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BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO

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In the Matter of the Commission's Review of)
Time-Differentiated and Dynamic Pricing) Case No. 12-150-EL-COI
Options for Retail Electric Services)

COMMENTS OF NUCOR STEEL MARION, INC.

Nucor Steel Marion, Inc. ("Nucor") welcomes the opportunity to comment on the range of time-differentiated and dynamic pricing options that should be made available to consumers, consistent with state policy, and how the Commission might encourage the broad and widespread availability of such options. Nucor submits the following comments on this important subject.

Nucor Steel Marion is a large interruptible customer of Ohio Edison and a subsidiary of Nucor Corporation, the largest producer of steel and largest recycler in the United States. Nucor recycles scrap steel with electric arc furnaces -- although this process saves substantial amounts of energy as compared with making steel from iron, melting steel scrap is still very electricity-intensive. As a result, low cost electric service is critical to Nucor's ability to compete in the national and international steel markets.

With numerous facilities nationwide, Nucor has considerable experience with the development of and response to time-differentiated and other related rate designs, in both regulated and competitive power markets. It should be noted that while these comments

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primarily represent the perspective of a large industrial consumer, we believe that all customers can benefit from time-of-use concepts, and that encouraging widespread comprehensive time-of-use options available to all consumers is in the public interest.

I. INTRODUCTION

In this proceeding, the Commission has highlighted the development and implementation of rate options that reflect time-varying prices in the wholesale electricity market, as well as other types of variable rate designs.¹ Nucor has long advocated cost allocation and rate design that sends proper price signals to customers, recognizes class cost differences, and encourages efficient use of energy, and has specifically supported the development of time-of-use, interruptible, and real-time pricing options, both in Ohio and nationwide. We believe that these options must be offered by electric distribution utilities ("EDUs"), both for the benefit of those customers who obtain generation service from EDUs, as well as for those who choose competitive retail electric service ("CRES") supply, so that CRES providers will also be encouraged to offer such options. Better price signals will lead to more efficient economic behavior by consumers, which is in the public interest.

We appreciate the fact that the Commission has supported time-of-use rate design concepts in recent years. For example, in 2008, the Commission set the bar stating that time-of-day rates "recognize that some customers have a higher proportion of usage in lower-cost, off-peak periods," and determined that such rates advance the state's policy objectives as set forth in Section 4928.02 of the Revised Code, and should be included in standard service offer

¹ *In the Matter of the Commission's Review of Time-Differentiated and Dynamic Pricing Options for Retail Electric Services*, Entry at 1 (January 11, 2012) ("Entry").

rate designs by EDUs.² As an Ohio Edison customer, we are most familiar with FirstEnergy's standard service offer ("SSO") rates. In the case of FirstEnergy, the Commission approved continued interruptible rates and required the future development of time-of-day rates in FirstEnergy's first approved electric service plan ("ESP"). Subsequently, in 2010, the Commission approved time-of-day, critical peak pricing, and real-time pricing rates schedules for FirstEnergy.³ These rates, along with interruptible rate options, now continue as part of FirstEnergy's current ESP. Nucor has availed itself of the opportunity to participate in both the time-of-use generation supply and interruptible rate options from Ohio Edison and strongly supports the continued offering of such options.

Given that some Ohio EDUs have already implemented time-differentiated rates and other forms of variable rates, the Commission does not start with a blank slate in this proceeding. At a minimum, the Commission should ensure that existing time-variable rates (such as those offered by FirstEnergy) remain in place and available as options to customers, and make sure that all EDUs offer such options. At the same time, the Commission can use this proceeding to explore further improvements to existing rate designs and new rate designs that will provide the greatest potential benefits to Ohio customers. While the concepts can be explored and further developed in this proceeding, we should note that we believe that specific rate designs should continue to be developed in EDU-specific proceedings, where rates can be

² *In the Matter of the Application of Ohio Edison Company, the Cleveland Electric Illuminating Company, and The Toledo Edison Company for Approval of a Market Rate Offer to Conduct a Competitive Bidding Process for Standard Service Offer Electric Generation Supply, Accounting Modifications Associated with Reconciliation Mechanism, and Tariffs for Generation Service*, Case No. 08-936-EL-SSO, Opinion and Order at 24 (November 25, 2008).

