



# JOHN GLENN SCHOOL OF PUBLIC AFFAIRS

## The Costs of Inefficiency: Ignoring Ohio's Energy Efficiency Potential

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### Scope of the Problem

In Ohio today, substantial energy efficiency resources, although available, are not being used. Based on the current technological capacity, there is significant potential to increase energy efficiency to a degree that would substantially and cost effectively reduce the state's energy use.

The state's current retail electricity market design is worsening this energy efficiency use weakness, causing consumers to spend more for energy while receiving fewer economic benefits. In 1999, Ohio established electric deregulation (in SB 3), changing from a regulatory price setting system into one where prices were established through wholesale market auctions.

In 2008 (in SB 221) and in recent decisions by the Public Utilities Commission of Ohio (PUCO), the marketing process was expanded to include retail competitors along with wholesale marketers. Now, third party retailers can compete with regional utilities to deliver energy to residential, commercial and industrial customers. That means that retail default energy prices provided by monopoly electric utilities are set by utility-managed auctions that include energy but *do not include* energy efficiency.

Retail energy-only auctions do not permit energy-saving services to compete, forcing ratepayers to pay for an excess supply of electricity. That, in turn, creates a drag on Ohio's economy. The nation has made huge strides in developing energy efficient technology in the past 40 years.<sup>1</sup> Nonetheless, efficiency gains are falling short of their full potential in the U.S. and in Ohio.<sup>2</sup>

After adoption of SB 221, PUCO directed Ohio's utilities to adopt procedures to capture a portion of this economically available energy efficiency.<sup>3</sup> The utilities select measures through a process called "Assessment of Potential," which first surveys all the achievable efficiency available today and then screens for cost-effectiveness and market availability.

### Barriers can include:

**"Split incentives"** such as when tenants, not building developers or owners, are responsible for paying energy costs, creating inefficient capital acquisition

**"Transition costs"** resulting from the time and effort required for users to grasp the availability of energy efficiency technologies and services

**Financing for up-front** energy efficiency investments, slowing resource adoption

**Historic regulatory structure**, subjecting utilities to financial harm/risk as a direct result of utility-sponsored energy efficiency programs

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<sup>1</sup> America's Energy Resurgence: Sustaining Success, Confronting Challenges, Bipartisan Policy Center's Strategic Energy Policy Initiative, February 2013, p. 6 ("Bipartisan Policy Center Report") <http://tinyurl.com/crp7uxm>

<sup>2</sup> McKinsey & Company (2010). Energy efficiency: A compelling global resource," McKinsey Sustainability & Resource Productivity ("McKinsey Report") [www.mckinsey.com](http://www.mckinsey.com)

<sup>3</sup> R.C. Section 4928.66 and O.A.C. Section 4901:1-39-04.

## Definitions of Energy Efficiency Potential

Not Technically feasible	Technical Potential			
Not Technically feasible	Not cost effective	Economic Potential		
Not Technically feasible	Not cost effective	Market and adoption barriers	Achievable Potential	
Not Technically feasible	Not cost effective	Market and adoption barriers	Program design, budget, staffing, and time constraints	Program Potential

Reproduced from National Plan for Energy Efficiency (2007). Guide to Resource Planning with Energy Efficiency, Prepared by Snuller Price et al, Energy and Environmental Economics, Inc. Figure 2-1

The results of those studies show:

- Reaching near-term efficiency benchmarks is achievable <sup>4</sup>
- By 2019, 17 percent of expected energy use could be met with cost-effective energy efficiency measures <sup>5</sup>
- By 2028, 29 percent of expected energy demand could be met <sup>6</sup>
- With little change in current market, regulatory or program operations systems, between 11.1 and 16.8 percent of expected energy use could be met by 2026 <sup>7</sup>

Independent analysis by PUCO indicated that all utilities complied with statutory savings benchmarks in 2009 and 2010.

Nonetheless, the electricity service provided by customer-chosen providers is geared toward furnishing energy, not efficiency, limiting consumers in choosing the resource that best meets their needs.

The current structure of Ohio’s retail electricity market is creating these problems. It favors the large incumbent electricity generators that run auctions in a way that restricts competition from energy efficiency resources.

