, Docket No. 04-035-11 (2004), on behalf of the U.S. Air Force (United States Executive Agencies), re time-of-day rate design issues.
109. Arizona Public Service Company, before the Arizona Corporation Commission, Docket No. E-01345A-03-0347 (2004), on behalf of the U.S. Air Force (Federal Executive Agencies), re retail cost allocation and rate design issues.
110. Idaho Power Company, before the Idaho Public Utilities Commission, Case No. IPC-E-03-13 (2004), on behalf of the U.S. Department of Energy (Federal Executive Agencies), re retail cost allocation and rate design issues.
111. PacifiCorp, before the Utah Public Service Commission, Docket No. 03-2035-02 (2004), on behalf of the U.S. Air Force (United States Executive Agencies), re retail cost allocation and rate design issues.
112. Dominion Virginia Power, before the Virginia State Corporation Commission, Case No. PUE-2000-00285 (2003), on behalf of Chaparral (Virginia) Inc., re recovery of fuel costs.
113. Jersey Central Power & Light Company, before the New Jersey Board of Public Utilities, BPU Docket No. ER02080506, OAL Docket No. PUC-7894-02 (2002-2003), on behalf of New Jersey Commercial Users, re retail cost allocation and rate design issues.
114. Public Service Electric and Gas Company, before the New Jersey Board of Public Utilities, BPU Docket No. ER02050303, OAL Docket No. PUC-5744-02 (2002-2003), on behalf of New Jersey Commercial Users, re retail cost allocation and rate design issues.

115. South Carolina Electric & Gas Company, before the South Carolina Public Service Commission, Docket No. 2002-223-E (2002), on behalf of SMI Steel-SC, re retail cost allocation and rate design issues.

116. Montana Power Company, before the First Judicial District Court of Montana, *Great Falls Tribune et al. v. the Montana Public Service Commission*, Cause No. CDV2001-208 (2002), on behalf of a media consortium (*Great Falls Tribune*, *Billings Gazette*, *Montana Standard*, *Helena Independent Record*, *Missoulian*, Big Sky Publishing, Inc. dba *Bozeman Daily Chronicle*, the Montana Newspaper Association, *Miles City Star*, *Livingston Enterprise*, Yellowstone Public Radio, the Associated Press, Inc., and the Montana Broadcasters Association), re public disclosure of allegedly proprietary contract information.

117. Louisville Gas & Electric *et al*., before the Kentucky Public Service Commission, Administrative Case No. 387 (2001), on behalf of Gallatin Steel Company, re adequacy of generation and transmission capacity in Kentucky.

118. PacifiCorp, before the Utah Public Service Commission, Docket No. 01-035-01 (2001), on behalf of Nucor Steel, re retail cost allocation and rate design issues.

119. TXU Electric Company, before the Public Utilities Commission of Texas, PUC Docket No. 23640/ SOAH Docket No. 473-01-1922 (2001), on behalf of Nucor Steel, re fuel cost recovery.

120. FPL Group *et al*., before the Federal Energy Regulatory Commission, Docket No. EC01-33-000 (2001), on behalf of Arkansas Electric Cooperative Corporation, Inc., re merger-related market power issues.

121. Entergy Mississippi, Inc., *et al*., before the Mississippi Public Service Commission, Docket No. 2000-UA-925 (2001), on behalf of Birmingham Steel-Mississippi, re appropriate regulatory conditions for merger approval.

122. TXU Electric Company, before the Public Utilities Commission of Texas, PUC Docket No. 22350/ SOAH Docket No. 473-00-1015 (2000), on behalf of Nucor Steel, re unbundled cost of service and rates.

123. PacifiCorp, before the Utah Public Service Commission, Docket No. 99-035-10 (2000), on behalf of Nucor Steel, re using system benefit charges to fund demand-side resource investments.

124. Entergy Arkansas, Inc. *et al*., before the Arkansas Public Service Commission, Docket No. 00-190-U (2000), on behalf of Nucor-Yamato Steel and Nucor Steel-Arkansas, re the development of competitive electric power markets in Arkansas.

125. Entergy Arkansas, Inc. *et al.*, before the Arkansas Public Service Commission, Docket No. 00-048-R (2000), on behalf of Nucor-Yamato Steel and Nucor Steel-Arkansas, re generic filing requirements and guidelines for market power analyses.
126. ScottishPower and PacifiCorp, before the Utah Public Service Commission, Docket No. 98-2035-04 (1999), on behalf of Nucor Steel, re merger conditions to protect the public interest.
127. Dominion Resources, Inc. and Consolidated Natural Gas Company, before the Virginia State Corporation Commission, Case No. PUA990020 (1999), on behalf of the City of Richmond, re market power and merger conditions to protect the public interest.
128. Houston Lighting & Power Company, before the Public Utility Commission of Texas, Docket No. 18465 (1998) on behalf of the Texas Commercial Customers, re excess earnings and stranded-cost recovery and mitigation.
129. PJM Interconnection, LLC, before the Federal Energy Regulatory Commission, Docket No. ER98-1384 (1998) on behalf of Wellsboro Electric Company, re pricing low-voltage distribution services.
130. DQE, Inc. and Allegheny Power System, Inc., before the Federal Energy Regulatory Commission, Docket Nos. ER97-4050-000, ER97-4051-000, and EC97-46-000 (1997) on behalf of the Borough of Chambersburg, re market power in relevant markets.
131. GPU Energy, before the New Jersey Board of Public Utilities, Docket No. EO97070458 (1997) on behalf of the New Jersey Commercial Users Group, re unbundled retail rates.
132. GPU Energy, before the New Jersey Board of Public Utilities, Docket No. EO97070459 (1997) on behalf of the New Jersey Commercial Users Group, re stranded costs.
133. Public Service Electric and Gas Company, before the New Jersey Board of Public Utilities, Docket No. EO97070461 (1997) on behalf of the New Jersey Commercial Users Group, re unbundled retail rates.
134. Public Service Electric and Gas Company, before the New Jersey Board of Public Utilities, Docket No. EO97070462 (1997) on behalf of the New Jersey Commercial Users Group, re stranded costs.
135. DQE, Inc. and Allegheny Power System, Inc., before the Federal Energy Regulatory Commission, Docket Nos. ER97-4050-000, ER97-4051-000, and EC97-46-000 (1997) on behalf of the Borough of Chambersburg, Allegheny Electric Cooperative, Inc., and Selected Municipalities, re market power in relevant markets.

136. CSW Power Marketing, Inc., before the Federal Energy Regulatory Commission, Docket No.ER97-1238-000 (1997) on behalf of the Transmission Dependent Utility Systems, re market power in relevant markets.
137. Central Hudson Gas & Electric Corporation *et al*., before the New York Public Service Commission, Case Nos. 96-E-0891, 96-E-0897, 96-E-0898, 96-E-0900, 96-E-0909 (1997), on behalf of the Retail Council of New York, re stranded-cost recovery.
138. Central Hudson Gas & Electric Corporation, supplemental testimony, before the New York Public Service Commission, Case No. 96-E-0909 (1997) on behalf of the Retail Council of New York, re stranded-cost recovery.
139. Consolidated Edison Company of New York, Inc., supplemental testimony, before the New York Public Service Commission, Case No. 96-E-0897 (1997) on behalf of the Retail Council of New York, re stranded-cost recovery.
140. New York State Electric & Gas Corporation, supplemental testimony, before the New York Public Service Commission, Case No. 96-E-0891 (1997) on behalf of the Retail Council of New York, re stranded-cost recovery.
141. Rochester Gas and Electric Corporation, supplemental testimony, before the New York Public Service Commission, Case No. 96-E-0898 (1997) on behalf of the Retail Council of New York, re stranded-cost recovery.
142. Texas Utilities Electric Company, before the Public Utility Commission of Texas, Docket No. 15015 (1996), on behalf of Nucor Steel-Texas, re real-time electricity pricing.
143. Central Power and Light Company, before the Public Utility Commission of Texas, Docket No. 14965 (1996), on behalf of the Texas Retailers Association, re cost of service and rate design.
144. Carolina Power & Light Company, before the South Carolina Public Service Commission, Docket No. 95-1076-E (1996), on behalf of Nucor Steel-Darlington, re integrated resource planning.
145. Texas Utilities Electric Company, before the Public Utility Commission of Texas, Docket No. 13575 (1995), on behalf of Nucor Steel-Texas, re integrated resource planning, DSM options, and real-time pricing.
146. Arkansas Power & Light Company, *et al*., Notice of Inquiry to Consider Section 111 of the Energy Policy Act of 1992, before the Arkansas Public Service Commission, Docket No. 94-342-U (1995), Initial Comments on behalf of Nucor-Yamato Steel Company, re integrated resource planning standards.

