



Price Mitigation Benefits of Ohio's Energy Efficiency Program Outweigh Costs for All Sizes of Manufacturers

A study commissioned by The Ohio Manufacturers' Association confirms that actual and projected price mitigation benefits of Ohio's Energy Efficiency Resource Standards¹ ("the Standards") outweigh the energy efficiency rider costs for all sizes of manufacturers – small, medium and very large – in all four electric utility territories, whether customers participate in the program or not. Any efforts to water down, eliminate or evade the Standards should be resisted.

Background

To help inform the Ohio Senate Public Utilities Committee's deliberations on whether or not to modify various energy efficiency, demand reduction and alternative energy provisions enacted in Ohio since Senate Bill 221 was approved in 2008, The Ohio Manufacturers' Association (OMA) commissioned a study² by the American Council for an Energy-Efficient Economy (ACEEE) on the potential financial impact of modifying or eliminating the Standards.

The major finding of the ACEEE report was that the combination of (a) continued utility investments in energy efficiency,³ (b) continued achievement of the Standards, and (c) utilities bidding a portion of their energy efficiency resources equal to the savings required by the Standards into regional capacity auctions⁴ through 2020, will yield direct and indirect savings of almost \$5.57 billion in avoided energy expenditures and reduced wholesale energy and capacity prices for customers statewide.

The ACEEE report further concluded that eliminating the Standards would turn these projected savings into anti-competitive costs and increase customers' exposure to less stable and less predictable market pricing. Such a scenario is of grave concern to manufacturers for whom stable, predictable energy pricing is as important as affordable pricing.

Additional Analysis: Energy Efficiency Rider Costs vs. Price Mitigation Benefits

While the ACEEE report found that continuation of Ohio's Energy Efficiency Resources Standards will save customers billions of dollars in electricity costs statewide, the report stopped short of answering one question of critical importance to manufacturers who range from small companies with fewer than 50 employees and modest levels of energy use to huge companies with thousands of employees and tens of millions of dollars in annual energy costs: "What is the impact of the Standards on different sizes of customers with different energy usage patterns?"

¹ Ohio's Energy Efficiency Resource Standards, established by enactment of SB 221, require utilities to achieve annual reductions in energy usage leading to 22 percent cumulative reduction in retail electricity sales by 2025. The Standards also required utilities to achieve a 1 percent reduction in peak demand in 2009, followed by 0.75 percent reductions in peak demand annually through 2018.

² Ohio's Energy Efficiency Resource Standard: Impacts on the Ohio Wholesale Electricity Market and Benefits to the State, April 2013, http://www.ohiomfg.com/legacy/communities/energy/OMA-ACEEE_Study_Ohio_Energy_Efficiency_Standard.pdf

³ The projected savings assume a \$2.7 billion investment in energy efficiency programs by Ohio's four investor-owned utilities.

⁴ "Capacity" is part of a customer's electricity generation rate (along with the cost of the energy itself) and is associated with the costs an electric utility incurs to have enough power to meeting demand in its service territory.

To answer this question, the OMA engaged Go Sustainable Energy, LLC (GSE), an energy engineering firm, to conduct additional cost-benefit analysis applying the ACEEE methodology to an expanded and more detailed data set. Specifically, GSE compared (a) the average of 2012 and 2013 energy efficiency riders customers were required to pay (i.e., energy efficiency costs) in each of the four electric utility service territories in Ohio; and (b) foregone 2015/16 and projected 2016/17 wholesale price mitigation (i.e., energy efficiency benefits) in those territories⁵. GSE conducted this cost-benefit analysis for three different customer profiles:

1. Small manufacturer on secondary service
(About 400 kW demand; 1,500,000 kWh/year; 45 percent load factor)
2. Medium manufacturer on primary or secondary service
(About 2,000 kW demand; 11,500,000 kWh/year; 60 percent load factor)
3. Very large manufacturer on transmission
(About 140,000 kW demand; 1 billion kWh/year; 80 percent load factor)

