

Before the
Senate Public Utilities Committee
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Senate Bill 310
Opponent Testimony of
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On Behalf of the
Environmental Defense Fund



Introduction

Chairman Seitz, Vice Chairman Larose, Ranking Member Gentile and distinguished members of the Committee, I appreciate the opportunity to appear before you today. My name is Cheryl Roberto and I serve as the Associate Vice President, Clean Energy Initiative for the Environmental Defense Fund (EDF). Last year, I testified as an interested party before this Committee during its consideration of S.B. 58. Today I speak in opposition to Senate Bill 310.

At EDF, we work to solve the most critical environmental problems facing the planet using market-based solutions. We use a uniquely effective approach, drawing on science economics, partnerships and ardent bipartisanship. We are a non-profit and accept no donations from any corporation engaged in activities in direct conflict with our objectives or activities or which could be a potential beneficiary of advocacy measures we promote.

EDF is not your typical environmental advocacy organization. We have a long history of working collaboratively with corporate partners beginning in 1990 when EDF was the first environmental group to work collaboratively with a leading corporation partnering with McDonalds to reduce the company's solid waste, including those foam "clamshell" containers. We recognize that technological innovations like hydraulic fracturing have unlocked vast U.S. reserves of natural gas, which has the potential to create jobs, increase domestic energy security and reduce climate pollution. We know that natural gas comes with its own set of serious risks to public health and the environment. EDF's immediate goal is to make sure that new energy investments, including new natural gas plants and their supply chain, are cleaner and safer. To achieve this, we have joined with stakeholders, committed to safe, environmentally responsible shale resource development, including other environmental organizations, foundations, and energy companies such as Chevron to create the Center for Sustainable Shale Development in Pittsburgh.

I lead EDF's Clean Energy Initiative, a national effort in which we work with utilities, commissions, legislatures, governors and other stakeholders in the nineⁱ states in which more than ½ of the US electricity is produced and consumed to reform utility regulation so that customers can choose clean energy. The policies we promote include: aligning market incentives to reward investments in clean energy; ensuring that the market values clean

resources fairly; improving access to consumer data, consumers and the grid; advancing new clean energy financing mechanisms; and optimizing electric grid efficiency.

Prior to joining EDF, I served as a commissioner on the Public Utilities Commission here in Ohio. This experience offers me unique insight into the particular challenges you are contemplating in the context of Senate Bill 310. While at the commission, I was instrumental in developing the rules implementing Senate Bill 221 and led our combined heat and power project. Within the National Association of Regulatory Utility Commissioners (NARUC), I served as vice chair of the Critical Infrastructure Committee, a member of the Electricity Committee, on the board of directors for the National Regulatory Research Institute, and on the Task Force for Environmental Regulation and Generation. I was tapped by NARUC to co-chair the National Electricity Forum 2012, a national conference addressing cutting-edge issues and potential collaborations to successfully modernize the nation's electricity infrastructure. I served and continue to serve on the executive group for a national network of more than 200 utilities, financial service companies, energy service companies, commissioners, and consumer advocates working toward the goal of achieving deployment of all cost-effective energy efficiency by 2020. I was requested by the Federal Energy Regulatory Commission (FERC) to appear before them and provide testimony at the Technical Conference on Reliability of the Bulk Power System. The testimony that I prepared received the unanimous, bi-partisan support of my colleagues on the Public Utilities Commission. Prior to my appointment to the commission, I served for six years as either the Director or Deputy Director for Operations for the City of Columbus Department of Public Utilities. My duties there included running the City's electric distribution utility.

Senate Bill 310: A Timely Review of Retail Electric Competition

As I discussed during my testimony last Fall, the nation's electricity system stands at a transformative crossroads which was not fully apparent to us in 2008. In just five years' time, we have seen a massive and dynamic reduction in the price of natural gas as a result of developments in hydraulic fracturing of shale. By all appearances, abundant domestic natural gas will be our reality for the foreseeable future, making natural gas in many instances a

cheaper alternative for electricity generation than coal. Beyond the price advantage of natural gas, aging coal-fired generation plants built decades ago (75% of all coal-fired plants in the United States are more than thirty years old with a typical useful life of forty yearsⁱⁱ) face challenges meeting environmental regulations. Even nuclear power faces economic challenges from the availability of natural gas. We are seeing fuel changes for centralized electricity generation that were not anticipated just five years ago.