147. Arkansas Power & Light Company, *et al*., Notice of Inquiry to Consider Section 111 of the Energy Policy Act of 1992, before the Arkansas Public Service Commission, Docket No. 94-342-U (1995), Reply Comments on behalf of Nucor-Yamato Steel Company, re integrated resource planning standards.

148. Arkansas Power & Light Company, *et al*., Notice of Inquiry to Consider Section 111 of the Energy Policy Act of 1992, before the Arkansas Public Service Commission, Docket No. 94-342-U (1995), Final Comments on behalf of Nucor-Yamato Steel Company, re integrated resource planning standards.

149. South Carolina Pipeline Corporation, before the South Carolina Public Service Commission, Docket No. 94-202-G (1995), on behalf of Nucor Steel, re integrated resource planning and rate caps.

150. Gulf States Utilities Company, before the United States Court of Federal Claims, *Gulf States Utilities Company v. the United States*, Docket No. 91-1118C (1994, 1995), on behalf of the United States, re electricity rate and contract dispute litigation.

151. American Electric Power Corporation, before the Federal Energy Regulatory Commission, Docket No. ER93-540-000 (1994), on behalf of DC Tie, Inc., re costing and pricing electricity transmission services.

152. Texas Utilities Electric Company, before the Public Utility Commission of Texas, Docket No. 13100 (1994), on behalf of Nucor Steel-Texas, re real-time electricity pricing.

153. Carolina Power & Light Company, *et al*., Proposed Regulation Governing the Recovery of Fuel Costs by Electric Utilities, before the South Carolina Public Service Commission, Docket No. 93-238-E (1994), on behalf of Nucor Steel-Darlington, re fuel-cost recovery.

154. Southern Natural Gas Company, before the Federal Energy Regulatory Commission, Docket No. RP93-15-000 (1993-1995), on behalf of Nucor Steel-Darlington, re costing and pricing natural gas transportation services.

155. West Penn Power Company, *et al*., v. State Tax Department of West Virginia, *et al*., Civil Action No. 89-C-3056 (1993), before the Circuit Court of Kanawha County, West Virginia, on behalf of the West Virginia Department of Tax and Revenue, re electricity generation tax.

156. Carolina Power & Light Company, *et al*., Proceeding Regarding Consideration of Certain Standards Pertaining to Wholesale Power Purchases Pursuant to Section 712 of the 1992 Energy Policy Act, before the South Carolina Public Service Commission, Docket No. 92-231-E (1993), on behalf of Nucor Steel-Darlington, re Section 712 regulations.

157. Mountain Fuel Supply Company, before the Public Service Commission of Utah, Docket No. 93-057-01 (1993), on behalf of Nucor Steel-Utah, re costing and pricing retail natural gas firm, interruptible, and transportation services.

158. Texas Utilities Electric Company, before the Public Utility Commission of Texas, Docket No. 11735 (1993), on behalf of the Texas Retailers Association, re retail cost-of-service and rate design.

159. Virginia Electric and Power Company, before the Virginia State Corporation Commission, Case No. PUE920041 (1993), on behalf of Philip Morris USA, re cost of service and retail rate design.

160. Carolina Power & Light Company, before the South Carolina Public Service Commission, Docket No. 92-209-E (1992), on behalf of Nucor Steel-Darlington.

161. Gulf States Utilities Company, before the Louisiana Public Service Commission, Docket No. U-17282, Rate Design (1992), on behalf of the Department of Energy, Strategic Petroleum Reserve.

162. Georgia Power Company, before the Georgia Public Service Commission, Docket Nos. 4091-U and 4146-U (1992), on behalf of Amicalola Electric Membership Corporation.

163. PacifiCorp, Inc., before the Federal Energy Regulatory Commission, Docket No. EC88-2-007 (1992), on behalf of Nucor Steel-Utah.

164. South Carolina Pipeline Corporation, before the South Carolina Public Service Commission, Docket No. 90-452-G (1991), on behalf of Nucor Steel-Darlington.

165. Carolina Power & Light Company, before the South Carolina Public Service Commission, Docket No. 91-4-E, 1991 Fall Hearing, on behalf of Nucor Steel-Darlington.

166. Sonat, Inc., and North Carolina Natural Gas Corporation, before the North Carolina Utilities Commission, Docket No. G-21, Sub 291 (1991), on behalf of Nucor Corporation, Inc.

167. Northern States Power Company, before the Minnesota Public Utilities Commission, Docket No. E002/GR-91-001 (1991), on behalf of North Star Steel-Minnesota.

168. Gulf States Utilities Company, before the Louisiana Public Service Commission, Docket No. U-17282, Phase IV-Rate Design (1991), on behalf of the Department of Energy, Strategic Petroleum Reserve.

169. Houston Lighting & Power Company, before the Public Utility Commission of Texas, Docket No. 9850 (1990), on behalf of the Department of Energy, Strategic Petroleum Reserve.

170. General Services Administration, before the United States General Accounting Office, Contract Award Protest (1990), Solicitation No. GS-00P-AC87-91, Contract No. GS-00D-89-B5D-0032, on behalf of Satilla Rural Electric Membership Corporation, re cost of service and rate design.

171. Carolina Power & Light Company, before the South Carolina Public Service Commission, Docket No. 90-4-E (1990 Fall Hearing), on behalf of Nucor Steel-Darlington, re fuel-cost recovery.

172. Gulf States Utilities Company, before the Louisiana Public Service Commission, Docket No. U-17282, Phase III-Rate Design (1990), on behalf of the Department of Energy, Strategic Petroleum Reserve, re cost of service and rate design.

173. Atlanta Gas Light Company, before the Georgia Public Service Commission, Docket No. 3923-U (1990), on behalf of Herbert G. Burris and Oglethorpe Power Corporation, re anticompetitive pricing schemes.

174. Ohio Edison Company, before the Ohio Public Utilities Commission, Case No. 89-1001-EL-AIR (1990), on behalf of North Star Steel-Ohio, re cost of service and rate design.

175. Gulf States Utilities Company, before the Louisiana Public Service Commission, Docket No. U-17282, Phase III-Cost of Service/Revenue Spread (1989), on behalf of the Department of Energy, Strategic Petroleum Reserve.

176. Northern States Power Company, before the Minnesota Public Utilities Commission, Docket No. E002/GR-89-865 (1989), on behalf of North Star Steel-Minnesota.

177. Gulf States Utilities Company, before the Louisiana Public Service Commission, Docket No. U-17282, Phase III-Rate Design (1989), on behalf of the Department of Energy, Strategic Petroleum Reserve.

178. Utah Power & Light Company, before the Utah Public Service Commission, Case No. 89-039-10 (1989), on behalf of Nucor Steel-Utah and Vulcraft, a division of Nucor Steel.