Major Finding: Benefits Outweigh Costs Across the Board

GSE's major finding is that actual and projected **price mitigation benefits outweigh the energy efficiency rider costs for all sizes of manufacturers – small, medium and very large companies – in all four utility territories, whether the customers participate in the energy efficiency program or not.** Even in FirstEnergy's territory, where generation supply is constrained, price mitigation benefits exceed rider costs for all sizes of industrial customers. The cost-benefit differential varies somewhat among different size manufacturers, with very large customers getting the lowest price mitigation rate (measured as savings per kWh) and small and medium-size customers getting the highest price suppression rate. [See Figures 1-3 on page 4.]

The GSE study did, however, reveal a problem that deserves attention from regulators and policy makers: **Much variation and volatility exist in energy efficiency riders across the state and from one utility service territory to another, resulting in a disparity and unpredictability of energy efficiency program costs for Ohio consumers.** This is of concern to manufacturers, in particular very large, energy-intensive companies. Because they receive the smallest price mitigation rate benefits, the very large customers are more vulnerable to, and at greater risk from, unpredictable spikes in energy efficiency rider costs than small and medium manufacturers – a concern that has led some individuals to propose a permanent exemption from energy efficiency riders for large manufacturers. [See Figure 4 on page 5.]

The GSE research confirms that the Standards are working to reduce costs for manufacturers of all sizes; however, the utility-directed programs through which the Standards are implemented can and should be improved to assure customers of least-cost implementation of the Standards over time.

⁵ Capacity price suppression occurs in regional forward capacity auctions, which set wholesale prices several years in the future. Thus, comparing two recent years of rider costs (2012 and 2013) to the price suppression in the corresponding capacity auctions (setting wholesale prices for 2015-16 and 2016-17) provides an apples-to-apples snapshot of price mitigation benefits versus the energy efficiency rider costs from which they are derived.

The Threat: Efforts to Dilute the Standards are Shortsighted & Anti-Competitive

Proposals to water down or eliminate Ohio's Energy Efficiency Resource Standards are ill-advised and dangerous. If successful, such efforts would be a step backwards for Ohio and inevitably would increase electricity costs over time and across the board.

Energy efficiency is the lowest-cost resource for utilities to meet the demand for electricity, even during a period of abundant shale gas and low natural gas prices. Investments in energy efficiency allow utilities to defer costly investment in new generation resources and transmission and distribution infrastructure – helping to keep costs low for utility customers of all sizes whether they participate in energy efficiency programs or not.

Energy efficiency reduces monthly electric bills for customers who participate in utilities' energy efficiency programs. It also contributes to the optimal functioning of wholesale capacity markets by putting downward pressure on the cost of electricity. **Energy efficiency that is bid into regional capacity auctions reduces the risk of unexpected capacity constraint and thereby suppresses capacity price – providing savings for all customers, whether they participate in energy efficiency programs or not.** Reductions in electricity expenditures lower companies' exposure to risk associated with volatile energy markets – and this ultimately enhances competitiveness and supports economic growth.

Any efforts to lower the energy efficiency reduction targets or broaden the definition of qualifying programs will put at risk the documented savings resulting from Ohio's energy efficiency program. These efforts to dilute the Standards must be resisted. Such efforts are not in Ohio's best long-term interests and inevitably will result in higher electricity prices for all customers.

The Bottom Line: Retain and Improve Ohio's Energy Efficiency Standards

For all of these reasons, Ohio's Energy Efficiency Resource Standards, which are yielding documented savings for electricity customers across Ohio, should be retained.

There is, however, a need for improvement. To reduce the variation and volatility of energy efficiency riders and to maximize the potential of energy efficiency as a tool for lowering manufacturers' energy costs, Ohio must identify some kind of regulatory mechanism to stabilize riders and drive down energy efficiency program costs to the lowest level among the state's four electric utilities. Customers should have regulatory assurance of least-cost implementation of the Standards across the state and over time.

