



ENERGY EFFICIENCY IN OHIO: THE DEAL OF THE CENTURY

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The foundation – solid or cracking?

As anyone following energy in Ohio knows, the energy outlook for the state in 2013 looks vastly different than it did just two years ago. Many of these changes stem from or were exacerbated by the economic downturn in 2008. For example, consumer groups representing budget-conscious residential customers continue to voice concern over utility rate structuring. Manufacturers balancing an onslaught of federal regulation are increasingly (yet still tentatively) exploring equipment upgrades that can reduce their energy expenditures in the medium- to long-term. Electric utilities serving Ohio continue to be under pressure to meet the costly proposition of growing demand and the provisions of Ohio's 2008 landmark alternative energy portfolio standard, S.B. 221. Finally, the fuel mix in Ohio is evolving as the outlook for natural gas resources trumps King Coal. These are some of the contentious issues that set the stage for a recent challenge to S.B. 221, shedding light on just how much Ohio needs a clear, growth-oriented energy strategy for the future.



Several additional developments from 2012 are poised to markedly affect how utilities conduct business in Ohio. First, state lawmakers are studying how to decouple electricity sales throughput from profits, which would protect utility profits from reductions in their delivery volumes that would occur from energy efficiency measures. (Under S.B. 221, in addition to renewable and advanced energy targets for utilities, the bill's energy efficiency provisions mandate that by 2025, utilities must carry out customer efficiency, demand-response and peak demand reduction programs to achieve a 22% reduction in energy consumption measured from a historically-averaged baseline.) Such a business model would allow utilities to instead earn back any lost margins that occur from efficiency improvements, incentives and performance-based ratemaking for natural gas and electricity, and potentially send a clearer price signal to consumers. Rate decoupling is often advanced by utilities as a way to help them weather the effect of lost revenue from decreased sales.

Second, in March 2012, Ohio Governor John Kasich signed S.B. 315 into law, giving co-generation technology (i.e., waste heat recovery systems) status to qualify either as a renewable energy technology or an energy efficiency technology for utilities. This distinction was viewed unfavorably by "traditional" renewable energy suppliers, for fear that market demand for sources of renewable energy to meet the S.B. 221 mandates would be flooded out by waste heat opportunities. However, industrial users and utilities now have an additional, mechanism to achieve their energy reduction goals, and combined heat and power (CHP) discussions are rampant statewide because of their cost competitiveness as compared with other new generation alternatives.

The efficiency provisions of S.B. 221 place Ohio in good company with more than 20 other states that have passed similar standards nationwide. Utilities are in fact achieving demand reduction for their product through a mix of industrial and residential rebate and incentive programs, consequently minimizing the need for and cost of constructing new electricity plants, hedging against escalating fuel, operations & maintenance and transmission & distribution (T&D) costs, and protecting Ohio consumers. Which makes the challenge to the

efficiency provisions of S.B. 221 by several of the state's utilities late in 2012 the third, but perhaps most worrisome development.

S.B. 221 requires utilities to help their customers conserve an amount of energy each year that corresponds with an increasing annual percentage of the company's electricity sales. The target began at 0.3 percent of sales in 2009, and aims to achieve a cumulative, annual energy savings more than 22 percent by the end of 2025. The law allows utilities to recoup the cost of the energy efficiency programs from their customers. Some utilities like FirstEnergy and AEP are concerned that the higher targets will hurt industrial customers and interfere with market development. The proposal put forth in late 2012 would indefinitely suspend the target at half a percent of a utility's annual sales and allows for a reexamination of the provisions.



While rate cases and complaints about meeting renewable targets seemingly come before the Public Utilities Commission of Ohio with relative abandon, the threat of an actual amendment to the Ohio Revised Code caught many by surprise. Ultimately placed on hold until after the holidays, it is anticipated that attacks to dismantle S.B. 221 will be soon

resurrected in 2013. Opponents of the challenge are rightly concerned that opening up current state policies embodied in S.B. 221 to any modification could open the floodgates for it to be systematically whittled away in the future.

Efficiency versus new generation

Energy efficiency remains the cheapest form of a new kilowatt, not to mention having the lowest emissions and operating costs in a utility's portfolio. The bottom line is that new generation is expensive, really expensive. Not to mention the T&D charges, environmental riders, tax normalization and fuel adjustment clauses that are added on top. Reducing compliance costs—even adding in the marketing costs for efficiency programs—will always cost less than the overall cost structure for new generation.

Energy efficiency will always help constrain costs over the long-term and implementing energy efficiency measures first helps to reduce the overall costs associated with any new generation. While short-term supply, demand and pricing fluctuations exist, over time the benefits of long-term integrated resource supply planning prevails. Energy efficiency measures are also a powerful hedge against the larger threats to the State economy such as insufficient capacity and an aging T&D and energy storage infrastructure.

In addition to being a cost-sensible approach to meeting future demand, many Ohio companies are in the business of manufacturing energy efficiency equipment or systems to help utilities meet their S.B. 221 obligations (and help other customers achieve energy reduction goals). For example, a recent report by the trade group Advanced Energy Economy Ohio entitled "Employment in Ohio's Advanced Energy Industry" found that in 2010, Ohio had a workforce of more than 25,000 individuals in advanced energy-related sectors. Of those, more than 7,000 jobs were identified in the "energy-saving building products" and "energy-saving consumer products" categories, and an additional 6,000 in the "HVAC and building control systems" and "lighting" categories. Those four efficiency-related categories alone comprised more than 50 percent of all the jobs in the assessment.