179. Soyland Power Cooperative, Inc. v. Central Illinois Public Service Company, Docket No. EL89-30-000 (1989), before the Federal Energy Regulatory Commission, on behalf of Soyland Power Cooperative, Inc., re wholesale contract pricing provisions

180. Gulf States Utilities Company, before the Public Utility Commission of Texas, Docket No. 8702 (1989), on behalf of the Department of Energy, Strategic Petroleum Reserve.
181. Houston Lighting and Power Company, before the Public Utility Commission of Texas, Docket No. 8425 (1989), on behalf of the Department of Energy, Strategic Petroleum Reserve.
182. Northern Illinois Gas Company, before the Illinois Commerce Commission, Docket No. 88-0277 (1989), on behalf of the Coalition for Fair and Equitable Transportation, re retail gas transportation rates.
183. Carolina Power & Light Company, before the South Carolina Public Service Commission, Docket No. 79-7-E, 1988 Fall Hearing, on behalf of Nucor Steel-Darlington, re fuel-cost recovery.
184. Potomac Electric Power Company, before the District of Columbia Public Service Commission, Formal Case No. 869 (1988), on behalf of Peoples Drug Stores, Inc., re cost of service and rate design.
185. Carolina Power & Light Company, before the South Carolina Public Service Commission, Docket No. 88-11-E (1988), on behalf of Nucor Steel-Darlington.
186. Northern States Power Company, before the Minnesota Public Utilities Commission, Docket No. E-002/GR-87-670 (1988), on behalf of the Metalcasters of Minnesota.
187. Ohio Edison Company, before the Ohio Public Utilities Commission, Case No. 87-689-EL-AIR (1987), on behalf of North Star Steel-Ohio.
188. Carolina Power & Light Company, before the South Carolina Public Service Commission, Docket No. 87-7-E (1987), on behalf of Nucor Steel-Darlington.
189. Gulf States Utilities Company, before the Louisiana Public Service Commission, Docket No. U-17282, Phase I (1987), on behalf of the Strategic Petroleum Reserve.
190. Gulf States Utilities Company, before the Public Utility Commission of Texas, Docket No. 7195 (1987), on behalf of the Strategic Petroleum Reserve.
191. Gulf States Utilities Company, before the Federal Energy Regulatory Commission, Docket No. ER86-558-006 (1987), on behalf of Sam Rayburn G&T Cooperative.
192. Utah Power & Light Company, before the Utah Public Service Commission, Case No. 85-035-06 (1986), on behalf of the U.S. Air Force.

193. Houston Lighting & Power Company, before the Public Utility Commission of Texas, Docket No. 6765 (1986), on behalf of the Strategic Petroleum Reserve.
194. Central Maine Power Company, before the Maine Public Utilities Commission, Docket No. 85-212 (1986), on behalf of the U.S. Air Force.
195. Gulf States Utilities Company, before the Public Utility Commission of Texas, Docket Nos. 6477 and 6525 (1985), on behalf of North Star Steel-Texas.
196. Ohio Edison Company, before the Ohio Public Utilities Commission, Docket No. 84-1359-EL-AIR (1985), on behalf of North Star Steel-Ohio.
197. Utah Power & Light Company, before the Utah Public Service Commission, Case No. 84-035-01 (1985), on behalf of the U.S. Air Force.
198. Central Vermont Public Service Corporation, before the Vermont Public Service Board, Docket No. 4782 (1984), on behalf of Central Vermont Public Service Corporation.
199. Gulf States Utilities Company, before the Louisiana Public Service Commission, Docket No. U-15641 (1983), on behalf of the Strategic Petroleum Reserve.
200. Southwestern Power Administration, before the Federal Energy Regulatory Commission, Rate Order SWPA-9 (1982), on behalf of the Department of Defense.
201. Public Service Company of Oklahoma, before the Federal Energy Regulatory Commission, Docket Nos. ER82-80-000 and ER82-389-000 (1982), on behalf of the Department of Defense.
202. Central Maine Power Company, before the Maine Public Utilities Commission, Docket No. 80-66 (1981), on behalf of the Commission Staff.
203. Bangor Hydro-Electric Company, before the Maine Public Utilities Commission, Docket No. 80-108 (1981), on behalf of the Commission Staff.
204. Oklahoma Gas & Electric, before the Oklahoma Corporation Commission, Docket No. 27275 (1981), on behalf of the Commission Staff.
205. Green Mountain Power, before the Vermont Public Service Board, Docket No. 4418 (1980), on behalf of the PSB Staff.
206. Williams Pipe Line, before the Federal Energy Regulatory Commission, Docket No. OR79-1 (1979), on behalf of Mapco, Inc.
207. Boston Edison Company, before the Massachusetts Department of Public Utilities, Docket No. 19494 (1978), on behalf of Boston Edison Company.

208. Duke Power Company, before the North Carolina Utilities Commission, Docket No. E-7, Sub 173, on behalf of the Commission Staff.
209. Duke Power Company, before the North Carolina Utilities Commission, Docket No. E-100, Sub 32, on behalf of the Commission Staff.
210. Virginia Electric & Power Company, before the North Carolina Utilities Commission, Docket No. E-22, Sub 203, on behalf of the Commission Staff.
211. Virginia Electric & Power Company, before the North Carolina Utilities Commission, Docket No. E-22, Sub 170, on behalf of the Commission Staff.
212. Southern Bell Telephone Company, before the North Carolina Utilities Commission, Docket No. P-5, Sub 48, on behalf of the Commission Staff.
213. Western Carolina Telephone Company, before the North Carolina Utilities Commission, Docket No. P-58, Sub 93, on behalf of the Commission Staff.
214. Natural Gas Ratemaking, before the North Carolina Utilities Commission, Docket No. G-100, Sub 29, on behalf of the Commission Staff.
215. General Telephone Company of the Southeast, before the North Carolina Utilities Commission, Docket No. P-19, Sub 163, on behalf of the Commission Staff.
216. Carolina Power and Light Company, before the North Carolina Utilities Commission, Docket No. E-2, Sub 264, on behalf of the Commission Staff.
217. Carolina Power and Light Company, before the North Carolina Utilities Commission, Docket No. E-2, Sub 297, on behalf of the Commission Staff.
218. Duke Power Company, *et al*., Investigation of Peak-Load Pricing, before the North Carolina Utilities Commission, Docket No. E-100, Sub 21, on behalf of the Commission Staff.
219. Investigation of Intrastate Long Distance Rates, before the North Carolina Utilities Commission, Docket No. P-100, Sub 45, on behalf of the Commission Staff.

Exhibit DWG-2: Responses to Selected Data Requests

Nucor Set 01
Answer Prepared By: Edward B. Stein, Brandon S. McMillen and Edward C. Miller
As to Objections: Trevor Alexander

Case No. 23-0301-EL-SSO
In the Matter of the Application of Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company for Authority to Provide for a Standard Service Offer Pursuant to R.C. § 4928.143 in the Form of an Electric Security Plan

ANSWERS TO INTERROGATORIES

Nucor Set 01 – INT-004

Regarding the Companies' proposal to no longer serve as the CSP for Rider ELR customers:

(a) Aside from customer notifications, penalties, or testing requirements as referred to at page 5, lines 20-21 of Witness Stein's testimony, what other activities do the Companies perform in serving as the CSP for Rider ELR customers?
(b) How long have the Companies been serving as the CSP for Rider ELR customers?
(c) Explain in detail any problems that the Companies have encountered in serving as the CSP for Rider ELR customers.
(d) Identify any costs the Companies incur in serving as the CSP for Rider ELR customers.
(e) Identify the number of employees used and the number of manhours spent by the Companies in serving as the CSP for Rider ELR customers.
(f) Could the Companies continue to serve as the CSP for Rider ELR customers if the Commission directs them to do so? If not, please explain why in detail.
(g) Aside from Rider ELR load, have the Companies offered any other demand response or energy efficiency resources into the PJM markets and/or served as the CSP for any other customers? If so, please explain in detail.
(h) Do the Companies intend to offer any energy efficiency and/or demand responses resources into the PJM markets during the proposed term of ESP V? If so, please explain in detail.
(i) Did the Companies consult with their current Rider ELR customers concerning the requirement that Rider ELR customers participate in the PJM load management programs though their own CSP? If so, please describe how they were consulted and provide any input provided and any related documents.