The change in fuel for large or utility scale electricity generation units, however, is not even the most significant part of the transformation. The very model of centralized, utility-scale generation itself is no longer sacrosanct. The costs of distributed generation technologies such as solar photovoltaics, battery storage, fuel cells, geothermal energy systems, wind, and micro turbines are falling with renewable options becoming available near natural gas prices just a few years ago. Energy productivity is rising. In the last 40 years, the United States has experienced a 300% increase in economic output with less than a 50% increase in energy used to produce it.ⁱⁱⁱ The U.S. Energy Information Administration (EIA) actually projects that average energy use per person will decline between 2011 and 2040.^{iv} In our digital world, consumers have demands for power quality and reliability that have not been adequately served from electricity cascading from centralized generation plants through miles of transmission and distribution lines. Falling natural gas prices reduce the operational costs of natural gas fueled combined heat and power systems. Customers are increasingly interested in how distributed generation, on its own or working in concert with the power from the grid can meet their needs. Increased integrated of intermittent renewable sources, such as wind, mean that distributed resources including demand response have added value to the operators of the centralized grid – also driving interest in investment and adoption of distributed resources. The Edison Electric Institute, the association representing all U.S. investor-owned electric companies published a report earlier this year acknowledging and describing this “disruptive challenge” to the model upon which our electric service has been based for the past century.^v

Changes in the energy landscape in Ohio are significant. Each of the monopoly electric utilities (or “wires” utilities) purchases the load it requires to serve its customers through

auction or it is on a pathway to do so. Ohio consumers in the Duke Energy and AEP territories are increasingly able to participate in a two-way relationship with their utilities through technology platforms enabled by smart meter installation. Duke Energy has installed 426,000 smart meters. AEP has installed 110,000^{vi} and recently filed plans^{vii} with the Public Utilities Commission to add 900,000 more. Consumers with this technology platform will progressively gain more options to choose how, when, and if they will use electricity and from what source. Consumers served by Duke Energy and AEP are already enjoying briefer outages due to a more responsive distribution system informed by smart grid investments. Consumers are participating in energy efficiency opportunities and enjoying savings at levels we have not seen before.

An assessment released last November and conducted by Collaborative Economics on behalf of the EDF, concludes that Ohio has enjoyed a rapid expansion of economic opportunity in advanced energy. Ohio has successfully leverage public and private efforts to stimulate demand for advanced energy products and services, foster advanced energy innovation, and help the region capture economic benefits from advanced energy sector growth. Ohio policy makers from both sides of the aisle, in adopting Senate Bills 3, 221, and 315, set the stage to stimulate markets for advanced energy which has paid off in new economic development.^{viii}

Senate Bill 310: A Missed Opportunity

Senate Bill 310 stalls development of Ohio's energy system just as it is gaining momentum. While visionary legislation could be a vehicle to enhance Ohio's ability to capture innovation through a platform for competitive markets free from barriers to competition; this is not that legislation. As proposed, Senate Bill 310 would turn back the advances made over the past 14 years to open competitive markets and would operate to reverse those gains. Instead of harnessing future economic opportunity it would pull Ohio backward through anti-competitive retrenchment.

The goal: a platform for market competition

While the electricity market has been restructured in Ohio, “wires” utilities are not free market competitors. They remain monopolies – enjoying a state-granted right to serve captive customers exclusively. In return for that right of exclusivity, what should we expect? The role of economic regulation for “wires” electric utilities must be to ensure that they provide a platform for competitive retail electric services.

