



**Written Testimony Opposing House Bill 114
Before the Ohio Senate Energy and Natural Resources Committee
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Chairman Balderson, Ranking Member O'Brien, Vice Chair Jordan and members of the committee, thank you for the opportunity to provide written testimony.

My name is Ray Fakhoury and I represent the Advanced Energy Economy (AEE), a national business association representing 120 companies with operations and facilities in the state of Ohio and across the nation. Ohio AEE represents the interests of local and national AEE member companies in Ohio.

Our business organization is unique, advocating for an approach that values technologies that diversify the state's energy portfolio and improve the grid's reliability. The businesses that make up our membership currently produce, deploy, or use over 50 different energy technologies including battery storage, advanced natural gas generation, solar, wind, demand response, energy efficiency, combined heat and power, electric vehicles, and smart grid technologies, among many others. In addition, many businesses with corporate commitments to procuring their energy needs from advanced energy have joined AEE to reduce policy hurdles and barriers preventing them from reaching their ambitious goals.

AEE and our member companies oppose House Bill 114 because it limits the benefits of advanced energy technologies for Ohio consumers. We ask the Committee to consider the following:

- **Falling costs, technological innovation, and consumer preferences are driving a transition to a more diverse resource mix in which advanced energy plays an increasingly dominant role.**
- **Advanced energy brings numerous benefits. For instance, advanced energy resources guarantee a consumer's energy cost through long-term fixed contracts that are not susceptible to price volatility. These technologies give consumers more control over their own energy use.**
- **Technological innovation ultimately benefits consumers by increasing competition in the marketplace among energy technologies, driving down the cost of electricity, and increasing opportunities for customers to exercise choice in their power sources and save money by controlling their utility bills.**

Market dynamics have overtaken Ohio energy policy as the driver of advanced energy growth, as the cost of advanced energy resources has dramatically declined while corporate demand from Fortune 100 and 500 companies has significantly increased.

The ability to control energy costs and sources is a key priority for many companies, and a growing number of corporations are specifically seeking opportunities to purchase advanced energy – a choice often backed by an internal sustainability or renewable energy target. Since 2007, Lazard, a financial advisory and asset management firm, has tracked the levelized cost (LCOE), which measures the average cost of electricity over the life of a project, including the costs of upfront capital, operations and maintenance, fuel, and financing, of power technologies using a consistent methodology. Lazard's annual analyses show that from 2009 to 2016, the LCOE for utility-scale wind and solar power has declined by 66% and 85%, respectively.¹

As renewable energy technologies continue to drop in price, these sources have become an increasingly attractive option for companies seeking to lower costs while protecting against fluctuating fuel prices. In the six years that AEE has been tracking, advanced energy in the United States has grown by an average of

¹ Lazard's Levelized Cost of Energy Analysis, version 10.0 (2016).

5% annually for a total of 28% over 2011. Today, 71% of Fortune 100 and 43% of Fortune 500 companies have renewable or sustainability commitments.²

Most recently, GM announced its commitment to investing in renewable energy and energy efficiency in pursuit of 100% clean energy to power their facilities and operations across the nation.³ While GM announced a portion of its renewable energy purchase would come from grandfathered wind projects in Ohio, the majority of their clean energy comes from outside of the state in places like Illinois and Texas due to Ohio's restrictive wind setback standards. Ohio's policies are pushing corporations to look to other states to locate new facilities and procure their energy demand, resulting in a missed opportunity for economic development in Ohio.

By contrast, House Bill 114 would reclassify the state's requirement to invest in renewable energy and energy efficiency as a voluntary "goal," making the standards completely ineffective before eliminating them altogether. Additionally, HB114 includes provisions that would further erode cost-effective energy efficiency investments by reducing Ohio's annual energy savings targets, allowing utilities to take advantage of heat-rate improvements at generating facilities to count toward compliance, and eliminating the opportunity for mercantile customers to invest in utility-initiated efficiency programs.

Furthermore, HB114 fails to include language that corrects Ohio's restrictive wind setback standard, a provision that has impeded new wind development throughout the state. Any legislation that attempts to take a comprehensive approach to Ohio's energy policy must ease restrictive barriers for consumers that wish to make these investments. The proposed legislation would stifle the growth of the advanced energy industry in Ohio and drive a \$10 billion market opportunity to neighboring states while driving up the cost of electricity for all Ohio consumers.

Advanced energy technologies provide consumers with fixed energy prices that are not susceptible to the fuel price volatility or unplanned outages similar to what Ohio experienced during the 2014 Polar Vortex.

Investments in advanced energy resources provided consumers with a hedge against energy price spikes or unplanned power outages, increasing the grid's resilience and reliability. During the Polar Vortex of 2014, the extreme cold caused a winter-record demand for electricity and also contributed to the failure of 22% of the generation in PJM Interconnection territory.

When states become over reliant upon a few energy resources, extreme weather events result in increased costs on all consumers. An assessment conducted by the North American Electric Reliability Corporation (NERC) of the Polar Vortex event and found that, of unplanned power plant outages, coal plants accounted for 26% of the total and natural gas 55%. Outages due to extreme cold were caused by the freezing of onsite fuel supplies like coal piles, frozen control and sensor equipment, and the inability to receive fuel from outside providers due to natural gas pipeline constraints.^{4,5} Facing this situation, grid operators were able to turn to advanced energy resources such as demand response and wind energy to meet electric power needs and keep the lights on even when other resources failed.

