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BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of Aligning Electric Distribution Utility Rate Structure With Ohio's Public Policies to Promote Competition, Energy Efficiency and Distributed Generation.	)	Case No. 10-3126-EL-UNC

COMMENTS BY THE OHIO CONSUMER AND ENVIRONMENTAL ADVOCATES

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I. INTRODUCTION

On December 29, 2010, The Public Utilities Commission of Ohio ("PUCO" or "Commission") issued an Entry initiating a process to review whether modifications to the structure of Ohio's electric distribution utilities' rates would help align utility performance with specific public policy objectives in Ohio. In this entry, the PUCO defines the "throughput incentive" (the incentive of a utility between rate cases to sell more energy than that assumed in the rate setting process), describes policies (and Ohio's current efforts) to remove or mitigate the throughput incentive, asks a series of discussion questions, and provides a list of data that may be used to review the various policies suggested by the Commission, all of which could have significant impacts on Ohio customers as described in these comments. The Commission also seeks answers to the discussion questions as well as comments on whether the requested data is comprehensive and appropriate.

Because changes to distribution rate design are being proposed not as ends in themselves, but to further Ohio's public policy objectives (which are intended to benefit

Ohioans), the Ohio Consumer and Environmental Advocates ("OCEA")[1] first reviews Ohio's desired public policy outcomes and suggests metrics for measuring utility performance toward achieving these outcomes once a change is made to distribution rate design. To provide context for answering the discussion questions, OCEA reviews how various potential changes to rate structure would likely affect Ohio's achievement of its desired public policy outcomes. In Section III, OCEA then answers the questions posed in Appendix A of the PUCO Entry.

OCEA supports removing the throughput incentive. Experience throughout the United States shows that substantial investment in cost effective energy efficiency depends not only on elimination of the throughput incentive, but also on incentives for effective efficiency programs, timely and complete cost recovery for energy efficiency programs, strong oversight ensuring good program design and fiscal prudence on the part of the utilities, and consistent regulatory attention to the evolution of these activities over time.

II. OHIO'S DESIRED PUBLIC POLICY OUTCOMES AND SUGGESTED METRICS TO MEASURE PROGRESS.

A. Decreased Use of Fossil Fuel-Based Energy

Ohio Revised Code Sections 4928.02(D), (J) and (M), 4928.64 and 4928.66 address concerns with the state's continued (and potentially growing) reliance on fossil fuel-based energy. Whether Ohio residents and businesses use fossil fuels directly to power oil and natural gas-fueled equipment and gasoline-powered vehicles, or indirectly

[1] Ohio Consumers' Counsel, Ohio Environmental Council, The Citizens' Coalition (Neighborhood Environmental Coalition, Consumers for Fair Utility Rates, United Clevelanders Against Poverty and The Empowerment Center of Greater Cleveland), Natural Resources Defense Council, Sierra Club, Ohio Poverty Law Center and Citizen Power.

by using electricity generated by burning these fuels, the use of fossil fuel is increasingly problematic. Environmentally, the reliance on fossil fuels makes reaching clean air goals difficult, harms health, and exacerbates the consequences of greenhouse gas pollution, whether in the form of climate change effects or the costs of compliance with national commitments to decrease such pollution. Economically, reliance on fossil fuels exposes Ohio to cost and supply volatility, a concern that will only intensify in the coming decade as economic growth puts increasing pressure on the supplies of these fuels. Moreover, while indirect use of fossil fuels to make electricity may appear cheap in the near term because of the use of decades-old generating facilities, new fossil-fuel burning generating plants are much more costly. Ohio's commitments to alternative energy sources – such as energy efficiency, solar power and wind energy – mitigate these adverse effects by lessening reliance on fossil fuels over time.

1. Metrics

The Commission should monitor the use of fossil fuel-based energy over time. For simplicity, OCEA recommends the Commission limit its purview to the use of metered electricity and natural gas on a total, per capita and per household basis for individual applications, and per Ohio gross domestic product for organizational applications. In addition, the Commission should monitor the types of fuel sources used for electricity generation in order to determine the carbon impact.

B. Increased Use of Distributed Generation

R.C. 4928.02(C), (F), (K), (M) and, to some extent, R.C. 4928.64 reflect concerns with an electricity system in which the energy consumed by individuals and organizations comes primarily from distant sources. The long distance between generation and end use of electricity means, at minimum, customers must pay for a system to deliver the energy to where it is needed from where it was produced. Although the embedded costs of these delivery systems may appear low once built and depreciated, all such systems have a capacity limit beyond which the marginal cost is considerably higher. Furthermore, the long distance between energy production and consumption increases transmission line losses and weakens system resilience to natural disasters and the possibility of intentional attack.