Additionally, in order to protect the state's largest electricity users, who receive the smallest price mitigation benefits from the Standards, the State should establish a statutory cap on the amount utilities can charge for an energy efficiency rider.

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See following page for graphs illustrating key cost-benefit analysis data from the GSE study.

FIGURES 1-3: Energy Efficiency Cost-Benefit Comparison, By Customer Size & Utility⁶

Figure 1: Small Manufacturer

(400 kW demand; 1,500,000 kWh/year; 45 percent load factor)

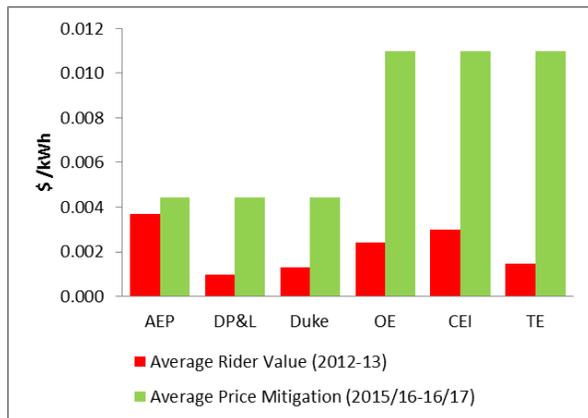


Figure 2: Medium Manufacturer

(2,000 kW demand; 11,500,000 kWh/year; 60 percent load factor)

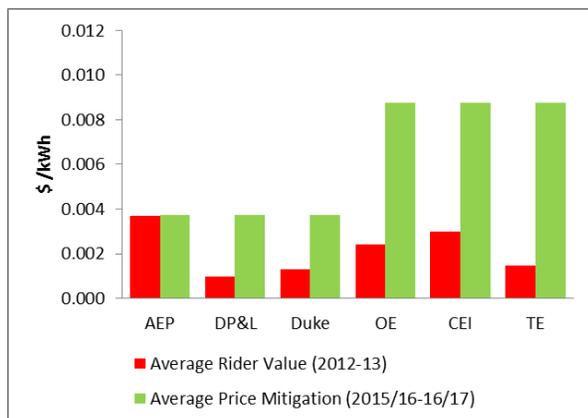
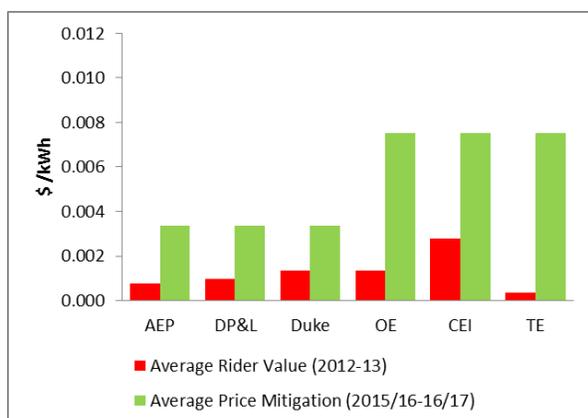


Figure 3: Very Large Manufacturer

(140,000 kW demand; 1 billion kWh/year; 80 percent load factor)



