

Testimony of Chris Neme
Principle, Energy Futures Group
Regarding Ohio House Bill 6
May 15, 2019

Chairman Vitale and Members of the Ohio House Energy and Natural Resources Committee, thank you for the opportunity to testify today. My name is Chris Neme. I am a co-founder and Principal of Energy Futures Group, a consulting firm that provides specialized expertise on energy efficiency and renewable energy markets, programs and policies. Over the past decade, our firm has worked on these issues for clients in more than 35 states, half a dozen Canadian provinces, and several countries overseas. Both since EFG was founded in 2010 and before, I have personally provided consulting support on energy efficiency programs to several different Ohio stakeholders, as well as to the Public Utility Commission of Ohio (PUCO). I am very familiar with current Ohio law on utility energy efficiency resource standards, the portfolios of programs the utilities are currently implementing to meet those standards, and the results of evaluations of the effects of those programs. I am testifying to express concern regarding HB 6's elimination of Ohio's electric efficiency program requirements because of the adverse effect that policy would have on both Ohioan's electricity bills, the environment and local economic development. I will endeavor to both document those concerns and address several misconceptions about the state's electric efficiency programs that proponents of the bill have put forward as rationales for its adoption.

Summary of Energy Efficiency Program Benefits

- Ohio's utility-run efficiency programs are required by law to be cost-effective, which means that they must produce more in energy savings for consumers than the programs cost.
- In 2017, the last year for which annual reports are currently available, the state's four major electric utilities (First Energy, AEP, Duke and DP&L) collectively spent a little over \$200 million on their efficiency programs to produce approximately \$1.1 billion in electric system benefits, for about \$900 million in net benefits – a benefit-cost ratio of better than 5 to 1.¹ *Again, that is just from one year of efficiency programs.*
- That is a conservative number because the utilities have not fully quantified several key electric system benefits of their efficiency programs, including the effect efficiency programs have on reducing market clearing prices for both energy and peak capacity.

¹ This is the ratio under the Utility Cost Test (UCT), which is one of two cost-effectiveness tests used in Ohio. The other is the Total Resource Cost Test, or TRC. As implemented in Ohio, the TRC compares just the electric system benefits to the combination of costs associated with the utility programs and any additional costs born by the customers participating those programs. Because the TRC as performed in Ohio uses the same electric system benefits as the UCT, but adds another category of costs (any additional costs born by program participants), the TRC benefit-cost ratio tends to be lower than the UCT benefit-cost ratio. That is why other witnesses have suggested that the Ohio programs provide only about \$3 in benefits for every dollar spent. That is still an astoundingly good deal. However, it also understates the real value of efficiency because though it accounts for program participant contributions to efficiency measure costs it doesn't account for lots of other non-electric participant benefits such as gas savings, water savings, improved comfort, improved health and safety, improved business productivity, etc.

Why are efficiency programs needed? Haven't we already captured all the cost-effective savings? Or wouldn't those savings just occur naturally, without programs, as homes and businesses replace old and inefficient equipment?

- All available evidence, including the utilities most recent efficiency potential studies, suggest that there are enormous reservoirs of untapped and cost-effective electricity savings that future Ohio utility efficiency programs could capture.
- While it is true that as products periodically get replaced in homes and businesses, the cycle of product turnover will “naturally” produce some efficiency gains, it is equally true that there are substantial *additional savings* – and very cost-effective savings – that will not be captured through such natural product turnover.
- For example, federal product efficiency standards ensure that a homeowner buying a new 50 gallon electric water heater will get one with an Energy Factor of 0.95 – about a 4% improvement over the minimum standard previously adopted in 2003. However, relatively few customers currently upgrade to dramatically more efficient heat pump water heaters that often have Energy Factors of greater than 3.00 – representing more than 50% savings.
- Moreover, maximizing electric efficiency typically also requires measures to be *added* to buildings, such as additional insulation; measures to seal inadvertent leaks to the outdoors; and controls to ensure ventilation systems, lighting systems and other energy consuming systems only run when they need to. Experience suggests that customers invest in such add-on efficiency measures much less frequently without the support of utility programs.
- The Ohio utility efficiency programs are targeted only to these opportunities to acquire additional savings that would not occur “naturally” because of equipment turnover.

Aren't the current utility efficiency programs wasteful because half of their costs are “overhead”?

- Those raising the concern are probably confusing “non-rebate spending” with “overhead”, a term which most people would associate with paperwork and administration. Non-rebate spending includes training of builders and other trade allies, audits and other forms of technical support to homeowners and businesses, marketing to and education of customers so they are more aware of efficiency opportunities and benefits, and evaluation of programs to make sure that they are providing real savings. That's not paper-pushing waste.
- Spending on these other non-rebate items can be a very good thing because cost is rarely the only market barrier to investments in efficiency. Other key barriers include lack of information, inadequate technical skill (e.g. for builders in designing buildings or HVAC technicians in how to properly size and install equipment), risk or uncertainty, split incentives between building owners who make most efficiency investments and tenants who pay electric bills, etc. To be successful, efficiency programs must address all such barriers which often requires spending on things other than rebates. To consider that wasteful is like telling Pepsi that they are wasting money when they spend it on anything other than manufacturing their product.

- Ultimately, all that really matters is that Ohio’s efficiency programs are wildly cost-effective. Could they be even more cost-effective? Maybe, but probably not dramatically so. And getting rid of them because they deliver only \$5 in benefits for every \$1 spent when maybe they could deliver \$5.50 for every \$1 is “throwing the baby out with the bath water.”

Why not just make the programs voluntary for the utilities? Wouldn’t they just run the programs anyway if they thought they were good for their customers? Wasn’t that what happened during the “pause” in 2014 and 2015?

- Utilities would probably not all continue to run efficiency programs, or at least not at the scale of the current programs.
- During the pause, First Energy dramatically cut back on its efficiency program offers. While the other electric utilities in the state continued with their programs, they may not have had the requirements been eliminated (as is now proposed) rather than “paused”.
- Elimination of the utility requirement will almost certainly result in significant cut-backs to very cost-effective programs.
- It is likely that the cut-backs will be more severe in some utility service territories than others, creating inequities in Ohioans access to help in making efficiency investments.

Don’t the efficiency program mandates effectively require some customers to subsidize others? Isn’t that inequitable?

- Many of the benefits of efficiency programs – including reduced need for new power plants, reduced need for investment in transmission and distribution system infrastructure (the “poles and wires” that deliver electricity to homes and businesses) and the reduction in market prices for energy and capacity – accrue to all electricity customers. In short, while program participants may benefit *more* from efficiency programs than non-participants, non-participants benefit as well.
- In contrast, many investments in the supply of electricity whose costs are born by all customers do not benefit all customers. Consider the need to upgrade the capacity of a distribution substation that is required because builder is building a large new subdivision of homes whose demand for electricity could not be served by the existing substation. All of the utility’s customers will pay for that upgrade, not just the customers served by that substation and certainly not just the builder of the new homes or the business who built the new factory. That is a different form of “mandate”.
- At least with efficiency programs, all customers have the opportunity to participate and obtain the extra benefits.

Conclusion

Energy efficiency should be treated as a resource that can be acquired in lieu of other supply and demand resources; indeed, it should be acquired whenever it can deliver services at a cost that is lower than those other resources such as new power plants, new “poles and wires”, etc. By any measure, Ohio is nowhere close to making economically optimal levels of investment in end use electric efficiency.

The result is that it is spending far more on electricity supply than it should. Making efficiency standards voluntary will just perpetuate that reality, with adverse effects for consumers and the local economy.