1. Metrics

To measure progress toward Ohio's goal of increasing the use of environmentally-friendly distributed generation, the Commission must regularly monitor the following:

- The distance from generation and end use of electricity;
- The age and reliability of the electric infrastructure;
- The number, size, location, and performance of distributed resources, and;
- Electric system line losses.

C. Increased Energy Efficiency and Opportunities for Innovation in the Supply of Energy Services

The energy efficiency targets and the call for innovation found in R.C. 4928.66 and R.C. 4928.02(D) reflect the need and tremendous potential for efficiency and innovation in the provision of energy services to customers in Ohio.

1. Metrics

To adequately measure progress toward Ohio's goals of increased energy efficiency and innovation in the provision of energy services, the Commission must regularly monitor:

- Compliance with the energy efficiency benchmarks found in R.C. 4928.66;
- The ratio of base load to peak load over time;
- For individuals, the amount of electricity used per household, and per-capita energy use over time;
- For non-residential customers, the amount of electricity used per square foot; and,
- For Ohio as a whole, the energy intensity of the economy over time (energy used per unit of Gross State Product).

D. Reasonably Priced Electric Service

The cost of non-fossil fuel-based retail electric service is a longstanding concern and is expressed in R.C. 4928.02(A) and (L). Ohio does not want its residents, businesses or organizations to have to spend more than necessary to obtain the energy services needed to achieve desired outcomes. At-risk populations are especially vulnerable to higher energy costs.

The Commission seeks comment on the list of data found in Appendix B of the Entry which begins to address the cost of attaining service from energy. However, Appendix B is designed to determine the "overnight" impact of a rate design that places costs labeled 'fixed' into fixed charges. Rate designs must be firmly grounded in the user perspective. At the end of the month, a customer pays a *bill* based on *rates* and consumption.

1. Metrics

To measure progress toward Ohio's goal of ensuring reasonably priced electric service, the Commission must regularly monitor the bills paid by each utility's customers and the distribution of those bills within customer classes. In order to gain an accurate understanding of what customers are paying, to simply look at the average price for a given customer class is not sufficient. Within the residential sector, the Commission should look at bill distributions across the size of the residence, the number of people in the residence, and a statistic such as income as a proxy for the types and "quality" of other discretionary uses customers demand. For larger customer classes, the Commission must similarly look at bills within a group that allows useful comparisons of the energy service delivered per dollar spent within that group. For both residential and larger classes of customers, this bill data would assist in successfully meeting the energy performance goals discussed above.

III. ANSWERS TO QUESTIONS PRESENTED IN THE PUCO ENTRY

A. Distinctions between Natural Gas and Electric Utilities

Question 1: Are there fundamental operational distinctions between natural gas and electric utilities that must be considered in determining whether and how to eliminate or mitigate the throughput incentive in electric distribution rates?

Natural gas and electric utilities both distribute energy from a source – which may be a wellhead (gathering system), an electricity generator, or an adjacent network of transmission lines or pipelines – to homes, businesses and organizations. Despite these similarities, conclusions reached on how to best remove the throughput incentive in the natural gas industry cannot be mechanistically applied to the electric industry, because of operational distinctions between the two industries.

First, electricity consumption levels cause a much greater portion of electric system costs than is the case with natural gas. For example, increased electricity consumption can increase loading on the components of the distribution system, reducing reliability and shortening components' useful life. Demand growth will also require investment in new substations, transformers, and wires. Moreover, even though Ohio has partially deregulated the generation of electricity, increased demand will eventually require new generation. New generation will raise costs for everyone because the fixed costs of these new facilities will greatly exceed the embedded, largely depreciated, costs of old generating units.

Second, residential and commercial consumption of natural gas has declined on a per-capita basis over the past several decades due at least in part to increases in building shell and gas appliance efficiency.[2] While natural gas customers demand different levels of hot water and conditioned space, natural gas uses are largely non-discretionary. In contrast, in the electric industry, some customers are able to make choices about what electronic devices they use and how and when they use them. Partially to respond to growing electricity use from discretionary uses, electric utilities nationwide will make trillions of dollars in investment to meet generation and distribution needs of future consumer demand in the coming decades. Once these investments occur, the opportunity to avoid them is gone, regardless whether customers subsequently change their investment and use behavior or whether other changes cause the anticipated demand increase to evaporate. Ohio can avoid these expensive investments in the electric system now by implementing energy efficiency.

[2] See the U.S. EIA Monthly Energy Reports, www.eia.gov

Question 2: Are there factual or policy considerations that suggest electric distribution rate design should be constructed differently from natural gas?