Response:

a. The companies also determine the amount of curtailable load to offer into RPM auctions and set the price strategy of how to offer those assets into the

RPM auctions. The Companies must then monitor PJM emergency operations notifications in order to curtail customers when required.

b. Objection. This Request seeks information that is not relevant and not reasonably calculated to lead to the discovery of admissible evidence. Subject to and without waiving the foregoing objections, the Companies interpret this Request as seeking information regarding when the Companies began serving as the CSP for all Rider ELR customers, and not requesting information regarding any specific customer's service dates. The Companies began managing the load of customers participating in Rider ELR beginning with the inception of Rider ELR on June 1, 2009.

c. Objection. This Request seeks information that is not relevant and not reasonably calculated to lead to the discovery of admissible evidence. This Request is vague and ambiguous in its use of the term "problems." The Companies object to this Request that purports to require a detailed, narrative response. *Penn Central Transp. Co. v. Armco Steel Corp.*, 27 Ohio Misc. 76, 77 (C.P. 1971). The Request is overbroad and unduly burdensome in requesting information over a period of more than 14 years. Subject to and without waiving the foregoing objections, there have been metering, dispatch, and customer performance issues. For example, the Companies experienced a malfunction of the automated notification system for a recent PJM emergency event causing response to the event to be delayed.

d. Objection. This Request seeks information that is not relevant and not reasonably calculated to lead to the discovery of admissible evidence. The Request is overbroad and unduly burdensome in requesting information over a period of more than 14 years. Subject to and without waiving the foregoing objections, from June 2016 – May 2023, the Companies have incurred costs totaling $1,642,465 related to charges from PJM and costs associated with the Companies' notification system for Emergency Curtailment Events. These costs are recovered through Rider DSE1.

e. Objection. This Request seeks information that is not relevant and not reasonably calculated to lead to the discovery of admissible evidence. The Request is overbroad and unduly burdensome in requesting identification of the "number of manhours spent by the Companies in serving as the CSP for Rider ELR customers" and in requesting information over a period of more than 14 years. Subject to and without waiving the foregoing objections, the Companies do not track the number of employees or personnel hours spent on serving as the CSP for Rider ELR customers. The groups within the Companies that are involved in serving as the CSP for Rider ELR customers include, but are not limited to, Rates and Regulatory Affairs, Legal, Energy Efficiency, Dispatch, Settlements, Customer Support, Accounting, Billing, Customer Service, and Supply Chain.

f. Objection. This Request seeks information that is not relevant and not reasonably calculated to lead to the discovery of admissible evidence. Further, the request calls for speculation. Subject to and without waiving the foregoing objections, yes.

g. Objection. This Request is vague and ambiguous in its use of the phrase "offered any other demand response or energy efficiency resources into the PJM markets." Subject to and without waiving the foregoing objections, yes, the Companies historically offered qualifying energy efficiency resources associated with programs implemented under Ohio Revised Code Section 4928.66 into the PJM capacity markets. Because those programs have ended and the associated resources no longer qualify for participation, that effort has been discontinued. The Companies have not served as CSP for any other customers.

h. Objection. This Request is vague and ambiguous in its use of the phrase "offered any other demand response or energy efficiency resources into the PJM markets." Subject to and without waiving the foregoing objections, yes, assuming the energy efficiency programs proposed as part of ESP V are approved as filed. Please see the Testimony of Edward Miller at p. 29 for a detailed explanation.

i. Objection. This Request is vague and ambiguous in its use of the term "consult" and the phrase "the requirement that Rider ELR customers participate in the PJM load management programs though their own CSP." The Companies interpret this request to seek information regarding the Companies' communications to current ELR customers regarding the Companies' Rider ELR proposal in ESP V. Subject to and without waiving the foregoing objections, yes. In ESP V pre-filing meetings with interested stakeholders, the Companies solicited feedback on Rider ELR and presented their plans for Rider ELR in ESP V. Separate from these ESP V discussions, the Companies have also consulted with current Rider ELR customers about participating in PJM load management programs though their own CSP beyond the expiration of ESP IV, and in connection with a customer's intent to participate in the PJM Synchronized Reserve Market..

Nucor Set 01
Answer Prepared By: Edward B. Stein
As to Objections: Trevor Alexander

Case No. 23-0301-EL-SSO
In the Matter of the Application of Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company for Authority to Provide for a Standard Service Offer Pursuant to R.C. § 4928.143 in the Form of an Electric Security Plan

ANSWERS TO INTERROGATORIES

Nucor Set 01 – INT-005 Provide any studies, analyses, reports, or other documents used by the Companies in developing the proposed changes to Rider ELR discussed at pages 4 through 7 of Witness Stein's testimony.

Response: Objection. This Request is vague and ambiguous in its use of the term "used." Objecting further, this Request improperly seeks or purports to require the Companies to provide documents and/or information that is publicly available or already in the possession, custody, or control of the requesting party, and thus equally available to the requesting party. Subject to and without waiving the foregoing objections, the Companies did not prepare studies, analyses, reports, or other documents. The Companies did rely in part on publicly available information including: PJM OATT and Operating Agreement, the Companies' current Rider ELR tariff, and PJM Stakeholder meeting documentation.

Nucor Set 01
Answer Prepared By: Brandon McMillen
As to Objections: Trevor Alexander

Case No. 23-0301-EL-SSO
In the Matter of the Application of Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company for Authority to Provide for a Standard Service Offer Pursuant to R.C. § 4928.143 in the Form of an Electric Security Plan

ANSWERS TO INTERROGATORIES

Nucor Set 01 – INT-006 Provide any studies, analyses, reports, or other documents used by the Companies in developing the proposed changes to Rider ELR discussed at pages 11 through 15 of Witness McMillen's testimony.

Response: Objection. This Request is vague and ambiguous in its use of the term "used". Subject to and without waiving the foregoing objections, see the Companies' responses to PUCO DR-006, Nucor Set 01-INT-003, and Nucor Set 01-INT-005. The Companies also conducted ESP V pre-filing meetings with interested stakeholders, where they solicited feedback on Rider ELR and presented their plans for Rider ELR in ESP V. in addition, the Companies reviewed AEP's Electric Security Plan filing in Case No. filed in 23-23-EL-SSO and the testimony filed by Jaime L. Mayhan regarding AEP's proposed changes to their Interruptible Power tariffs.

Nucor Set 01
Answer Prepared By: Juliette Lawless
As to Objections: Trevor Alexander

Case No. 23-0301-EL-SSO
In the Matter of the Application of Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company for Authority to Provide for a Standard Service Offer Pursuant to R.C. § 4928.143 in the Form of an Electric Security Plan

ANSWERS TO INTERROGATORIES

Nucor Set 01 – INT-007 For a customer currently participating in the NMB Pilot Program, please explain any differences between how transmission costs are to be allocated and recovered under the Companies' proposed NMB 2 charge and how such costs are currently allocated and recovered under the Pilot Program.

Response: Objection. This Request seeks information that is not relevant and not reasonably calculated to lead to the discovery of admissible evidence. The Companies object to this Request that purports to require a detailed, narrative response. Penn Central Transp. Co. v. Armco Steel Corp., 27 Ohio Misc. 76, 77 (C.P. 1971). Subject to and without waiving the foregoing objections, for customers participating in the Rider NMB Pilot Program and shopping with a supplier, the allocation and recovery of applicable costs are determined by the participating customer's supplier, so the Companies do not know. For customers participating in the Rider NMB Pilot Program and being manually billed for their non-market-based services charges by the Companies, the customers are charged as described in Witness Lawless's testimony at page 9, line 15 through page 10, line 3.

Under the Companies' Rider NMB proposal in this case, non-market-based services costs for all customers will continue to be allocated to the Companies' rate schedules based on the four coincident system peaks ("4 CPs") from the prior year. The resulting aggregate allocated revenue requirement for all commercial and industrial customers on Rate Schedules GS, GP, GSU, and GT is divided by the aggregate NSPLs for those same customers to derive the NMB 2 rates. See the direct testimony of Companies' Witness Lawless at page 7, line 21 through page 8, line 8, and page 11, lines 1-14. The proposed NMB 2 rates charge all applicable billing line items based upon the customer's NSPLs; there is not a breakout for kWh-based charges.

OCC Set 5
Answer Prepared By: Brandon McMillen
As to Objections: Trevor Alexander

Case No. 23-0301-EL-SSO
In the Matter of the Application of Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company for Authority to Provide for a Standard Service Offer Pursuant to R.C. § 4928.143 in the Form of an Electric Security Plan

<u>ANSWERS TO INTERROGATORIES</u>

OCC Set 05 – INT-006 The following interrogatories relate to the Economic Load Response Rider ("Rider ELR").

