Interested Party Testimony Submitted to the Ohio Energy Mandates Study Committee

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Greg R. Lawson, Statehouse Liaison
The Buckeye Institute for Public Policy Solutions

Thank you Co-Chair Balderson and Co-Chair Roegner, and members of the Energy Mandates Study Committee for the opportunity to testify today. My name is Greg R. Lawson and I am the Statehouse Liaison and Policy Analyst with The Buckeye Institute for Public Policy Solutions. The Buckeye Institute is a think tank that promotes a low-tax, low-regulation environment, and free-market public policy solutions for Ohio.

Ohio's renewable mandates—collectively known as the Alternative Energy Portfolio Standard or "AEPS"— as well as energy efficiency mandates intervene in and ultimately distort Ohio's energy markets. These energy mandates—like virtually all government mandates—amount to nothing less than the government picking winners and losers in the marketplace. Unsurprisingly, such market manipulation and "bureaucrat-knows-best" thinking has yielded poor results for Ohio, her businesses, and her citizens. The AEPS mandates hurt Ohioans in at least three ways.

First, AEPS mandates artificially raise electricity prices for residential, commercial, and industrial consumers. Artificially high prices make Ohio less competitive, slow private sector economic growth and job creation, and exact a harmful regressive tax on Ohioans living on lower and fixed incomes. Second, AEPS mandates discourage energy innovation by enabling less efficient resources and technologies to profit in the open market regardless of their consumer value. Third, AEPS mandates raise concerns about electric grid reliability as intermittent renewable energy resources displace other, more reliable energy sources that provide on-demand power.

Higher Energy Costs and Their Consequences

Ohio maintains its Alternative Energy Portfolio Standard mandates at a cost. Some of that cost is transparent and obvious to consumers—higher energy bills, for example—while some of that cost is hidden and virtually unseen beneath the market's surface—such as tax subsidies, and the hours, wages, and even jobs that are cut by businesses that must pay the higher tax and energy bills to subsidize renewable energy providers. Those hidden, unseen costs may be paid less directly, but Ohioans pay them nonetheless.[1]

Wind energy mandates offer one example of how the AEPS can be a net cost for consumers and a drag on the state's economy. First, mandated wind resource use negatively affects existing fossil fuel generators and drives up electric costs per MWh by requiring utilities to buy energy from the less efficient and cost-effective renewable energy providers. This requirement, in turn, enables uncompetitive resources to take market share directly from the more competitive and cost-effective dispatchable plants. By losing market share, dispatchable plants sell less electricity, which raises the price per Kwh required to break even. A new study from the Institute for Energy Research estimates that these additional costs of adding non-dispatchable resources ranges from $15 to $30 per MWh.[2]

Second, electricity is a "use-it or lose-it" commodity, and without batteries to cost-effectively store and release wind energy on-demand, utilities can only buy and resell wind energy when it is available. This requires dispatchable plants to ramp their own output up and down—or

[1] Frederic Bastiat, "What is seen and what is not seen." Selected Essays on Political Economy. Seymour Cain, trans. 1995. Library of Economics and Liberty, http://www.econlib.org/library/Bastiat/basEss1.html (accessed Jan. 19, 2015).

[2] Institute for Energy Research, "The Levelized Cost of Electricity from Existing Generation Resources," June 2015, http://instituteforenergyresearch.org/wp-content/uploads/2015/06/ier_lcoe_2015.pdf.

"cycle"—more than they would without the mandates in order to accommodate the less reliable wind energy production. The additional "cycling" causes dispatchable plants to run less efficiently than they otherwise would and artificially increases their operating cost.[3]

Third, wind and other renewable energy providers cost taxpayers their tax dollars through exorbitant government subsidies. Federal programs known as the 1705 loan guarantee program and the 1603 loan program artificially "lowers the cost of a new wind farm by about 55% and solar technologies by about half relative to a no-subsidy case."[4] Those lower costs are made up with subsidies paid for with tax dollars.

Finally, wind farms require new and retrofitted transmission infrastructures to accommodate their intermittency. This new infrastructure and higher transmission costs are ultimately borne by businesses, consumers, and taxpayers.

Together, these costs on existing energy providers, taxpayers, and consumers make new mandated renewables less cost-effective than existing dispatchable plants.