Yes. First, the amount of short-term fixed costs per customer is higher for customers of an electric distribution utility than for natural gas utility customers.[3] If a straight fixed-variable ("SFV") rate design is implemented by Ohio's electric utilities, electric customers will see a much larger absolute increase in the fixed portion of their bills than experienced by gas customers when SFV was implemented by Ohio's natural gas utilities. The implementation of an SFV rate design for Ohio's electric utilities would require a radical increase in fixed per-customer charges and would have negative effects on those customers who use little electricity or have already made investments to become more efficient or use less grid-provided electricity. Low to medium income customers among Ohio's electric customers would be immediately and negatively affected to a greater degree by the increase in the customer charge that would accompany an SFV rate design than Ohio's natural gas customers.[4] A family that already has difficulty paying utility bills will struggle even more.

Second, adopting an SFV rate design would undermine existing investments in energy efficiency and renewable energy and reduce the rewards of further investment. One of Ohio's important policies relevant to this topic is the encouragement of distributed generation.[5] Investments in small distributed generation equipment are often

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[3] In contrast, the natural gas system is in a pretty stable and stagnant capital equipment situation now, not likely to see any significant additional capital costs driven by consumption growth.

[4] See Direct Testimony of Roger D. Colton in Case No. 07-1080-GA-AIR at 25, July 23, 2008.

[5] R.C. 4928.02(C) states that "It is the policy of this state to do the following throughout this state: [...] Ensure diversity of electricity supplies and suppliers, by giving consumers effective choices over the selection of those supplies and suppliers and by encouraging the development of distributed and small generation facilities...." 4928.02(K) notes that it is state policy to "encourage implementation of distributed generation across customer classes...."

larger than investments in gas efficiency measures.[6] A significantly reduced variable charge and correspondingly increased customer charge would drastically increase the payback period for these investments. Implementing an SFV mechanism would discourage investment in distributed generation by the customer classes assigned to this type of rate design and could potentially create backlash from those customers who have already invested in distributed generation in Ohio.

Third, given Ohio's reliance on coal to generate electricity[7], adopting a rate design that encourages consumption of electricity has more severe environmental consequences than one that encourages consumption of natural gas. The burning of natural gas to power end-use appliances is more efficient and emits fewer greenhouse gases, sulfur dioxide, smog precursors, and hazardous air pollutants than burning coal in a power plant and distributing it over the electric grid. The Commission should not send an "all you can eat" price signal to users of coal-based electricity, even if only on the distribution portion of the bill.

Fourth, the bundled price of natural gas service has experienced sharp price volatility over the past two decades, making customers more aware of their level of natural gas consumption. In comparison, bundled electricity prices have been comparatively stable in Ohio over the same time frame. Higher fixed charges would make any customer inattention problem worse.

[6] For example, the average residential Photovoltaic Solar Array costs approximately $35,000 (http://solarpowerauthority.com/how-much-does-it-cost-to-install-solar-on-an-average-us-house/) where a comprehensive home retrofit for gas customers costs approximately $3,000 (http://www.kaca.org/WhatWeDo/EnergyAssistance/Weatherization/tabid/356/Default.aspx). However, these costs will vary based on individual application circumstances.

[7] Coal typically fuels close to 9/10 of net electricity generation in Ohio. (http://www.eia.gov/cfapps/state/state_energy_profiles.cfm?sid=OH#Datum).

Fifth, SFV essentially averages costs compared to current recovery. For residential natural gas customers, an individual customer's consumption makes little difference to the average cost per customer. By contrast, a group of residential electric customers who use a lot of power can impose large costs on other customers who use less by creating new capacity needs, forcing pollution controls instead of retirement on an older generation unit, and requiring distribution grid upgrades.

Moreover, adopting an SFV rate design would present considerable challenges from a customer education standpoint. The Commission Entry initiates a formal discussion on policies which promote the efficient use of energy and demand response programs. However, implementation of SFV sends a mixed price signal contrary to these goals. On one hand, the increased fixed charge of an SFV rate design tells electric customers that there is little incremental cost to higher usage because they will pay the same amount for distribution service resulting in longer payback periods for their energy efficiency investments. On the other hand, utilities are rolling out smart grid and rate design programs which reward or penalize customers based on usage. Even the most seasoned public relations expert would be challenged on how to simultaneously convey these contradictory messages on how consumption levels affect price to customers.

B. Consideration of Different Types of Revenue Recovery Structures

Question 3: If the Commission adopts a decoupling rate design, which rate design should it use: SFV, decoupling adjustment, lost revenue recovery adjustment, or some combination of these?