GSE STUDY FINDINGS

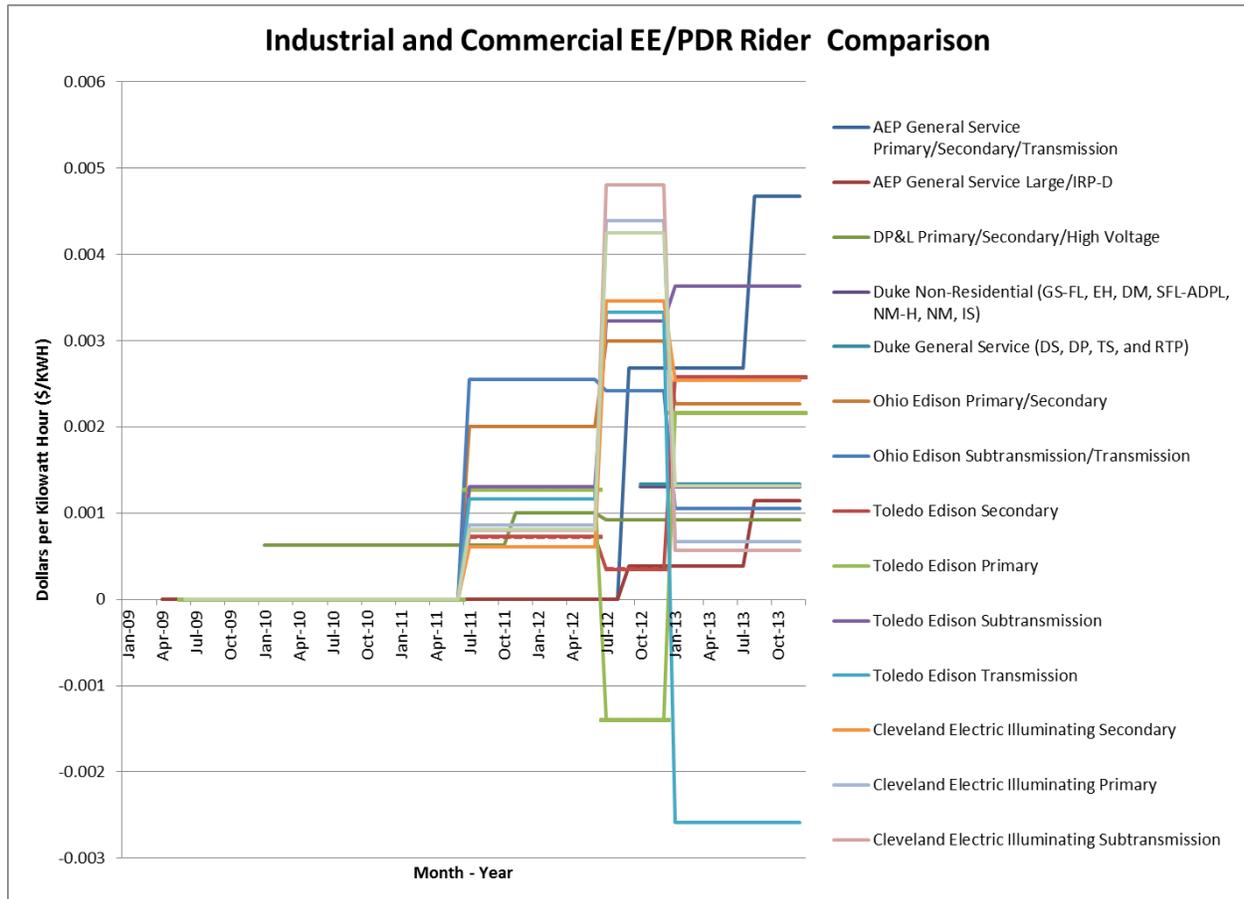
Actual and projected price mitigation benefits outweigh the energy efficiency rider costs for all sizes of manufacturers – small, medium and very large companies – in all four utility territories, whether the customers participate in an energy efficiency program or not.

Even in FirstEnergy’s territory, where generation supply is constrained, price mitigation benefits exceed rider costs for all customers.

The cost-benefit differential varies somewhat among different size manufacturers, with very large customers getting the lowest price mitigation rate (measured as savings per kWh) and small and medium-size customers getting the highest price suppression rate.

⁶ FirstEnergy data is broken out by its three regulated distribution companies in Ohio: Ohio Edison, Cleveland Electric Illuminating and Toledo Edison

FIGURE 4: Wide Variation and Volatility in Energy Efficiency Riders



GSE STUDY FINDING

There is much variation and volatility in energy efficiency riders across Ohio and from one utility service territory to another. The resulting disparity and unpredictability of energy efficiency program costs should be of great concern to manufacturers – in particular, very large and energy intensive companies, because they receive the lowest price mitigation rate (measured as savings per kWh).