(a) For the current calendar year and the past two calendar years, how many customers participate on the Economic Load Response Rider for each operating company (OE, CEI, & TE)?
(b) What is the total curtailable load in kWs for each operating company under Rider ELF for the current calendar year and the past two calendar years?
(c) Are customers in the Rider ELR program also allowed to participate in the PJM Demand Response Program?
(d) If Rider ELR customers are allowed to participate in the PJM Demand Response Program, are customers allowed to keep any credits received from PJM or are they required to reimburse FE?
(e) For each of the past five years (201, 2019, 2020, 2021 and 2022) and to date in 2023, how many Emergency Curtailable Events occurred under Rider ELR?
(f) What was the duration of each curtailable event?
(g) How much load was actually curtailed for each Emergency Curtailable Event for OE, CEL and TE?

Response: (a) 16 OE customers; 4 CEI customers; and 4 TE customers.

(b) Objection. This request is vague and ambiguous in its use of the terms "Rider ELF" and "curtailable load." For purposes of this response the Companies assume "Rider ELF" means "Rider ELR" and that "curtailable load" is defined as provided in the Companies' Rider ELR tariffs. Subject to and without waiving the forgoing objections, see the table below for the sum of the total monthly curtailable loads in kW.

OPCO	2021	2022	2023 thru June
CEI	2,253,583	2,283,740	1,101,362
OE	2,019,121	2,097,305	1,024,888
TE	2,247,310	2,240,958	1,120,123

(c) Objection. The request is vague and ambiguous in its use of the phrase "PJM Demand Response Program". For purposes of this response, the Companies interpret this request to ask whether Rider ELR customers can participate with their demand response capabilities in the PJM capacity market. Subject to and without waiving the foregoing objections, the Rider ELR tariff provides that Rider ELR customers are not able to participate with their demand response capabilities in the PJM capacity market, . However, Rider ELR customers are able to participate in PJM programs related to the energy market.

(d) Rider ELR customers that participate in PJM programs related to the energy market do not reimburse the Companies for credits they may receive from those other programs.

(e) Objection. This Request is vague and ambiguous in its use of the term "201." For purposes of this response, the Companies assume this Request seeks the number of Emergency Curtailable Events, including test events, from 2018-present. Subject to and without waiving the foregoing objections, see the table below.

Date	Start Time	End Time
May 14, 2019 (PJM Test)	2:00 PM	3:00 PM
May 11, 2021 (PJM Test)	2:00 PM	3:00 PM
May 10, 2022 (PJM Test)	2:00 PM	3:00 PM
December 24, 2022	10:10 AM	8:00 PM

(f) See response to (e).

(g) Objection. This Request is vague and ambiguous in its use of the terms "load was actually curtailed" and "CEL." For purposes of this response, the Companies assume "CEL" means CEI. Subject to and without waiving the foregoing objections, for each event listed in (e), the Companies successfully curtailed to or below their PJM registered firm service level for all Rider ELR customers. See the table below for the expected load reduction for Rider ELR customers reported to PJM for each delivery year coinciding with the events listed in (e).

Delivery Year	MWs
2018/19	126.8
2020/21	132.8
2021/22	128.6
2022/23	199.5

OELC Set 01
Answer Prepared By: Juliette Lawless, Christopher Moravec, Ronald Lord
As to Objections: Trevor Alexander

Case No. 23-0301-EL-SSO
In the Matter of the Application of Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company for Authority to Provide for a Standard Service Offer Pursuant to R.C. § 4928.143 in the Form of an Electric Security Plan

ANSWERS TO INTERROGATORIES

OELC Set 01– INT-001 For each year during the term of FirstEnergy's ESP IV through the present year, please identify:

a) The total number of customers and total number of accounts enrolled in FirstEnergy's Rider NMB Pilot in each year;
b) For each account enrolled in FirstEnergy's Rider NMB Pilot at any time during the term of FirstEnergy's ESP IV, that account's Network Service Peak Load ("NSPL") value for each year that the account was enrolled in the Rider NMB Pilot;
c) For each account enrolled in FirstEnergy's Rider NMB Pilot at any time during the term of FirstEnergy's ESP IV, that account's monthly billed demand for each month in each year that the account was enrolled in the Rider NMB Pilot; and
d) An indication of which accounts enrolled in FirstEnergy's Rider NMB Pilot at any time during the term of FirstEnergy's ESP IV were enrolled through a reasonable arrangement approved by the PUCO.

Response: a)

Year	Customers	Accounts	Premise Numbers
2016	41	44	44
2017	41	59	63
2018	53	73	77
2019	56	78	82
2020	61	85	89
2021	75	105	108
2022	77	109	112
2023	71	97	99

*This table include participants at the end of the NMB year; 2023 includes participants as of October 2023

b) See OELC Set 01-INT-001 Attachment 1 Confidential.

c) Objection. The Request is overbroad and unduly burdensome in requesting monthly billed demand for each month in each year for each account enrolled in First Energy's Rider NMB Pilot at any time during the Companies' ESP IV. Subject to and without waiving the foregoing objection, see OELC Set 01-INT-001 Attachment 1 Confidential for the monthly demands for each Pilot participant while participating in the Pilot program for March 2019 through July 2023.

d) Objection. This Request is vague and ambiguous in its use of the phrase "An indication of which accounts enrolled in FirstEnergy's Rider NMB Pilot." This Request seeks information that is not relevant and not reasonably calculated to lead to the discovery of admissible evidence. This Request improperly seeks or purports to require the Companies to provide information that is publicly available on the Commission's docket and thus equally available to the requesting party. Subject to and without waiving the foregoing objections, please see OELC Set 01-INT-001 Attachment 1 Confidential.

OELC Set 01
Answer Prepared By: Juliette Lawless

Case No. 23-0301-EL-SSO
In the Matter of the Application of Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company for Authority to Provide for a Standard Service Offer Pursuant to R.C. § 4928.143 in the Form of an Electric Security Plan

<u>ANSWERS TO INTERROGATORIES</u>

OELC Set 01– INT-006 For the proposed NMB 2 rate, will FirstEnergy use the actual NSPL values assigned to the account to bill NMB 2 charges, or will FirstEnergy use some other value? If some other value, please describe the calculation of that value.

Response: The Companies will use actual NSPL values assigned to the customer's account to bill Rider NMB 2 rates**.**

OELC Set 01
Answer Prepared By: Juliette Lawless

Case No. 23-0301-EL-SSO
In the Matter of the Application of Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company for Authority to Provide for a Standard Service Offer Pursuant to R.C. § 4928.143 in the Form of an Electric Security Plan

<u>ANSWERS TO INTERROGATORIES</u>

OELC Set 01– INT-007 For the proposed NMB 2 rate, for those commercial and industrial customers in NMB 2, will NMB 2 rate charges be static on a month-to-month basis, only changing when the account at issue is assigned a new NSPL value on January 1 of any given year or when the NMB 2 rate is updated by FirstEnergy through its annual update filings referred to in the testimony of Juliette Lawless filed in this Proceeding at p. 11, lines 15-20? If not, please describe what other factors will lead to variations in the NMB 2 rate over the course of a calendar year.

Response: Yes, Rider NMB 2 charges for an individual customer will remain the same each month until either the customer is assigned a new NSPL value or the Rider NMB 2 rate is updated.

OELC Set 01
Answer Prepared By: Brandon McMillen
As to Objections: Trevor Alexander

Case No. 23-0301-EL-SSO
In the Matter of the Application of Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company for Authority to Provide for a Standard Service Offer Pursuant to R.C. § 4928.143 in the Form of an Electric Security Plan

ANSWERS TO INTERROGATORIES

OELC Set 01– INT-013 Please identify the total load in MW that was curtailed or interrupted in FirstEnergy territory on December 24, 2022, as a result of any interruptible notice originating from PJM (including, but not limited to, any Pre-Emergency Load Management Reduction Action, Emergency Load Management Reduction Action or NERC level EEA2 initiated or issued by PJM at any time on December 24, 2022).[1]

Response: Objection. This Request seeks information that is not relevant and not reasonably calculated to lead to the discovery of admissible evidence. Subject to and without waiving the foregoing objections, the Companies only have information regarding load curtailed or interrupted as a result of PJM notices as it relates to Rider ELR customers. See the Companies' response to OCC Set 05-INT-006(g).