Comprehensive energy efficiency program portfolios[8] are the quid pro quo for providing a mechanism that assures full recovery of the electric utility's revenue requirements. The PUCO should mitigate the throughput incentive and manage revenue erosion from energy efficiency programs by decoupling sales volumes from recovery of fixed costs using a rate adjustment mechanism that includes adequate consumer protections. A decoupling adjustment ("decoupling") removes the incentive of the utility to increase sales between rate cases while allowing customers to continue seeing the rewards of investing in energy efficiency and distributed generation.

To comprehensively address the Commission's question, OCEA defines each rate design the Commission has listed in its Entry and describes the expected impact of each rate design on Ohio's policy objectives as well as the expected impacts on the utility and customers. Considering these definitions and the expected impacts of the various rate designs, OCEA concludes that a decoupling adjustment mechanism, including sufficient customer protections as outlined below, is preferable to the other alternatives.[9]

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[8] As required by R.C. 4928.66 (Senate Bill 221) or otherwise offered voluntarily by electric utilities.

[9] In the 2007 report, *Aligning Utility Incentives with Investments in Energy Efficiency*, the National Action Plan for Energy Efficiency ("NAPEE") evaluated decoupling adjustment mechanisms in comparison with SFV and lost revenue recovery rate designs. When compared across a broad spectrum of impacts on customers and on the utility, along with the rate design's ability to meet the goals of energy efficiency and distributed generation policies, a decoupling adjustment mechanism out-performs the other rate design options (www.epa.gov/eeactionplan). A table highlighting the impacts of the three separate rate designs' and abilities of each to meet specific goals is included as Attachment 1. For purposes of these comments, OCEA is not adopting the NAPEE document as a whole, but limits the reference to the point cited above and the Attached table.

Decoupling Through a Rate Adjustment Mechanism Combined with Essential Customer Protections is the Best Choice of the Three Named Revenue Recovery Mechanisms.

A decoupling mechanism adjusts rates on a periodic basis to ensure that a utility collects no more and no less than its Commission-authorized fixed cost revenue requirement. If consumption levels fall below those which were used to set rates and the utility fails to collect its revenue requirement, a decoupling mechanism would adjust rates upward to collect the difference from customers. Correspondingly, a decoupling mechanism would adjust rates downward in the event the utility over-collects its revenue requirement. Because the utility would return over-collection to customers, a decoupling mechanism removes the incentive of the utility to increase sales between rate cases. It is important to note that a decoupling mechanism does not actually change the existing rate design; rather, it adds an adjustment clause to bills.

When considered in conjunction with Ohio's desired public policy outcomes, decoupling with essential consumer protections would:

- Reduce the use of fossil fuel-based energy. Customers would still see a price signal rewarding them for decreased energy consumption. The throughput incentive would be removed and the utility would still be able to offer energy efficiency programs that would assist customers in reducing energy consumption as directed in R.C. 4928.66.

- Support the development of distributed generation. Customers would continue to see a price signal that rewards them for decreased energy consumption through the deployment of distributed generation and the utility would be assured collection of its fixed costs.

- Support innovation in the delivery of energy services. The utility would be free to explore other types of rate designs and market transformation activities without endangering collection of its Commission-authorized fixed costs of distribution service.

- Support the goal of energy affordability through the essential protections which cap annual rate adjustments.

Finally, unlike a Lost Revenue Adjustment Mechanism, a decoupling mechanism would not change the long-term cost of delivering energy services beyond allowing the utility to dramatically improve the efficiency with which customers use energy and perhaps lowering the utility's risk profile over time. Decoupling decreases the amount of time between the recovery of consumption-related deficient or excess fixed costs and rate adjustments, rather than changing the amount of costs that must be recovered. (In our responses to the questions below, OCEA will discuss the customer protections that must be included as part of a decoupling mechanism and upon which OCEA's support is contingent).

The Straight-Fixed Variable Rate Design Sends the Wrong Price Signal to Customers.

Straight fixed-variable rate designs place costs that the Commission determines to be fixed in the short-term into fixed charges. Proponents typically attempt to justify an SFV based on cost causation principles. For example, some argue that distribution equipment is sized for the maximum load possible. Thus, within a rate class, everyone should bear the same level of responsibility for the cost of distribution service. However, over the medium or long term, it is the amount of demand placed on the system that largely influences the need for investment in the distribution system.

With an SFV rate design, customers receive a price signal informing them that their consumption practices do not influence this medium and long-term need for costly distribution system investments. Although generation is partially deregulated in Ohio, added consumption influences the need for expensive new generation. The Commission must take into account the effect of any change in distribution rate design on the demand for expensive new generation.