The former vertically integrated system was based upon centralized generation fired by tax-subsidized fossil fuels^{ix} with transmission and distribution lines providing a one-way delivery system to meet customers’ needs. The entire system was constructed with very little risk to private capital because the companies enjoyed state-granted monopoly rights to serve together with a regulated return on investment (which is why utility stocks were called “widows and orphans stocks”). With the electrification of the United States, year after year load growth made large-scale generation an economically efficient choice. Corporate affiliates of the “wires” utilities still own the generating plants built through rate of return regulation which are located at all of the best sites – near load centers and transmission line access (which they own as well).^x

In this time of transformation, however, from a one-way power delivery network to a two-way flow of both power and information when load growth is modest or flat, the monopoly “wires” utilities must become a platform for integration of the full range of retail electric services. In order for customer choice to become truly operative, customers must receive information about their usage (when and how much they use) and price signals indicating moment by moment the changed value of electricity. Distributed resource alternatives must be smoothly integrated into the grid with no preference given to the incumbent centralized generation. The diversity of options will provide opportunities to customers to hedge risk for both price and reliability (customers may find that their electric vehicle may be plugged back into their home to provide power to ride out storm outages.)

To realize the economic and environmental gains made possible by harnessing this transformation and not blocking it, the monopoly “wires” system must be scrubbed of all

artifacts of its former bias toward not only its corporate affiliates but toward centralized generation. A truly level competitive playing field means that the monopoly “wires” system is motivated only to meet its customers’ needs. Its success would be based upon the access it provides to the full range of cost-effective solutions - whether from centralized generation or a distributed resource, including generation, demand response, and energy efficiency.

If we fail to get regulation of the monopoly “wires” utility right, Ohio falls behind other states. Technologies and opportunities that we cannot imagine today will not be built or available here. Imagine if protectionist legislation had been adopted to block wireless and internet adoption. What technology applications would our families and businesses not be able to enjoy today? Getting regulation of monopoly “wires” in Ohio right means ensuring that they provide a platform for the full range of market competition for retail electric services free from market barriers.

A pathway to a platform for market competition

In considering what legislative changes, if any, are indicated consider whether any change could be proposed or has been proposed which would operate to remove a barrier to competition arising from the existing monopoly or from an artifact of the former vertically integrated monopoly. In order evaluate whether a regulatory intervention is indicated, ask the following three questions:

- What is the precise barrier to competition observed?
- Does it arise from the fact that the “wires” utility remains a monopoly or as a holdover effect from monopoly vertical integration?
- If it represents a barrier from monopoly status, what is a/the solution?

Using this framework to consider the provisions of Senate Bill 310, there are opportunities to remove barriers which were not taken and there are provisions which will operate to entrench barriers to competition.

What Senate Bill 310 could do but doesn't:

Free Corporate Structure of Anti-Competitive Conflicts

Observed barrier: Monopoly “wires” utilities share senior management, investors, and a board of directors with their affiliate competitive generation company and their affiliate federally regulated transmission company. This corporate structure creates inherent and insurmountable conflicting mixed economic incentives. High performance by the monopoly “wires” utility in creating a platform for competition for the full range of retail electric services can only serve to disadvantage the sister affiliate. While the monopoly “wires” utility should be endeavoring to level the playing field between centralized generation and distributed generation, fossil-fuel generation and renewable generation, and energy and energy efficiency, the generation affiliates’ economic success is built upon entrenching reliance upon existing fossil-fuel fired centralized generation. The basic laws of supply and demand put the affiliates at odds. Traditional generation will be and has been bumped off the stack by a level playing field for demand response, renewables, and energy efficiency.^{xi}