[1] Please refer to this publicly-available PJM presentation if further details are required on the terms used in this interrogatory: https://www.pjm.com/-/media/committees-groups/committees/mic/2023/20230111/item-0x---winter-storm-elliott-overview.ashx

OELC Set 01
Answer Prepared By: Brandon McMillen
As to Objections: Trevor Alexander

Case No. 23-0301-EL-SSO
In the Matter of the Application of Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company for Authority to Provide for a Standard Service Offer Pursuant to R.C. § 4928.143 in the Form of an Electric Security Plan

<u>ANSWERS TO INTERROGATORIES</u>

OELC Set 01– INT-014 For the load identified in response to ROG-01-013, please identify:

a) the total number of FirstEnergy accounts included in that curtailed or interrupted load;
b) for the accounts included in the response to subpart (a) of this interrogatory, the total number of those accounts that were participating or being served under FirstEnergy's Rider ELR on December 24, 2022;
c) for the accounts included in the response to subpart (b) of this interrogatory as participating or being served under FirstEnergy's Rider ELR, the total load in MW that was curtailed or interrupted at any time on December 24, 2022;
d) for the accounts included in the response to subpart (b) of this interrogatory as participating or being served under FirstEnergy's Rider ELR, the cumulative total number of hours that those accounts were curtailed or interrupted at any time on December 24, 2022;
e) for each of the accounts included in the response to subpart (b) of this interrogatory as participating or being served under FirstEnergy's Rider ELR, the peak load contribution (PLC) values for each account for the current 2022/2023 delivery year and future 2023/2024 delivery year;
f) for each of the accounts included in the response to subpart (b) of this interrogatory as participating or being served under FirstEnergy's Rider ELR, the monthly billed demand for each account for the 12 billing cycles with service periods ending in June 2022 through May 2023; and
g) a detailed itemization of all payments, revenues and/or penalties received by FirstEnergy from PJM related to the load curtailment on December 24, 2022, or the interruptible notice originating from PJM on that date.

Response: Objection. This Request seeks information that is not relevant and not reasonably calculated to lead to the discovery of admissible evidence. Subject to and without waiving the foregoing objections:

a) 24 ELR customers were curtailed.

b) See the Companies' response to subpart (a).

c) See the Companies' response to OCC Set 05-INT-006(g).

d) See the Companies' response to OCC Set 05-INT-006(e).

e) Objection. This Request seeks information that is not relevant and not reasonably calculated to lead to the discovery of admissible evidence. Subject to and without waiving the foregoing objection, see OELC Set 01-INT-014 Attachment 1 Confidential.

f) Objection. This Request seeks information that is not relevant and not reasonably calculated to lead to the discovery of admissible evidence. Subject to and without waiving the foregoing objection, see OELC Set 01-INT-014 Attachment 2 Confidential.

g) Objection. This Request is vague and ambiguous in its use of the phrase "or the interruptible notice originating from PJM on that date." This Request seeks information that is not relevant and not reasonably calculated to lead to the discovery of admissible evidence. Subject to and without waiving the foregoing objections, the Companies received approximately $11.4M in payments from PJM for the curtailment events in December 2022.

OECSP		
3/1/2023 0:00	$	(2,151,718.16)
4/1/2023 0:00	$	(2,944,130.26)
5/1/2023 0:00	$	(2,721,728.86)
6/1/2023 0:00	$	(1,405,837.57)
7/1/2023 0:00	$	(1,086,346.53)
8/1/2023 0:00	$	(1,132,623.12)
	$	(11,442,384.50)

OELC Set 01
Answer Prepared By: Brandon McMillen

Case No. 23-0301-EL-SSO
In the Matter of the Application of Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company for Authority to Provide for a Standard Service Offer Pursuant to R.C. § 4928.143 in the Form of an Electric Security Plan

ANSWERS TO INTERROGATORIES

OELC Set 01– INT-015 Please identify the number of FirstEnergy accounts that were participating or being served under FirstEnergy's Rider ELR on December 23, 2022, that failed to curtail or interrupt load on that day in response to any interruptible notice originating from PJM or FirstEnergy, and for those accounts identify the total aggregate amount of load in MW that should have been curtailed or interrupted on that day.

Response: None. See the Companies' response to OELC Set 01-INT-021.

OELC Set 01
Answer Prepared By: Brandon McMillen

Case No. 23-0301-EL-SSO
In the Matter of the Application of Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company for Authority to Provide for a Standard Service Offer Pursuant to R.C. § 4928.143 in the Form of an Electric Security Plan

<u>ANSWERS TO INTERROGATORIES</u>

OELC Set 01– INT-016 Please identify the number of FirstEnergy accounts that were participating or being served under FirstEnergy's Rider ELR on December 24, 2022, that failed to curtail or interrupt load on that day in response to any interruptible notice originating from PJM or FirstEnergy, and for those accounts identify the total aggregate amount of load in MW that should have been curtailed or interrupted on that day.

Response: None.

OELC Set 01
Answer Prepared By: Edward B. Stein

Case No. 23-0301-EL-SSO
In the Matter of the Application of Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company for Authority to Provide for a Standard Service Offer Pursuant to R.C. § 4928.143 in the Form of an Electric Security Plan

ANSWERS TO INTERROGATORIES

OELC Set 01– INT-021 In response to Subpart (c) of Interrogatory No. 4 of the first set of discovery requests from Nucor Steel Marion, Inc. ("Nucor") (Nucor Set 01 – INT-004), FirstEnergy stated that, "there have been metering, dispatch, and customer performance issues. For example, the Companies experienced a malfunction of the automated notification system for a recent PJM emergency event causing response to the event to be delayed." With respect to this "malfunction" referenced by FirstEnergy, please provide the following information:

a) identify when the malfunction occurred;
b) identify what caused the malfunction;
c) describe specifically what the malfunction was;
d) describe specifically what delay occurred as a result of the malfunction;
e) identify how long of a delay was caused by the malfunction;
f) identify the specific amount of any penalties assessed by PJM as a result of this delay in response described by FirstEnergy; and
g) if there were PJM penalties, identify whether FirstEnergy has sought to recover any portion of those penalties from its customers.

Response:

a) The malfunction occurred on December 23, 2023, and December 24, 2023.

b) The Companies have a notification system in place that automatically polls the PJM DR Hub for emergency curtailment events. Once an event is called by PJM, the Companies' system will be triggered, and notifications would be sent to the customers called by PJM through a webservice. When the events in December were triggered, the webservice returned an error and did not send the notifications. This was due to API integration with the webservice. Once the error was discovered, the Companies sent out notifications manually.

c) See the Companies' response to b).

d) On December 23, 2023, PJM triggered events for 5 ELR customers at 5:30PM and 6:00PM and ended the events at 10:15 PM. On December 24, 2023, PJM triggered events at 4:20AM, 5:00AM and 6:30AM for all ELR customers.

After identifying the malfunction of the notification system and confirming the customers that were called to curtail, the Companies began to send out event notices at 9:30AM on December 24, 2023.

e) See the Companies' response to d).

f) Due to the Companies' ELR customers overperformance in the event hours, the Companies did not receive any penalties. See also the Companies' response to OELC Set 01-INT-014.

g) Not applicable.

OELC Set 01
Answer Prepared By: Brandon McMillen

Case No. 23-0301-EL-SSO
In the Matter of the Application of Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company for Authority to Provide for a Standard Service Offer Pursuant to R.C. § 4928.143 in the Form of an Electric Security Plan

<u>ANSWERS TO INTERROGATORIES</u>

OELC Set 01– INT-023 Referring to page 14, lines 3-5, of the testimony of Brandon McMillen filed in this Proceeding on April 5, 2023, where Mr. McMillen testified that "Currently, the Companies are eligible to receive revenues from PJM if the Rider ELR demand response resources clear in the PJM capacity auctions, and 80% of those revenues are provided to customers to offset the costs of the Rider ELR and Rider EDR(b) credits", please provide the following information:

a) describe why FirstEnergy keeps 20% of the PJM revenues associated with Rider ELR demand response resources that clear in the PJM capacity auctions;
b) describe what services FirstEnergy provides, if any, to justify the retention of 20% of the PJM revenues associated with Rider ELR demand response resources that clear in the PJM capacity auctions;
c) identify the PUCO order or tariff provision that permits FirstEnergy to retain 20% of the PJM revenues associated with Rider ELR demand response resources that clear in the PJM capacity auctions; and
d) describe whether FirstEnergy retains any other PJM revenues associated with Rider ELR demand response resources, including, but not limited to, emergency energy payments made by PJM for demand response events.