Challenging S.B. 221 creates an impediment to the growing energy efficiency supply chain in Ohio and to the planning efforts of a nascent industry with huge growth potential. (Of note, the Ohio Manufacturers' Association came out against the recent challenge to S.B. 221, stating that S.B. 221 should remain intact.)

Will national attention for efficiency strengthen Ohio's case?

In yet another twist to Ohio's recent energy efficiency debate, in mid-December, the federal "American Energy Manufacturing Technical Corrections Act" (H.R. 6582) became law, combining key provisions from several pieces of previously proposed legislation into a catch-all bill covering a wide range of energy efficiency measures. Most of the provisions in H.R. 6582 address revising or clarifying standards for certain technologies and equipment; other sections address research & development, best practices and studies to analyze specific energy initiatives.

Compared with Ohio's existing state-based policies, the national policies add significant breadth to the scope of coverage—which energy efficiency advocates welcome. Because despite the strides made with S.B. 221 and S.B. 315, Ohio tied for 22nd in a national ranking of energy efficiency standards conducted by the American Council for an Energy-Efficiency Economy (ACEEE) in their 2012 Scorecard. The ranking is based on a cumulative, comparative score of utility, transportation, building codes, CHP, state government initiatives and appliance standards. While Ohio received praise for its CHP initiatives, its low ranking for appliances, transportation and other policies necessitate a larger—and smarter—call to action from Ohio lawmakers, utilities and consumers.

Justifying energy efficiency in Ohio

Energy efficiency must play a bigger role in the near future to mitigate the tens of trillions of dollars that will be required to 1) reduce CO₂ and other air emissions; 2) build new generation to meet skyrocketing demand; and, 3) minimize other air and water resource

challenges while *at the same time* addressing quality of life, economic growth and public health. Energy efficiency provides electricity and service at a lesser cost, *and* is more timely, more responsive and more reliable. Every company and household can and should participate in energy efficiency initiatives in Ohio to help their own bottom line and the State's energy future. As important economic drivers, efficiency projects bring about other numerous benefits, which include in part:

- Energy efficiency projects promote U.S.-based manufacturing and technological solutions grounded in innovation. Traditional projects incorporate products such as taping, sealing, caulking, insulation, windows, doors refrigerators, motors/controls, water heaters, furnaces, fans, air conditioners, etc. that are almost entirely made in the U.S. High-tech efficiency solutions are advancing daily.



- Implementing efficiency projects will mitigate rising energy demand, making the U.S. more domestically competitive, increasing energy exports and reducing the trade balance.
- Projects are often quick and easy to install, and many offer simple payback periods of six months to five years depending upon the technology choice.

- The installation workforce for efficiency projects must inherently be U.S.-based.
- Energy efficiency projects do not require extensive (or controversial) studies, permitting, demonstration or pilot plants prior to execution.
- Efficiency measures, which are often invisible and quiet, reduce the need for expensive and highly visible T&D systems.
- Projects have a capacity factor = 1.0 and are available 24/7/365 with no intermittency concerns.
- Studies have shown that efficiency projects can reduce emissions of greenhouse gases and conventional air pollutants, and do so in a more cost effective manner than many other direct emissions reduction technologies.
- According to the ACEEE, an investment in energy efficiency improvements creates more gross direct, indirect and induced jobs than an equal size, business-as-usual, investment into the economy as a whole.

Conclusion

If barriers to education/outreach, finance and lobbying efforts can be surmounted, energy efficiency grounded in long-term consumer behavior change can provide more economic stimulus to Ohio than taxes, budget cuts or new energy legislation. Energy consumers just need to see the results of their incentives on their monthly bills. For example, utilities must be urged to increase investments in upgrading their existing infrastructure to support the increased deployment of smart meters, energy monitoring and sensors so consumers can easily see their energy consumption habits and patterns from their computer or smart phone. Energy efficiency rebates and incentives need to be better explained and presented to consumers, as well as grounded in 21st-century IT solutions like apps, smart devices and remote technologies.

In addition, the State must foster distributed generation development statewide using cogeneration and CHP measures, residential and commercial solar generation and improved net metering and interconnection. Ohio industry will improve with reduced

standby charges and lower demand ratchets as the State considers shifting to performance ratemaking. Utility billing payments for efficiency and alternative technologies for consumers to pay back the capital costs of efficiency would round out the suite of effective strategies.

This movement to efficiency will save Ohio ratepayers and electric utilities money in the long run. Efficiency investments made in the near term will postpone costly utility generation demands, foster improved air and water health, and create a culture where energy savings is engrained into our everyday habits—and we see our electricity bills *decrease*. Imagine the precedent that Ohio can set by not only maintaining, but strengthening its efforts to make energy efficiency the smart choice for consumers and utilities alike. Every avoided dollar on power, fuels and command/control compliance is a dollar of annual economic stimulus and economic recovery for Ohio. Let's be smart enough to jump at that bargain of a deal.

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