Energy efficiency mandates are another example of expensive, inefficient government mandates that harm more than they help the economy. The National Bureau of Economic Research recently studied real-world outcomes of the largest energy efficiency mandate program to date and found that the program's savings were 2.5 times less than expected, while the costs were

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[3] George Taylor, PhD, and Thomas Tanton, "The Hidden Costs of Wind Electricity," American Tradition Institute, December 2012, http://eelegal.org/wp-content/uploads/2013/09/Hidden-Cost.pdf.
[4] Carol Browner, Ron Klain, Larry Summers, "Memorandum for the President- Renewable Energy Loan Guarantees and Grants," The White House, October 25, 2010, http://www.politico.com/pdf/PPM182_101105_renewable_energy_memo.pdf

more than double the value of the energy savings.[5] A similar study of Ohio's energy efficiency mandate found that most compliance efforts have consisted of utilities subsidizing energy efficient light bulbs for businesses that would have purchased them anyway, and passing the cost on to all ratepayers.[6] This is a classic example of wasteful "free riding" that benefits a few at the expense of the many.

All of these costs impose real consequences for businesses and consumers. Prior to Ohio's AEPS freeze, large employers such as The Timken Company already described the increased, exorbitant costs created by the AEPS, and recently warned that renewing the AEPS mandates will likely result in layoffs.[7] In 2011, the American Tradition Institute issued a similar warning, stating:

> *"The AEPS will impose costs of $1.427 billion in 2025, within a range of $262 million and $2.373 billion. For the period of 2016 – 2025, the AEPS mandate will cost $8.629 billion, with a low estimate of $5.22 billion and a high estimate of $10.929 billion. As a result, the AEPS mandate will increase electricity prices by 0.97 cents per kilowatt-hour (kWh), or by 9.3 percent, within a range of 0.18 cents per kWh, or by 1.7 percent, and 1.61 cents per kWh, or by 15.4 percent."*[8]

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[5] Meredith Fowlie, Michael Greenstone, and Catherine Wolfram, "Do Energy Efficiency Investments Deliver? Evidence from the Weatherization Assistance Program," The Becker-Friedman Institute for Research in Economics, June 2015, http://econresearch.uchicago.edu/sites/econresearch.uchicago.edu/files/paper_draft_06_15_clean.pdf.
[6] Robert J. Michaels, "Ohio's Energy Efficiency Resource Standard: Where Are the Real Savings?," Mercatus Center at George Mason University, December 2014, http://mercatus.org/sites/default/files/Michaels-Energy-Efficiency-OH.pdf.
[7] Peggy R. Claytor, "Senate Public Utilities Committee Proponent Testimony - Senate Bill 310, April 8, 2014," The Timken Company, April 8, 2014, http://www.ohiomfg.com/wp-content/uploads/2014-04-11_lb_energy_Peggy-Claytor-TimkenTestimony-SB-310.pdf.
[8] David G. Tuerck, Paul Bachman, and Michael Head, "The Cost and Economic Impact of Ohio's Alternative Energy Portfolio Standard," The American Tradition Institute, April 2011, http://heartland.org/sites/default/files/ati_oh_rps_study.pdf.

These rising energy costs are not without consequences. As energy costs rise, Ohio's economic growth rate falls. Looking specifically at Ohio, The American Tradition Institute study found:

> *"Upon full implementation, the AEPS law will reduce economic output in Ohio. Ratepayers will face higher electricity prices, which will increase the cost of living and the cost of doing business in the state. By 2025 Ohio will employ 9,753 fewer workers than without the AEPS policy, within an estimated range of 2,480 and 15,523 workers."*[9]

More broadly, the Heritage Foundation, in a 2010 report, estimated that a national RPS would raise electricity rates by 36 percent for residential customers and 60 percent for industrial users while costing the country 1 million jobs.[10]

Ohio lost nearly 620,000 private sector jobs over the past decade and has just begun to climb out of a deep economic chasm. The AEPS is almost certain to harm Ohio's economy and jeopardize the state's road to recovery. Renewing the AEPS would be a proactive step to *slow* the pace of recovery, and is simply not worth the risk to Ohio's economy.