This corporate dilemma is documented in SEC statements by FirstEnergy^{xii} in which it acknowledges that its competitive energy services segment derives its revenue from the sale of generation which is exposed to market risk including energy efficiency and demand response. As discussed earlier, Duke Energy and AEP have undertaken and are undertaking substantial investment in technology to support customer choice and access to information in the form of smart meters. At the same time, FirstEnergy’s monopoly “wires” utility has eschewed investing in enabling technology, leaving its customers blind to the meaningful energy usage data which would empower them to participate in market choices. Strategic under-investment in infrastructure circumventing access obligations is classic anti-competitive behavior.^{xiii} Additionally, after investigation, the Commission’s expert found that FirstEnergy subjected its captive customers to procurement of renewable energy credits at prices of which it should have been aware reflected significant economic rents and were excessive. FirstEnergy’s monopoly “wires” utility has been found by the Commission to have made procurement decisions which were not prudent or reasonable for renewable energy requiring FirstEnergy to refund in excess

of \$43 million dollars to its captive customers. The Commission acknowledged in its review that FirstEnergy purchased renewable energy credits from its affiliate.^{xiv} Of all monopoly “wires” utilities in Ohio, FirstEnergy has been the least successful in delivering energy efficiency opportunities to its captive customers. Under investment, imprudent choices, lowest performing energy efficiency programs, these are logical responses from a corporate structure subject to inherent internal economic conflict.

Solution: Remove the conflict through “full ownership” corporate separation. Senate Bill 3 required corporate separation but permitted the possibility that it could be achieved through functional or structural corporate separation. Now that all of the monopoly “wires” utilities in the state are or soon will be acquiring energy on a competitive basis and given the inherent conflict that remains when less than full ownership corporate separation is achieved, it is time to remove the corporate separation loophole from Senate Bill 3. To illustrate how this could work, a potential draft amendment is attached as Attachment 1.

Open Billing System

Observed barrier: Monopoly “wires” utilities have a direct relationship with their customers through their billing systems. The billing system is open for competitive energy suppliers. It is not, however, open to competitive financial providers or competitive energy service providers. Even though competitive providers are willing to offer financial products and energy services which would enable customers to invest their own money in cost-effective energy efficiency upgrades at no upfront cost and pay for them over time, these providers are not permitted access to the billing system to service these loans. As it operates today, the monopoly “wires” utilities preferentially provide access to their billing systems to energy providers while not providing the same access to energy efficiency providers.

Solution: Open the billing system to “On Bill Repayment” offerings. These products enable a customer to use their own money to choose to meet their energy needs in the manner that works best for them. No rate payer or utility dollars are involved.

Compensate the Monopoly “Wires” Utility for Providing a Competitive Platform

Observed barrier: Current regulatory rate structures continue to reward monopoly “wires” behavior consistent with the former structure of vertically integrated, centralized generation. The utilities have an opportunity to enhance earnings in three ways: (1) reduce their expenses below those documented during the last test year; (2) sell more electricity than was captured in the billing determinants in the last rate case; or (3) invest in capital infrastructure. None of these opportunities provides a clear avenue for the utilities to earn more for providing unfettered access to competitive retail electricity choices.

Solution: Free the utility to be innovative. Reward the monopoly “wires” utilities for performance consistent with their responsibility to provide a platform for competitive energy services. The following are features of monopoly “wires” operations that support a competitive platform:

- A partnership between the utility and “prosumers” (proactive consumers engaged not only in the consumption of a product or service but in its design or development) – with each party both buying and selling electricity and electrical services.
- The utility has an opportunity for fully and timely recovery of distribution system costs. All utility customers should pay the value of the distribution systems to them whether receiving or contributing electricity from/to the grid.
- The utility should pay for benefits it receives from customer-sited resources taking into account all the value it provides the system including the value of deferring distribution resources like substations and transformers, peak power prices where appropriate, and hedging benefits.
- The utility must invest in the technology to make both the grid and consumer smarter about the flow of electricity with sensors, telecommunications, and computer technology. What a utility earns must be tied to providing benefits to consumers and the environment.

- The utility must make their customer data available to third party vendors, within privacy limits established by the customers. Utilities should facilitate the use of customer data by third party vendors to develop energy applications for the customer.
- The system needs to be open up to third party innovation. Utilities must provide an open platform on a non-discriminatory basis to clean technology third party providers and be paid fairly for successfully promoting access to consumer options. Rules for Interconnection for third party generation including roof top solar and microgrids should be easy and predictable and be able to be completed quickly.
- The utility should be provided the ability to retain earnings when operational costs are reduced through enhanced distribution system efficiency.
- The utility should have an ability to earn more for superior performance (including metrics related to increased customers' competitive access to a broader range of energy services.)