When evaluated in conjunction with Ohio's desired public policy outcomes, SFV rate design would:

- Have an adverse effect on the objective of improving energy efficiency in Ohio as customers would be receiving an incorrect price signal telling them that their consumption level is less of a factor in determining the price of their service than the fact that they simply receive service. .
- Not decrease the use of fossil fuel-based energy. When using an SFV rate design, a larger portion of a customer's bill would not change according to consumption. Because the elasticity of electricity use is nonzero, customers will receive a price signal to increase their use of energy, the majority of which is fossil fuel-based in Ohio. This additional consumption would only be economically "efficient" in the short term, if at all. Customers who consume more will be placing more demands on the generation system where marginal costs are much higher than embedded costs. As mentioned above, over the medium or long term, the amount of demand on the distribution system influences investment in that system.
- Have a detrimental impact on the use of environmentally-friendly *distributed generation. A larger portion of customers' bills would* not change according to consumption under an SFV rate design. A customer who installs a photovoltaic solar system, for example, will see a smaller bill decrease than they would under the current rate design, and even more damaging, customers who have already invested in such distributed generation systems will see much of the benefits on which they based that investment disappear. Over the medium and long term, these customers' distributed generation systems will reduce the size and load characteristics of the local distribution network. An SFV rate design cannot recognize this.
- Decrease customers' investments in energy efficiency and prevent opportunities for innovation in the supply of energy services. An SFV rate design lengthens the payback time for energy efficiency investments, just as it does for the distributed generation systems discussed above. This lengthened payback will have an unfavorable effect on the development of the market for efficiency services in Ohio, such as home retrofits and HVAC upgrades. By reducing rewards for investment in cost effective energy

efficiency, an SFV rate design would conflict with Ohio's policy of supporting increased efficiency, as stated in R.C. 4928.66.

Further, an SFV rate design does not take into account that when all customers pay the same amount as a service fee, customers who use less distribution services subsidize customers who use more. This subsidy is inconsistent with public policy where the intent is to reward customers for using less energy as opposed to rewarding high-use customers for using more energy. Specifically, there is a correlation between income and usage as low-income customers cannot afford all the discretionary electric devices that a more affluent customer can. Shifting costs from high-use to low-use residential customers is equivalent to a regressive subsidy for increased electricity consumption.

There may be a concern that *not* implementing SFV sends a false price signal to customers; however, this is equivalent to contending that it is more economically efficient for customers to consume more. OCEA strongly disagrees. The rationale for additional and more successful energy efficiency programs rests partly on the conclusion that, even with today's electricity rate structures, extensive market failures continue to block energy savings that are much cheaper than additional electricity generation purchases. With the implementation of an SFV rate design, the Commission would exacerbate this situation by reducing customers' rewards for conserving electricity.

The implementation of an SFV rate design would make implementing various innovative rate designs[10] for variable pricing difficult or impossible. To continue having the same impact on the utility as intended – stabilization of revenues – an SFV rate design must remain in effect once implemented. Experimental rate designs that include

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[10] R.C.4928.02(D).

distribution costs would no longer be possible in Ohio. Such rate designs could include, for example:

- A totally variable rate offering, combined with various control technologies and information systems; and
- A demand-based rate available only after certification that the structure and equipment meet certain (high) thresholds for energy performance akin to the "good driver" policies common in auto insurance.[11]

Thus, locking Ohio into an SFV rate design could have the unintended consequence of making innovation in variable pricing even more difficult to implement than under current conditions.

The Commission must also consider the experiences of other states while contemplating a change in rate design. In the natural gas industry, decoupling through a rate adjustment mechanism and SFV rate designs are both used to remove the throughput incentive. Currently, 22 states have adopted decoupling through a rate adjustment mechanism for at least one natural gas utility, while 8 states have adopted an SFV rate design for at least one natural gas utility.[12] In the electric industry, 15 states have adopted decoupling through a rate adjustment mechanism for at least one electric utility or as a state policy. Only one state – Mississippi – has adopted SFV pricing for an electric utility.

The states currently leading the nation in efficiency investment – and Ohio will soon be among these leaders – overwhelmingly use decoupling over Lost Revenue Adjustment Mechanisms or SFV rate designs to support this investment. Of the 10 U.S.

[11] In these comments, OCEA is not taking a position on the examples of innovative rate design. These are presented for illustrative purposes only.

[12] See Table 4, Page 40, Mark Lowry, Revenue Decoupling for Commonwealth Edison, ComEd Ex. 47.2, Illinois Commerce Commission Docket No. 10-0467, December 8, 2010.

states or regions that had the highest per-capita investment in energy efficiency in 2009, decoupling is used in 9, while Lost Revenue Adjustment Mechanisms are used in 2.[13] A Commission decision to adopt an SFV rate design for the electric industry would be at odds with Ohio's policies as discussed above and nearly unprecedented nationally.