² Corporate Advanced Energy Commitments, March 2016 - http://info.aee.net/growth-in-corporate-advanced-energy-demand-market-benefitsreport?utm_campaign=Press%2FMedia+Outreach&utm_source=hs_email&utm_medium=email&utm_content=38742484&hsenc=p2ANqtz-8FIVjr3slvGhsZMuZnUXCDBF2XBtDa67EDFpf989Fq5GOR-LGa2KpiCNR3TsoTqR6KJiG4MXRdvOPz_qy0XVDiFAWvg&_hsmi=38742484.

³ General Motors going 100% green in Ohio, Funk, John. Cleveland Plain Dealer, September 2017, http://www.cleveland.com/business/index.ssf/2017/09/general_motors_going_100_perce.html.

⁴ NERC. "Polar Vortex Review." (Sept. 2014) available online at http://www.nerc.com/pa/rrm/January%202014%20Polar%20Vortex%20Review/Polar_Vortex_Review_29_Sept_2014_Final.pdf.

⁵ PJM Interconnection. "Response to Consumer Reports on 2014 Winter Pricing." (19 Sept. 2014) available online at <http://www.pjm.com/~media/documents/reports/20140919-pjm-response-to-consumer-reports-on-2014-winterpricing.ashx>.

Purchasers of electricity from advanced energy resources are also not susceptible to the price volatility associated with commodity fuels, having entered into bi-lateral agreements or power purchase agreements (PPAs) to procure their energy from an independent generator at a fixed price. These PPAs allow for businesses and customers to purchase their electricity at a fixed cost per/kWh directly from a competitive third-party generator. This agreement would provide a business with financial certainty that spans 10, 15, or 20 years, allowing businesses to hire more staff, invest in research and innovation, or expand operations. While some contracts are considered proprietary information, publicly announced PPA contracts in 2016 totaled 1.6 GW of new renewable energy capacity with an average price per/MWh declining significantly since 2009.⁶

In addition to long-term fixed energy costs, advanced energy technologies provide consumers and the grid with a number of economic and reliability benefits. A recent report has found that Ohio enjoys the second-largest number of advanced energy jobs in the Midwest, boasting nearly 105,500 jobs in 2016 across the various advanced energy technologies. Energy efficiency jobs leads the way with well over 81,000 employees and over 10,000 working within the renewable energy generation sector, technologies that reduce energy consumption and cost by decreasing dependence on price-fluctuating energy resources.⁷

Innovative technologies reduce consumer costs and energy consumption, enhance grid reliability, and meet new demand at a time when uneconomic energy resources are being retired.

As the deployment of advanced energy accelerates in Ohio, consumers are able to reduce their energy costs and manage their energy consumption. When renewable energy technologies are paired with waste-reducing energy efficiency technologies, consumers and businesses benefit through lower electricity bills.

Modernizing the aging energy infrastructure that has supported American prosperity for decades and moving toward a more diverse and dynamic energy system are the keys to maintaining a reliable electric power system in the future. Competition and innovation will drive down costs while meeting our energy needs as they evolve. And as mentioned earlier, this process has not only improved the overall functioning of the grid but acted as an economic engine as well. Giving these resources the chance to contribute to and compete in the U.S. energy system has resulted in growth and prosperity, and will continue to do so going forward.

State policy should pursue an all-of-the-above approach that diversifies the state's energy portfolio, protecting consumers from future rate increases due to fuel price fluctuations and uneconomic generating facilities.

Ohio lawmakers are currently debating energy policies that could improve the state's national competitiveness, making the energy these businesses need to power their operations and facilities more secure, clean, and affordable – through reducing energy use through efficiency, allowing customers to access advanced energy technologies, or investing in a diverse energy portfolio. Ohio's energy policy should consider these resources on an economic, least cost basis.

Market certainty attracts private business investment. Unfortunately, in Ohio, continued attempts to weaken the state's renewable energy and efficiency standards have drastically stalled investment in advanced energy projects and severely limited options for purchasing renewable energy that corporate customers want.

Energy policy has implications for both consumer costs and job creation – and both need to be taken into account. In addition to ensuring the state invests in renewable energy and energy efficiency by maintaining strong, robust RPS and EERS targets, Ohio must overturn the stringent wind-siting setback requirements, adopting the standard proposed by Senator Hite in Senate Bill 118. This approach will bolster grid reliability, reduce energy costs for all consumers, and diversify the state's energy portfolio, strengthening our ability to serve our communities in times of natural disasters.

⁶ Business Renewable Center Deal Tracker, The Rocky Mountain Institute, October 2017; <http://businessrenewables.org/corporate-transactions/>.

⁷ Clean Jobs Midwest 2017, October 2017, <https://www.cleanjobsmidwest.com/state/ohio>.

AEE appreciates the opportunity to testify before the Committee today, and looks forward to working with each of you to ensure that technological innovation continues to thrive in the Ohio to preserve a reliable, resilient, and affordable energy system.