What Senate Bill 310 would do but shouldn't:

Cap Access to Utility Procured Cost-Effective Energy Efficiency

If operating an open and competitive market platform, monopoly "wires" utilities would function as an unbiased energy service procurement agent on behalf of the customer. It would provide customers access to the full range of energy service options, allowing customers to choose. Customers would be able to meet their energy needs from any combination of products; including being empowered and supported by their monopoly "wires" utility to purchase all of the cost-effective energy efficiency they wished.

Senate Bill 310 would block this open competitive platform and establish preferential procurement by the monopoly "wires" utilities for energy. Under Senate Bill 310, monopoly "wires" utilities would continue to procure, on behalf of their customers, unlimited volumes of energy through the competitive auction process and in doing so spend an unlimited amount of money. Senate Bill 310, however, would cap the energy efficiency that the monopoly "wires" utility would be authorized to procure. So while the typical price per kWh for energy procured

on behalf of customers through these auctions has ranged around \$0.06/kWh and the energy efficiency procured on behalf of the customers has cost less than half that amount, Senate Bill 310 would prevent the monopoly “wires” utility from procuring any more energy efficiency beyond 2014 levels --- leaving cheaper alternatives to meet Ohioans energy needs on the table.. Energy efficiency could double in cost and still be an advantageous choice for the monopoly “wires” utilities’ captive customers but Senate Bill 310 would block the utilities’ procurement of all available cost-effective energy efficiency. Despite recent gains in energy efficiency stimulated by Senate Bill 221, the economic analysis conducted by the monopoly “wires” utilities themselves demonstrate that there is far, far more cost-effective energy efficiency available.^{xv}

Recommendation: There is no advantage to competitive markets in Ohio to create a bias for energy procurement over energy efficiency procurement. It is the antithesis of retail competition. Senate Bill 310 should not cap energy efficiency procurement. Senate Bill 310 could benefit market competition in Ohio, however, by establishing as state policy codified in section 4928.02 of the revised code to ensure the availability to consumers of all cost-effective energy efficiency.

Impair Environmental Compliance opportunities

Unrelated to competitive market operation but worthy of note, Senate Bill 310 would impair, Ohio’s ability to utilize existing energy efficiency and renewable standards as a compliance pathway for impending Greenhouse Gas regulations for existing coal-fired power plants. The U.S. EPA is required to establish Greenhouse Gas regulations pursuant to Section 111(d) of the Clean Air Act. Those draft standards are expected to be issued in June. All indications are that it would entertain a state proposal capturing and accounting for Greenhouse Gas emission reductions in other areas of the economy for application to coal-fired generation plant emissions. Thus, a robust energy efficiency and renewables benchmark in a form recognizable to a broader market would become the pathway by which some of Ohio’s coal-fired generation may stay on line. This is the very pathway that has been urged and advocated by AEP CEO Nick Akins: “EPA should acknowledge early action measures taken by utilities to reduce their greenhouse gas emission profiles such as renewable energy additions and energy efficiency measures. In taking this step, the agency will be enabling utilities to move funds from environmental compliance to wires investments aimed at boosting reliability.”^{xvi}

Recommendation: Instead of capping energy efficiency, Senate Bill 310 should establish as state policy codified in section 4928.02 of the revised code that it is the policy of the state to ensure the availability to consumers of all cost-effective energy efficiency. Embracing energy efficiency can prove to be a pathway for Ohio's coal-fired generation fleet.

Conclusion

Senate Bill 310, as it is currently structured, misses opportunities to remove identified barriers to competition arising from the existing wires monopoly or artifacts of generation monopoly. What is more unfortunate, however, is that it would reverse competitive market gains already put in motion by Senate Bills 3, 221, and 315 and limit options available to Ohio's coal-fired generation plants for compliance with pending Greenhouse gas regulations.