Lost Revenue Adjustment Mechanisms Do Not Assist in Meeting Ohio's Goals for Energy Efficiency because the amount of Lost Revenues Collected May Exceed Energy Efficiency Program Costs

A lost revenue adjustment mechanism ("LRAM") allows utilities to charge customers for the revenue that a utility forgoes as it implements energy efficiency programs. Calculating lost revenues is conceptually simple: the evaluated savings of an energy efficiency program is multiplied by the portion of the rate that collects a utility's fixed costs of service, for the number of years that the program or measure produces savings, and the resulting amount is collected from customers. LRAMs are contentious to implement in practice and have other drawbacks as discussed below.

Similar to a decoupling mechanism, OCEA notes that a LRAM does not actually change rate design; it merely adds an adjustment clause to bills. But the effect of a LRAM on the policy goals listed in R.C. 4928.02 is nonetheless detrimental. When evaluated in conjunction with Ohio's desired public policy outcomes, continued use of LRAMs would:

- Have no significant additional impact on the reduction of the use of fossil fuel-based energy beyond the impact of supporting investments in energy efficiency necessary to meet the energy-saving targets in R.C. 4928.66.

[13] Id, Table 5a. States/regions within the top 10 that use decoupling through a rate adjustment mechanism or have adopted decoupling as state policy are: Vermont, New Jersey, Pacific Northwest (Oregon, Idaho, Montana), Connecticut, Hawaii, California, Massachusetts, Rhode Island, and New York. States/regions that use LRAMs include the Pacific Northwest (Washington) and Iowa. The discrepancy in the numbers in the text is due to the inclusion of the Pacific Northwest region as a top 'state' in terms of energy efficiency investment.

- *Have no impact on the use of environmentally-friendly distributed* generation.

- Support limited development in energy efficiency. An LRAM's necessary focus on the precise amount of energy a program saved adds contention to the process of evaluating, measuring, and verifying energy efficiency programs. Moreover, unlike an SFV rate design or decoupling through a rate adjustment mechanism, a LRAM does not remove a utility's incentive to increase sales of energy between rate cases. When using a LRAM, a utility still keeps revenue from marginal electricity sales. LRAMs can also create a perverse incentive for utilities. Because the throughput incentive is not removed with a LRAM, and a utility is compensated for evaluated savings, the profit maximizing strategy for utilities is to run programs that *appear* to save energy.

- Preclude opportunities for innovation in the delivery of efficiency services, because the utility would not be shielded from the revenue erosion impact of experimental energy efficiency programs or the market transformation activities listed above.[14]

- Increase the cost of distribution service for customers. Unlike decoupling through a rate adjustment mechanism, which ensures that a utility collects its Commission-authorized fixed-cost revenue requirement, no less and no more, and an SFV rate design, which designs rates to collect the fixed cost revenue requirement, LRAMs credit the utility with "lost revenues" without having the utility give up "found revenues" to customers. In other words, LRAMs can only produce rate and bill *increases* for customers, while revenue decoupling through rate adjustment mechanisms produces both rate increases and decreases. To illustrate this effect, consider a utility that operates a successful refrigerator recycling program that saves energy. A LRAM would charge customers for the revenues the utility "loses" from this program even when a hot summer results in utility over-collection in its fixed costs of service. LRAMs can accumulate large balances that become politically untenable to collect, as happened in Minnesota in the

[14] In the event an innovative or experimental program cannot demonstrate certain or accurate savings numbers so as to place accurate amounts into an LRAM, the utility will have no incentive to pursue such programs due to concerns of revenue erosion.

1990s. As stated in a 2006 paper from the American Council for an Energy Efficient Economy:[15]

> Minnesota had a "lost-margin recovery mechanism" in place in the 1990s, but because this was cumulative, utilities were recovering financial incentive amounts greater than their actual conservation expenditures (the lost-margin incentives totaled about $40 million in 1998). This had the effect of doubling the cost of energy conservation to ratepayers. In 1998 the Department of Commerce recommended that this mechanism be changed.

The projected impact of FirstEnergy's LRAM, which would have added between $12.60 and $30.80 to the program's $7.00 per-customer implementation cost,[16] without taking into account Company collection of its authorized fixed costs, led to customer backlash against the Company's CFL program. Thus, utility recovery mechanisms like LRAM that can increase the utilities' revenue collection beyond the revenue requirements and at the same time fail to incent the utilities to reduce sales is anathema to the public policy objectives Ohio is pursuing.