³ *In the Matter of the Application of Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company for Approval of an Experimental Critical Peak Pricing Rider, a Revised Generation Service Rider Which Includes a Time-of-Day Option, and an Experimental Real Time Pricing Rider*, Case No. 09-541-EL-ATA, Finding and Order (January 20, 2010).

tailored to the unique circumstances and needs of the particular utility and its customers. We also strongly recommend as a matter of policy that more complex rate designs (like real-time pricing) not be made mandatory for any particular customer class or group of customers.

In the comments below, Nucor responds to some, but not all, of the specific questions the Commission posed in the Entry.

II. COMMENTS

Question 6(a): Should EDUs offer consumers with advanced or interval meters time-differentiated or dynamic retail rates to ensure that such options are available to such consumers? In addition to or in conjunction with Commission-approved time of use programs, should such choices include dynamic pricing options that reflect time varying PJM Interconnection, LLC (PJM) market prices?

Nucor strongly supports making time-differentiated rate options (such as time-of-use rates) and dynamic pricing (such as real-time pricing), available to all customers. Rates that incorporate some time variation do a better job of aligning cost recovery with cost causation than average cost rates, send more accurate price signals, and advance the state's policy goals of encouraging conservation and a more efficient use of the electric system.

In the absence of these types of rates, consumers lack a price signal that reflects variation in the cost of electricity, even though the cost to produce electricity varies significantly by season and time-of-day. For example, in Ohio, the cost of producing electricity is typically higher in the summer than it is in the winter. Similarly, it is typically more expensive to produce electricity in the on-peak summer hours of the day than in the off-peak hours. Average cost pricing simply does not capture these cost differences, and therefore leads consumers to make inefficient consumption decisions. Average cost pricing is also punitive to higher load factor customers and customer classes, since these customers tend to operate at a

more constant level across all hours of the day, as opposed to lower load factor customers who typically consume electricity primarily in the on-peak hours, when electricity is most expensive to produce.

By contrast, time-differentiated and dynamic rates, if properly designed, can more accurately reflect the true cost of electricity over particular time periods, and provide customers price signals to shift consumption from higher-cost hours to lower-cost hours. Since such rates align cost causation and cost recovery better than average cost rates, the rates have the potential to reduce electricity costs for all customers. For example, several Ohio EDUs employ competitive bidding processes to acquire generation supply to serve their SSO load. Suppliers that bid into these auctions for an EDU that has time-differentiated and dynamic rates are able to offer a lower price than if the EDU used only average cost rates to recover its energy costs from its retail customers, by projecting how customers subject to such rates will respond to higher seasonal and/or on-peak price signals.

There are many different types of time-variable rates, but in our view a fixed time-of-use rate design is the easiest to implement, and probably the most attractive for the most customers. Time-of-use rates should be seasonally differentiated, and further differentiated based on time-of-day. Since these rates are fixed ahead of time, the customer has a precise price signal and can better plan its usage and operations since the customer knows what the price will be in a given time period. Fixed time-of-use rates are a middle road between average cost rates (since the rates are averaged within the defined time periods), and real-time or dynamic pricing options. They provide price signals and cost variation, but they are not as precise and not as volatile as real-time rates that vary by the hour. In this way, time-of-day

rates are an ideal option for customers who can respond to price signals, but are unwilling to be subject to the volatility of real-time pricing.

While real-time pricing might only be attractive to a smaller group of customers, these rates can provide many of the same benefits as time-of-use rates, and should be an option for customers who are interested in receiving an even more granular price signal than that provided under time-of-use rates. Real-time pricing should reflect the hourly prices in the applicable wholesale market (e.g., PJM). For these rates to be effective, it is important that the rate design dilute these wholesale price signals as little as possible.