Response:

a) See the July 17, 2013 Entry on Rehearing in Case No. 12-2190-EL-POR (paragraph 8) and the November 21, 2017 Opinion and Order in Case No. 16-0743-EL-POR (paragraphs 34 and 74).

b) See the Companies' response to part a).

c) See the Companies' response to part a).

d) The Companies retain 20% of all PJM revenues associated with energy efficiency and demand response programs, including but not limited to emergency payments made by PJM for demand response events, pursuant to the response to part a).

OELC Set 01
Answer Prepared By: Edward Miller

Case No. 23-0301-EL-SSO
In the Matter of the Application of Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company for Authority to Provide for a Standard Service Offer Pursuant to R.C. § 4928.143 in the Form of an Electric Security Plan

<u>ANSWERS TO INTERROGATORIES</u>

OELC Set 01– INT-025 Referring to page 30, lines 9-13, of the testimony of Edward Miller filed in this Proceeding on April 5, 2023, where Mr. Miller testified that "The Companies propose to utilize the previously approved Commission practice in which 80% of PJM net revenues obtained from cleared EE resources (revenues minus costs) from the FCM would offset the EE/PDR Plan revenue requirements in the years the PJM FCM revenues are realized, with 20% of the PJM FCM revenues retained by the Companies", please provide the following information:

a) describe why FirstEnergy is proposing to keep 20% of the PJM net revenues described by Mr. Miller;
b) describe what services FirstEnergy will provide, if any, to justify the retention of 20% of the PJM net revenues described by Mr. Miller; and
c) identify all PUCO orders or tariffs reflecting the "previously approved Commission practice" referred to by Mr. Miller.

Response:

a) The Companies propose to continue the 80/20 percent sharing of revenues between customers and the Companies, consistent with the July 17, 2013 Entry on Rehearing in Case No. 12-2190-EL-POR (paragraph 8) and the November 21, 2017 Opinion and Order in Case No. 16-0743-EL-POR (paragraphs 34 and 74). .
b) The Companies will perform analysis and develop offers for eligible EE Resources from programs into applicable PJM Base Residual Auctions ("BRAs") and/or Incremental Auctions ("IAs"). The Companies intend to offer in EE peak reduction values from programs consistent with PJM's governing Manuals 18 and 18B. The Companies plan the following high-level processes for use in the development of its EE resource values to facilitate participation in the PJM Capacity Auctions:
   a. Identify and remove PJM ineligible measures and establish Capacity Rights to the EE resources to be considered.
   b. Categorize PJM eligible measures by PJM Program name and segregate EE resources into the applicable PJM delivery year.
   c. Determine the kW savings values for each measure for the PJM

defined summer and winter periods, based on assigned savings load shape, accounting for delivery channel, interactive factors and fuel.

d. Aggregate kW savings based on PJM Capacity performance kW values being the lesser of the summer or winter kW values by installation period, to maximize offers and allow for otherwise stranded resources to participate.
e. Recognize costs to participate vs anticipated revenues for selection of EE resources to be offered.
f. Recognize that EE resources have a limited offer duration of four years with additional installation period limitations.
g. Recognize that PJM Auctions have been delayed and some IA auctions cancelled, resulting in the potential for EE resources from some installation periods no longer being eligible for inclusion in auctions.

c) See the response to subpart a)

OEG Set 01-DR-004
Answer Prepared By: Brandon S. McMillen

Case No. 23-0301-EL-SSO
In the Matter of the Application of Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company for Authority to Provide for a Standard Service Offer Pursuant to R.C. § 4928.143 in the Form of an Electric Security Plan

RESPONSES TO THE OHIO ENERGY GROUP'S DATA REQUESTS

OEG Set 01-DR-004 For calendar years 2020, 2021, and 2022 identify the number of customers receiving service under the current Economic Load Response Program Rider ("Rider ELR").

Response: 24 customers.

OEG Set 01-DR-005
Answer Prepared By: Brandon S. McMillen
As to Objections: Trevor Alexander

Case No. 23-0301-EL-SSO
In the Matter of the Application of Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company for Authority to Provide for a Standard Service Offer Pursuant to R.C. § 4928.143 in the Form of an Electric Security Plan

RESPONSES TO THE OHIO ENERGY GROUP'S DATA REQUESTS

OEG Set 01-DR-005 For calendar years 2020, 2021, and 2022 identify the megawatts of interruptible load receiving service under the current Rider ELR.

Response: Objection. The request is vague and ambiguous in its use of the phrase "interruptible load". Subject to and without waiving the foregoing objections, and assuming "interruptible load" refers to "curtailable load" as defined in the Rider ELR tariffs, see the Companies' response to OCC Set 05-INT-006(b).

OEG Set 01-DR-006
Answer Prepared By: Brandon S. McMillen
As to Objections: Trevor Alexander

Case No. 23-0301-EL-SSO
In the Matter of the Application of Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company for Authority to Provide for a Standard Service Offer Pursuant to R.C. § 4928.143 in the Form of an Electric Security Plan

RESPONSES TO THE OHIO ENERGY GROUP'S DATA REQUESTS

OEG Set 01-DR-006 For calendar years 2020, 2021, and 2022 identify the number of interruptions and the duration of interruptions for customers receiving service under the current Rider ELR.

Response: Objection. The Request is overbroad and unduly burdensome in requesting the duration of each and every interruption for every customer receiving service under the current Rider ELR. The request is also vague and ambiguous in its use of the term "interruptions." The Companies interpret this request as seeking information regarding the number of Emergency Curtailable Events, including test events, as defined in the Rider ELR tariffs, as well as the duration of each such event. Subject to and without waiving the foregoing objections, see the Companies' response to OCC Set 05-INT-006(e).

OEG Set 01-DR-007
Answer Prepared By: Juliette Lawless
As to Objections: Trevor Alexander

Case No. 23-0301-EL-SSO
In the Matter of the Application of Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company for Authority to Provide for a Standard Service Offer Pursuant to R.C. § 4928.143 in the Form of an Electric Security Plan

RESPONSES TO THE OHIO ENERGY GROUP'S DATA REQUESTS

OEG Set 01-DR-007 Please provide, in Excel, a workpaper supporting the most recently developed allocation of ATSI network integrated transmission costs to each ATSI wholesale customer, including FE (as an LSE), municipals, cooperatives, etc. Please show the following:

a. The date and time of the ATSI NSPL.

b. Each wholesale customer's NSPL.

c. The name and state of the wholesale customer.

d. Date and time of each of the 4 CPs used in the calculation of the Customer NSPL based on 5CPs.

Response:

Objection. This request is vague and ambiguous in its use of the term "FE." This Request seeks information that is not relevant and not reasonably calculated to lead to the discovery of admissible evidence. The Request is overbroad and unduly burdensome in requesting information regarding the allocation to each ATSI wholesale customer. This Request seeks information in the possession of ATSI rather than information in the possession of the Companies. In addition, this request seeks confidential ATSI wholesale customer information. Subject to and without waiving the foregoing objections:

a. June 15, 2022, hour ending 1600 EPT.

b. Please see the table below for a breakdown of the NSPL in the ATSI zone:

CE	3,928.5	MW
OE	4,776.7	MW
TE	1,994.1	MW
OH Wholesale	922.2	MW
Penn Power	894.3	MW
Other *	255.3	MW
Total	12,771.1	MW

*Reflects the difference between the total, calculated NSPL and the ATSI zonal target, including NSPLs corresponding with customer move-in dates after the highest peak loads occurred in 2022, and the scaling factor assigned by PJM to tie the aggregate NSPL to ATSI's zonal target.

c. Please see the Companies' response to subpart b.

d. The ATSI summer peak hours were as follows: 6/15/2022 hour ending 1500, 7/20/2022 hour ending 1500, 8/3/2022 hour ending 1900, and 9/2/2022 hour ending 1700.