Question 4: If the Commission adopts a decoupling rate design in electric distribution rates:

First, OCEA notes that our preferred policy, decoupling through a rate adjustment with essential consumer protections, does not have a significant effect on current rate design; rather, it adds a rate adjustment to bills.

Second, if the Commission adopts decoupling or an SFV rate design, which both assure utility collection of authorized revenue requirements, the Commission should review the mechanisms 3 years after implementation and only continue their use if the

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[15] See Kushler, et al. Aligning Utility Interests with Energy Efficiency Objectives: A Review of Recent Efforts at Decoupling and Performance Incentives. American Council for an Energy Efficient Economy. Page 28. October 2006.

[16] Assuming 80 kWh of savings per bulb, a distribution rate of $.035/kWh, and lost revenue collection for 2.25 or 5.5 years.

utility surpasses minimum reliability standards under rule and law[17] (as measured by

[17] Ohio Adm. Code 4901:1-10-10 identifies the service reliability indices[17] and prescribes the process for an electric utility to establish company-specific minimum reliability performance standards. Specifically, Ohio Adm. Code 4901:1-10-10(B)(3) requires that the applications proposing the performance standards contain: (a) A proposed methodology for establishing reliability standards; (b) A proposed company-specific reliability performance standard for each service reliability index based on the proposed methodology, and; (c) Supporting justification for the proposed methodology and each resulting performance standard.

standard indices such as CAIDI[18] and SAIFI[19]).

1. Should that rate design be applied to residential rate classes? What other rate classes should be considered?

A decoupling rate design should be applied to residential and small commercial customers. Ohio's large commercial and industrial customers principally pay rates that are demand-based and there is a relatively small amount of "lost revenues" to collect from these customers. Further, large commercial and industrial customers are more sophisticated energy users, and thus are less susceptible to throughput incentive-driven efforts by utilities. Within the large commercial and industrial classes, based upon how each customer uses energy, there is likely to be a greater variance from customer to customer, making it more difficult, for example in the case of an SFV rate design, to determine an appropriate average rate.

2. How often should the Commission require the utility to update its distribution revenue requirement?

The Commission should require the utility to update its revenue requirement at least every three years, and sooner in the event decoupling rate adjustments exceed the rate impact cap (discussed below) for two consecutive years. This customer protection will prevent the decoupling mechanism from handling consumption declines that should be considered in a general rate case.

[18] "CAIDI," or the *customer average interruption duration index*, represents the average interruption duration or average time to restore service per interrupted customer. CAIDI is expressed by the following formula: CAIDI equals sum of customer interruption durations divided by total number of customer interruptions.

[19] "SAIFI," or the *system average interruption frequency index*, represents the average number of interruptions per customer. SAIFI is expressed by the following formula: SAIFI equals total number of customer interruptions divided by total number of customers served.

3. Should the Company's return on equity be reduced to reflect a reduced risk to the Company?

Both decoupling and an SFV rate design lower a utility's risk of not recovering its authorized revenue requirements. As in all ratemaking, the PUCO should adjust an electric utility's return on equity to reflect changes in a company's risk profile.

Question 5: If the Commission adopts some element of a decoupling rate design:

1. Should the adjustments be made on total revenue, per customer revenue, or some other basis?

Adjustments should be based on the allowed revenue requirement per-customer. By adjusting on a per customer basis, the utility is given an incentive to encourage energy efficient economic growth.

2. Should adjustments be normalized for weather?

No. Adjustments should not be normalized for weather. Weather is a risk symmetrically borne by both customers and the utility. Weather adjusting revenues would add needless complication to a decoupling mechanism.

3. Should the Commission adopt any special features to shield consumers from volatile adjustments (e.g., caps, collars, bands)?

Yes and these features are essential to OCEA's support of decoupling. The Commission should employ a cap on annual rate adjustments to prevent volatility. An annual cap of a 3% adjustment to distribution rates, with balances carrying forward, should be adopted as part of a decoupling mechanism implemented in Ohio to protect customers from excessive increases. OCEA does not mean the previous recommendation of a cap to indicate that it is the only special feature that should be considered.

C. Changes Due to Implementation of a Decoupling Rate Design:

Question 6: If the Commission determines that a decoupling rate design should be implemented to eliminate or mitigate the throughput incentive in electric distribution rates:

1. When should this change occur (i.e., in what types of actions before the Commission should this change be implemented)?

A decoupling rate adjustment mechanism should be implemented as quickly as possible to eliminate the overpayments for distribution service inherent in the existing lost revenue mechanism as explained above and shown in Attachment 2. While implementing any decoupling rate adjustment mechanism in Ohio, the PUCO must reconsider currently existing recovery mechanisms with each electric utility.