As a matter of principle, EDUs should offer real-time pricing as an option to all customers with adequate metering. However, real-time pricing should not be the “default” pricing option, and the Commission should not *require* any particular group of customers to take service under dynamic or real-time pricing. In other words, real-time and dynamic pricing should be available on an “opt-in” basis. The customer should be the one to decide whether such pricing is compatible with its energy usage patterns and operations.

In summary, Nucor supports making time-differentiated and dynamic rate options widely available.

Question 6(b): Should EDUs offer consumers with advanced or interval meters two-part dynamic pricing, such that the offer provides a dynamic price signal and a hedging or insurance component that addresses consumer risk aversion?

Dynamic pricing is volatile and may be unattractive to a large number of customers. An insurance component option could alleviate some of the volatility and price spike exposure inherent in dynamic pricing, thereby making this type of rate more palatable for customers. For example, one option would be to allow the customer to split its load between a component to

be priced under standard time-of-use rates and a component that is priced on a dynamic or real-time basis.

Of course, the Commission needs to balance the potential advantages of dynamic pricing with an insurance component against the added complexity of such a rate structure. This rate option might be a good candidate for approval on an experimental basis or for a field test, as the Commission suggests in its Entry. As discussed above, however, before embarking on such a hybrid rate design, the first step to providing better price signals to customers, while at the same time addressing the risk aversion many customers might feel with regard to dynamic pricing, is to also have good fixed time-of-use rate options, which are easy to design and implement, and are easy for customers to understand.

Question 6(c): Are there specific forms of dynamic or time-differentiated pricing which should be offered to different groups or classes of consumers who have the requisite metering?

As noted above, as a customer of Ohio Edison, Nucor is most familiar with FirstEnergy's rates. We believe that FirstEnergy already offers a basic menu of time-differentiated and dynamic rate options that can serve as a good starting place for the discussion. These rate options should be available to all customers who have the necessary metering (or could acquire the necessary metering) to take advantage of them.

FirstEnergy offers both time-of-use and dynamic energy pricing. Under FirstEnergy's Rider GEN, the energy costs for all customers are seasonally differentiated, producing higher prices for the summer months and lower prices for the winter months (thus some time-differentiation is embedded even in the standard generation rate). Customers have the option of paying an average summer rate and an average winter rate, or they can select a fixed time-

of-day pricing option that further differentiates the seasonal rates on a daily basis. The time-of-day rate option provides different rates for the daily on-peak, off-peak, and shoulder-peak periods. The rates reflect the cost differentials (based on hourly wholesale market prices) for producing electricity in the various time periods. Therefore, in the summer months, the daily on-peak price is the highest of the three daily rates (since it is most expensive to produce electricity in the peak hours of the summer), while the rate is highest in the shoulder-peak periods during the winter months.

In addition to the time-of-day pricing option under Rider GEN, FirstEnergy also offers a real-time pricing rate (Rider RTP), which bills customers based on the hourly day-ahead PJM Locational Marginal Price, along with a fixed charge component. FirstEnergy also offers a critical peak pricing option (Rider CPP). This rate offering resembles the time-of-use pricing option under Rider GEN, but it allows FirstEnergy to dramatically increase the summer on-peak price in a limited number of hours, enabling FirstEnergy to provide an even stronger price signal than provided under the standard time-of-day rate for customers to curtail usage in the very highest cost hours of the summer.⁴

While Nucor supports the continuation of FirstEnergy's time-differentiated and dynamic pricing options, in the future, the Commission should encourage all Ohio EDUs to experiment with rates that could provide even stronger, more granular price signals for customers. For example, in developing a time-of-use rate, an EDU could seasonally differentiate the rate based on three seasonal periods (summer, winter, and shoulder months) instead of just two.