But energy efficiency can be improved, consistent with the market principles of deregulation, by precisely identifying barriers to competition and by implementing specific and focused regulatory interventions.

<sup>4</sup> Duke Energy Ohio: Market Assessment and Action Plan for Electric DSM Programs (January 7, 2013), Prepared by Forefront Economics, Inc. and H. Gil Peach & Associates LLC, Table 1, filed February 19, 2013, In Re: Duke Energy Ohio Market Assessment, Case No. 13-0431-EL-POR (“Forefront Report”) <https://dis.puc.state.oh.us>

<sup>5</sup> Assessment of Electric Energy Efficiency Potential (2010-2019), Prepared by The Cadmus Group, Inc. for Dayton Power & Light at Table 17 and Figure 17, filed July 15, 2010, In re: Application of The Dayton Power and Light Company, Case No. 09- 1986-EL-POR (“Cadmus Report”) <https://dis.puc.state.oh.us>

<sup>6</sup> 2009 to 2029 Energy Efficiency/Peak Demand Reduction Potential Study (November 5, 2009), Prepared by Summit Blue Consulting, LLC and Midwest Energy Efficiency Alliance, at Table 17, Filed November 12, 2009, In re: Applications of Columbus Southern Power and Ohio Power for Approval of Program Portfolio Plan, Case Nos. 09-1089-POR et al., Testimony of Jon F. Williams (“Summit Blue Report”) <https://dis.puc.state.oh.us>

<sup>7</sup> Market Potential Study: Energy Savings and Demand Reduction for Ohio Edison, Toledo Edison, and The Illuminating Company (June 22, 2012), Prepared for FirstEnergy Corp. by Black & Veatch, at p. 11, filed July 31, 2012, In re: Application of Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company for Approval of Their Energy Efficiency and Peak Demand Reduction Portfolio Plans for 2013-2015, Case Nos. 12-2190-EL-POR, et al. (“Black & Veatch Report”) <https://dis.puc.state.oh.us>

## Recommendations

Perfect competition is not possible, but policymakers can take simple and direct action in the following two areas to close the gap between available cost-effective energy efficiency and improve market access to energy efficiency.

1) Align utilities' business model with market principles to ensure that the model supports market access for customers to both supply and demand-side choices. Aspects to consider:

- Utilities must reliably recover energy efficiency program expenses on a timely basis
- Decoupling rates so utilities are not forced to recover costs which remain the same, no matter how much energy is used
- Allowing utilities to profit on successful energy efficiency programs commensurate with their earning potential on equivalent capital investments
- Separating utility ownership from energy generation business – corporate officers answering to shareholders have an inherent conflict of interest that may only be resolved through structural corporate separation

2) Level the competitive field between energy efficiency providers and energy providers with a parallel procurement process for energy efficiency products and services. There are advantages and disadvantages<sup>8</sup> to each of these alternatives but in absence of adoption of at least one, Ohio's retail electricity services market will remain functionally noncompetitive. Consider:

- Continuing the statutory energy efficiency benchmark mandates as designed
- Requiring utilities to procure energy efficient services competitively on behalf of their customers in quantities linked to the volume of available cost-effective energy efficiency
- Establishing a separate utility for competitive procurement of default energy efficiency services

Finally, adoption of “on-bill” financing programs should be considered. These programs provide a mechanism for consumers to delay paying for energy efficiency investments until they enjoy the benefits of the investment. This allows competitors to profitably package products and spur market innovation and it has been a proven success.<sup>9</sup>

<sup>8</sup> See Sadano, Richard (November 2011), Who Should Deliver Ratepayer-Funded Energy Efficiency? A 2011 Update: Based on work for the Colorado Public Utilities Commission, updating a 2003 report by RAP, Regulatory Assistance Project.

<sup>9</sup> Bell, Catherine J., Steven Nadel and Sara Hayes (December 2011), On-Bill Financing For Energy Efficiency Improvements: A Review of Current Program Challenges, Opportunities, and Best Practices, American Council for an Energy-Efficient Economy, Report No. E118.

**For more information on this study, please go to [glenn.osu.edu/policy](http://glenn.osu.edu/policy)**

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