The PUCO should modify the lost revenue provision of the FirstEnergy ESP Stipulation that allowed for the recovery of lost revenues.[20] For AEP and Duke, the decoupling mechanism should be implemented as part of the distribution rate cases that have been, and are expected to be, filed in 2011, respectively. For DP&L, when the distribution stay-out clause of the ESP stipulation expires on December 31, 2012, the Commission should implement the decoupling adjustment mechanism.

2. Should it be phased in?

A revenue adjustment decoupling mechanism that maintains the volumetric collection of distribution costs should not be phased in as it would not be a significant departure from the existing rate design. However, in the unfortunate circumstance that

[20] Section 6n of the Stipulation, filed February 19, 2009, and Supplemental Stipulation, filed February 26, 2009, in Case No. 08-935-EL-SSO allows FirstEnergy to recover Lost Revenues created from certain energy efficiency programs for a period "not to exceed the earlier of the Companies' effective date of the Companies' next base distribution case, or six years from the effective date of this Stipulated ESP."

residential customers are forced to bear a detrimental SFV rate design, it should be phased in.

3. Over what period of time?

OCEA does not recommend a phase in period for a revenue adjustment decoupling mechanism that maintains a volumetric collection of distribution costs. However, if an SFV rate design is selected, the mechanism should be phased in over a period no less than twenty years.

Question 7: In order to review the various decoupling rate designs, the Commission will need necessary data such as that included in Appendix B. Is the data contained in Appendix B:

1. Burdensome?

The information requested by the Commission (e.g. number of customers, usage, and distribution revenues) would not be burdensome as this information is either already collected by or is readily available to the utility. As noted in the *Metrics* portion of Section II, OCEA recommends the Commission review the additional data as presented above.

2. Appropriate?

The information requested by the Commission is appropriate and is necessary to design an effective decoupling mechanism. The additional information recommended by OCEA in the *Metrics* portion of Section II is also appropriate for consideration not just for reference in the initial design, but also to measure how the rate design subsequently affects the achievement of Ohio's desired policy outcomes stated in R.C. 4928.02.

3. A comprehensive list of the necessary data?

Additional information recommended as being appropriate for the successful design and evaluation of an effective decoupling mechanism is listed in the *Metrics* portion of Section II above. In addition to information on customers' electric usage, OCEA recommends that the Commission monitor customers' natural gas usage (Section I, Part A,(i)), distance information from the generation source to end use for electricity and from well head to end use for natural gas (Section I, Part B, (i)), distributed generation facility location and performance (Section I, Part C, (i)) and examine specific customer usage as described above (Section I, Part D and E, (i)).

4. Proprietary

No. The utility may employ this information in the design phase and in subsequent evaluation efforts without the necessity of employing or revealing confidential customer information. Much of this information is already available to the PUCO and to the public in various utility filings and reports.

IV. CONCLUSION

The undersigned members of OCEA appreciate the efforts of the PUCO to seek input before instituting any modifications or significant changes to the current electric utility rate design structure. Any change will likely be a significant change for Ohio electric utility customers and thus it is important that the Commission have the appropriate information and input to render a change that will produce the kind of benefits for Ohio customers envisioned by Senate Bill 221.

The undersigned members of OCEA urge the PUCO to adopt the above recommendations and comments in order to develop a rate design that will truly align utility performance with Ohio's desired public policy goals of competition, increased energy efficiency and the encouragement of distributed generation.

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CERTIFICATE OF SERVICE

I hereby certify that a true copy of the foregoing *Comments by the Ohio Consumer and Environmental Advocates* has been served upon the following parties by Regular U.S. Mail Service, postage prepaid, this 11th day of February 2011.

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Options

Key considerations	Decoupling revenues from sales	Lost revenue recovery	Fixed / Variable Rate Design (straight-fixed variable)
Removes the sales incentive for all EE	√	■	√
Utility maintains full fixed cost recovery and associated net income with investment in all cost-effective EE	√		√
Removes utility disincentive to support public policies that increase EE	√		√
Does not reduce customer incentive to invest in EE	√	■	
Empowers customers to control energy costs	√		
Administrative simplicity	■	■	■

■ = addresses partially
√ = addresses fully

Cost

- FirstEnergy
  - LRAM would have added $12.60 and $30.80 to CFL program's $3.50 per-bulb implementation cost
  - If 2010-2012 programs had gone forward, under ESP II lost revenues collection will total $21 million 2012, $28.7 million in 2013, and $37.2 million in 2014 ($23.7 million if collection ends May 31, 2014)
  - Lost revenues would have exceeded program costs by 2014

NRDC
THE EARTH'S BEST DEFENSE