OEG Set 01-DR-008
Answer Prepared By: Edward B. Stein
As to Objections: Trevor Alexander

Case No. 23-0301-EL-SSO
In the Matter of the Application of Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company for Authority to Provide for a Standard Service Offer Pursuant to R.C. § 4928.143 in the Form of an Electric Security Plan

RESPONSES TO THE OHIO ENERGY GROUP'S DATA REQUESTS

OEG Set 01-DR-008 Please explain how the FE LSE NITS costs are allocated to each FE OPCo (OE, TE, CE). In particular state whether the OPCo allocation is based on the OPCo's 1 CP NSPL or the summation of the OPCo's 5 CP customer NSPLs for its customers. Also state whether the OPCo allocation includes the load of the OPCo's Pilot customers.

Response: Objection. This Request is vague and ambiguous in its use of the term "OPCo's Pilot customers." The Companies interpret this request as seeking information regarding the current Rider NMB Pilot program. Subject to and without waiving the foregoing objections:

NITS costs are allocated to each FE Ohio operating company (OE, CE, TE) by summing the NSPLs of all customers operating under that operating company multiplied by the NITS rate of the ATSI Zone.

With respect to the basis of the OPCO allocation, the assignment of NSPLs to individual customers follows the 5 CP method described in the Companies' capacity manual titled "Determination of Capacity Peak Load Contributions and Network Service Peak Loads," which is available at: PJMCapacityManualOH.pdf (firstenergycorp.com).

Regarding whether the OPCo allocation includes the load of the NMB Pilot customers, the OpCo allocations always include the Pilot customers' NSPLs.

OEG Set 01-DR-009
Answer Prepared By: Juliette Lawless

Case No. 23-0301-EL-SSO
In the Matter of the Application of Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company for Authority to Provide for a Standard Service Offer Pursuant to R.C. § 4928.143 in the Form of an Electric Security Plan

<u>RESPONSES TO THE OHIO ENERGY GROUP'S DATA REQUESTS</u>

OEG Set 01-DR-009 Please confirm that each customer in classes GS, GP, GSU and GT has a Customer NSPL which represents their allocated share of the FE NSPL.

Response: The Companies confirm that each customer on rate schedules GS, GP, GSU and GT has a customer NSPL that represents their individual contribution to the system-wide aggregate NSPL.

OEG Set 01-DR-012
Answer Prepared By: Juliette Lawless
As to Objections: Trevor Alexander

Case No. 23-0301-EL-SSO
In the Matter of the Application of Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company for Authority to Provide for a Standard Service Offer Pursuant to R.C. § 4928.143 in the Form of an Electric Security Plan

RESPONSES TO THE OHIO ENERGY GROUP'S DATA REQUESTS

OEG Set 01-DR-012 Please confirm that, to the best of the Company's understanding of the Exeter Audit Report, the Exeter analysis did not include any potential savings to ATSI revenue requirements due to a reduction in the RTEP and PJM administrative charges that were made possible by Pilot customer load reductions. If the Company is unable to confirm or deny, please explain why.

Response: Objection. This Request is vague and ambiguous in its use of the phrases "Exeter Audit Report" and "any potential savings to ATSI revenue requirements due to a reduction in the RTEP and PJM administrative charges that were made possible by Pilot customer load reductions." The Companies assume "Exeter Audit Report" means the Exeter Audit Report filed on 7/17/2023 in Case No. 22-0391-EL-RDR. However, it is not clear to the Companies what "potential savings" the request is referencing. Subject to and without waiving the foregoing objection, the Companies cannot provide the requested confirmation. The Exeter Audit Report does identify estimated savings from the Rider NMB Pilot. See page 3 of the Exeter Audit Report: "[…], the Pilot provided approximately $8.9 million in total benefit over the 7-year assessment period, or approximately $1.3 million per year."

OEG Set 01-DR-013
Answer Prepared By: Ed Stein
As to Objections: Trevor Alexander

Case No. 23-0301-EL-SSO
In the Matter of the Application of Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company for Authority to Provide for a Standard Service Offer Pursuant to R.C. § 4928.143 in the Form of an Electric Security Plan

RESPONSES TO THE OHIO ENERGY GROUP'S DATA REQUESTS

OEG Set 01-DR-013 Please identify each PJM allocated charge to ATSI that would potentially be reduced if Pilot customers reduced their NSPLs.

Response: Objection. This Request is vague and ambiguous in its use of the terms "reduced" and "Pilot." The Companies interpret this request as seeking information regarding the current Rider NMB Pilot program. This Request also seeks information that is irrelevant and is not reasonably calculated to lead to the discovery of admissible evidence. Subject to and without waiving the foregoing objections, the charges at PJM that utilize NSPL as a billing determinant include NITS, TEC, TEC Settlement, Reactive, Black Start and Non-Firm Credits.

PUCO DR-006

Case No. 23-0301-EL-SSO
In the Matter of the Application of Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company for Authority to Provide for a Standard Service Offer Pursuant to R.C. § 4928.143 in the Form of an Electric Security Plan

RESPONSES TO THE PUBLIC UTILITIES COMMISSION OF OHIO'S DATA REQUESTS

PUCO DR-006

1. Regarding the Economic Load Reduction (ELR) program:
   a. For each year since the start of ESP IV, what is the total amount of credits paid to ELR participants (including credits under Rider EDR and Rider DSE)?
   b. What is the total curtailable load for current ELR participants?
   c. Identify all current ELR participants.
   d. State the curtailable load for each current ELR participant.
   e. For each year since the start of ESP IV, identify all ELR participants and the amount of annual credits received by each participant (under each of Rider EDR and Rider DSE).
   f. For each current ELR participant, to the extent known by the Companies, state whether the participant is a member of Ohio Energy Group, Ohio Energy Leadership Council (formerly Industrial Energy Users-Ohio), Ohio Manufacturers' Association, or none of the above.
   g. Since the beginning of ESP IV, how many times have the Companies called on ELR participants to interrupt each year?
   h. Page 6 of the Testimony of Edward Stein states: "To date, the Companies have not called a load interruption event on their distribution system independent of PJM under the provisions of Rider ELR during the term of ESP IV."
      i. Did the Companies call any load interruption events on their distribution system independent of PJM under the provisions of Rider ELR prior to the start of ESP IV?
      ii. If so, how many times, under what circumstances, and on what dates?
   i. Page 14 of the Testimony of Brandon McMillen states: "Over the term of ESP IV, average annual PJM revenue offsets for Rider ELR resources credited to customers were approximately $2 million." Please provide the exact amount of credits for each year of ESP IV.

Response:

a. See PUCO DR-006 Attachment 1.
b. See PUCO DR-006 Attachment 2 Confidential.
c. See PUCO DR-006 Attachment 2 Confidential.
d. See PUCO DR-006 Attachment 2 Confidential.

e. See PUCO DR-006 Attachment 2 Confidential for the credits ELR customers received through Riders ELR and EDR(b) for the period February 2019 through May 2023. The Companies are working on locating information prior to February 2019..

f. The Companies' latest records of the membership of Rider ELR customers in the referenced customer groups are provided in PUCO DR-006 Attachment 2 Confidential. Membership may change without notification to the Companies.

g. See the following table:

June 16 - May 17*	June 17 - May 18*	June 18 - May 19*	June 19 - May 20**	June 20 - May 21*	June 21 - May 22*	June 22 - May 23
1	1	1	0	1	1	1

* PJM Test Event
**For PJM year 2019/2020, the Companies received waivers of the Rider ELR testing requirements due to COVID-19 implications. See Case No. 20-1025-EL-WVR

h.

i. Yes

ii.

1/19/1994
6/25/1998
6/26/1998
8/15/2003
8/20/2003
8/21/2003
8/1/2006
8/2/2006
7/22/2011

i. See the following table for the 80% of the PJM revenues received by the Companies that were credited to customers in Rider DSE1, pursuant to the PUCO Entry on Rehearing dated July 17, 2013 in Case No. 12-2190-EL-POR, and continued pursuant to the PUCO Order dated November 21, 2017 in Case No. 16-743-EL-POR:

June 16 - May 17	June 17 - May 18	June 18 - May 19	June 19 - May 20	June 20 - May 21	June 21 - May 22	June 22 - May 23
$ 75,251	$ 1,969,546	$ 1,365,170	$ 3,557,180	$ 2,066,337	$ 3,091,897	$ 5,324,066

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing was served upon the following parties of record or as a courtesy, via electronic mail on October 23, 2023.

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