⁴ While Nucor supports real-time pricing and critical peak pricing options in concept, we are unfamiliar with how these specific FirstEnergy rate options have been developed and operated in practice, since they are not available to Nucor (as an interruptible customer), and therefore we are not offering specific comments on the specific details of these rate offerings at this time.

Similarly, time-of-day rates could be broken down into even more time periods – for example, the on-peak rate could be further differentiated into a normal on-peak rate and a “super peak” rate. All of these approaches would encourage customers to modify their usage when possible to take advantage of lower rates in the off-peak periods, and to limit their usage when possible in high-cost periods.

Finally, although most of our discussion in these comments addresses time-varying energy rates, it should also be noted that time-of-use principles apply with respect to capacity and other demand-related costs as well. As a first step, allocating generation and transmission capacity costs among customer classes based on coincident peak demand recognizes time-of-use characteristics of the customer classes in cost allocation, which is ultimately reflected in rates. However, to ensure that the price signal reaches the customer, EDUs could go a step further and recover these capacity costs based on the customer’s demand at the time of the system peak demand (*i.e.*, bill based on “coincident” demand, as opposed to the customer’s “non-coincident” demand), or, at a minimum, bill customers for these costs based on their peak demand or usage in a reasonably narrow on-peak period. Under this approach, the customer would only be charged for demand-related costs in the on-peak hour(s), but would be able to operate in off-peak hours without concern about incurring additional demand-related costs over and above those incurred in the on-peak period. These types of demand billing options would be consistent with cost causation (since generation and transmission infrastructure is generally built to meet peak demand, not off-peak demand), and would provide an additional strong price signal to shift usage from on-peak to off-peak periods to complement time-

differentiated and dynamic energy pricing options. The Commission should encourage EDUs to explore these approaches to time-of-use capacity and demand-related pricing.

Question 6(d): Should the Commission support well designed field tests by EDUs and/or CRES providers of additional time-differentiated or dynamic pricing options and various approaches to and combinations of consumer education, targeted messaging, information feedback, and/or enabling technology to better assess what options may work best for consumers and have the greatest beneficial impacts?

As noted above, field testing might be appropriate for certain types of new and untested pricing options, such as dynamic pricing with an insurance component. However, other pricing options, such as time-of-use rates, are fairly common throughout the industry, and are generally easy for the utility to implement and for the customer to understand. Field testing should not be required for these types of rate options.

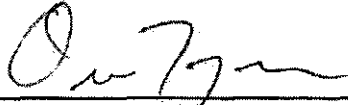
Question 6(f): Should EDUs and/or CRES providers develop and implement a plan to better inform eligible consumers regarding time-differentiated and dynamic pricing options? If so, what should such plans include?

EDUs and CRES providers should inform consumers about the availability of time-differentiated rate and dynamic pricing options. Information relayed to consumers should explain how the rates work and the benefits that the rates will provide to the customer and to the system. Informed customers are more likely to participate on these rates, and generally speaking the more customers that participate on the rates, the more benefits will be realized on a system-wide basis.

III. CONCLUSION

Nucor respectfully requests the Commission to consider the comments and recommendations contained herein as the Commission continues its examination of time-differentiated and related pricing options in this proceeding.

Respectfully submitted,



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CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing pleading was served, via U.S. Mail postage prepaid, express mail, hand delivery or electronic transmission on the 11th day of April, 2012 upon the following parties of record or as a courtesy:

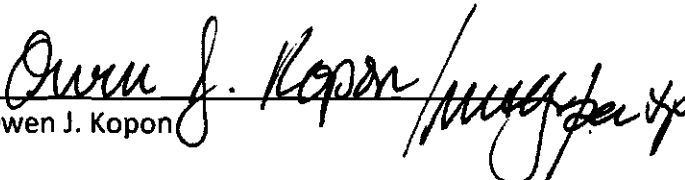
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