In light of the transformative changes occurring within the energy services industry, we advise you to continue to trust your commission but to provide to them clear direction and authority to ensure that monopoly "wires" utilities provide a platform for competition for all forms of energy services. These policies should include:

- set utilities on a path to full ownership corporate separation
- use fact-based economic analysis to set performance standards (including acquisition of all-cost effective energy efficiency and customer access to all demand side resources)
- align utility earnings with quality of performance
- open the door to on bill repayment

We urge you to categorically reject legislative proposals in Senate Bill 310 which would:

- establish anti-competitive caps on energy efficiency acquisition

Thank you for your attention. We are hopeful that you will take this opportunity to advance competition for energy services markets in Ohio leading to both a stronger economy and healthier environment.

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- ⁱ Texas, Pennsylvania, Ohio, North Carolina, New York, New Jersey, Illinois, Florida, and California.
- ⁱⁱ http://www.eia.gov/energy_in_brief/article/age_of_elec_gen.cfm
- ⁱⁱⁱ 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>
- ^{iv} Annual Energy Outlook 2013, released April 15-May 2, 2013 http://www.eia.gov/forecasts/aeo/chapter_market_trends.cfm
- ^v Kind, Peter *Disruptive Challenges: Financial Implications and Strategic Responses to a Changing Retail Electric Energy Business* (EEI, January 2013). <http://www.eei.org/ourissues/finance/Documents/disruptivechallenges.pdf>
- ^{vi} <http://www.puco.ohio.gov/puco/index.cfm/consumer-information/consumer-topics/smart-grid-in-ohio/>
- ^{vii} Case No. 2013-24.
- ^{viii} Ohio's Advanced Energy Journey (Clean Energy Development Series, November 2012) http://business.edf.org/sites/business.edf.org/files/AdvancedEnergy_OH_Nov2012.pdf
- ^{ix} Dinan, Terry M. *Testimony Federal Financial Support for Fuels and Energy Technologies Before the Subcommittee on Energy Committee on Science, Space, and Technology* (U.S. House of Representatives, March 13, 2013) <http://www.cbo.gov/sites/default/files/cbofiles/attachments/03-12-EnergyTechnologies.pdf>
- ^x Testimony of Chairman Todd A. Snitchler before the House of Representatives Policy and Legislative Oversight Committee on electric generation delivered October 15, 2013. <http://www.puco.ohio.gov/emplibrary/files/media/testimony/House%20Policy%20and%20Legislative%20Oversight%20Testimony%20101513.pdf>
- ^{xi} See PJM capacity auction results. <http://www.pjm.com/~media/about-pjm/newsroom/2013-releases/20130524-pjm-capacity-auction.ashx>
- ^{xii} FirstEnergy, Form 10-Q, for the quarter ending June 30, 2013, p. 62. <http://www.sec.gov/Archives/edgar/data/1031296/000103129613000034/fe-06302013x10q.htm>
- ^{xiii} OECD Reports. Report on Experiences with Structural Separation (OECD Competition Committee, 2011) p. 15 <http://www.oecd.org/daf/competition/50056685.pdf>
- ^{xiv} In re: Alternative Energy Rider, Case No. 11-5201-EL-RDR (Opinion and Order, August 7, 2013) <http://dis.puc.state.oh.us/TiffToPDF/A1001001A13H07B41149F98309.pdf>
- ^{xv} See Robert, Cheryl & Noah C. Dormady, The Costs of Inefficiency: Ignoring Ohio's Energy Efficiency Potential (Policy Paper, The Glenn School Of Public Affairs) <http://glennschool.osu.edu/research/policy/cost-of-inefficiency/The%20Costs%20of%20Inefficiency%20-%20Dormady3.pdf>
- ^{xvi} "AEP CEO: Polar vortex should be a 'red flag' for EPA as it crafts greenhouse gas standards", SNL (April 7, 2014) <http://www.snl.com/InteractiveX/article.aspx?ID=27664575&KPLT=4>