Regressive Mandates

Ohioans with low or fixed incomes spend higher portions of their income on energy, which means that higher energy prices have a greater impact on their ability to afford other necessities

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[9] *Ibid.*

[10] David Kreutzer, PhD, Karen Campbell, PhD, William W. Beach, Ben Lieberman, and Nicolas Loris, "A Renewable Electricity Standard," The Heritage Foundation, May 5, 2010, http://www.heritage.org/research/reports/2010/05/a-renewable-electricity-standard-what-it-will-really-cost-americans.

such as food and shelter. The AEPS and other policies that raise energy prices have an especially strong negative effect on the most vulnerable Ohioans. As more vulnerable citizens are forced into "energy poverty" through high electric bills and job losses, the state is strained by increasing demand for government energy assistance.[11]

Stifling Renewable Energy Innovation

Across the country, RPS mandates discourage investment in renewable energy and energy-efficient products. A competitive market tends to reward companies whose investments and products create value for consumers—a profit incentive to invent and produce more valuable products than are currently available. Unfortunately, government mandates skew the market and reward politically favored companies and industries with profits regardless of the value that those companies create for consumers. This market manipulation removes the profit incentive for investments in truly innovative and valuable products, which in turn reduces private sector investments and innovation. By reducing investments in innovation, the mandates may ultimately crowd-out entrepreneurs who might otherwise bring better ideas and products to the market—a troubling, unintended consequence that may hinder or prevent the large-scale use of the best energy-efficient technologies. [12] Worst of all, companies that currently benefit from mandates and government subsidies will likely lobby to maintain those mandates and subsidies and thereby keep competitors out of the market at the taxpayers' expense.

Grid Reliability

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[11] Barbara Alexander, Cynthia Mitchell, and Gill Court, "Renewable Energy Mandates: An Analysis of Promises Made and Implications for Low-Income Customers," Oak Ridge National Laboratory, June 2009, www.liheap.ncat.org/dereg/renewables%20and%20low%20income.doc.

[12] Joe Nichols, "Power to the People: Repeal Ohio's Counterproductive Energy Policies," The Buckeye Institute for Public Policy Solutions, July 20, 2015.

The safety and reliability of the electric grid is a serious concern, and mandated renewable energy sources could begin to jeopardize that reliability. PJM and other grid operators use complex mathematical constructs and futures markets to estimate capacity and ensure reliable energy delivery. But the mandated increase in renewable energy sources in the market has required changes to these tools and market designs.

Unfortunately, these design changes are relatively untested and may be imprecise because they have not been thoroughly calibrated through the trial-and-error of experience. Should they prove imprecise and faulty, the grid may prove less reliable for consumers. As more inefficient, variable energy is forced onto the grid, there is no guarantee that the designs and tools will work properly to keep the necessary level of capacity online without requiring government subsidies and tax burdens. The independent market monitor for PJM testified about this potential before this committee in April, stating:

> *"Procuring capacity when it is not needed for reliability, requiring it to clear in the auction through an offer price below its costs and providing subsidies in the form of additional out of market revenue is not consistent with the PJM market design. The result would be to artificially depress prices in the PJM capacity market. This would negatively affect the incentives to build new generation and would likely result in a situation where only subsidized units would ever be built."*[13]

[13] Joseph Bowring, "Testimony of Joseph Bowring, Independent Market Monitor for PJM," Monitoring Analytics, April 20, 2015, http://emsc.legislature.ohio.gov/Assets/Testimony/41615-joseph-bowring.pdf.

In other words, government mandates for artificially high levels of renewable energy sources and energy efficiency may require government subsidies for dispatchable power plants as well.

A Brief Reply to Mandate Advocates

Ignoring many of these concerns, advocates of Ohio's AEPS warn that repealing or even re-freezing the mandates would cost Ohio millions of dollars and thousands of jobs already invested and at work in the renewable energy sector. As my Buckeye Institute colleague, Joe Nichols, has argued, however, those jobs and investment dollars allegedly at risk will not simply evaporate into thin air.[14] Rather, most of the investment dollars will likely stay in Ohio. Investors and workers will shift their funds and labor to other, more productive industries that don't need mandates to survive. This, in turn, will allow businesses to create more jobs and grow the economy in the long run.

Although some current in-state resources may migrate to sunnier or windier states that may support renewable energy more efficiently, Ohio could then focus on its comparative advantage and make the products that it is best at making. Ohioans who want energy from renewable energy sources could buy it at a lower cost from those other states where it is produced more efficiently. This would be a positive step, not a negative one. Additionally, some so-called "green jobs" would likely remain in Ohio despite the absence of the AEPS due to Ohio's comparative advantage in manufacturing. For example, even without the AEPS, Ohio manufacturing firms could still produce wind turbines or solar panels for energy producers in other states where access to reliable wind and sun is one of *their* comparative advantages.

[14] Joe Nichols, "Why Ending the Renewable Energy Mandate is Good for Ohio Families and the Economy," The Buckeye Institute for Public Policy Solutions, January 29, 2015, http://buckeyeinstitute.org/uploads/files/Pew%20Renewables%20Final(1).pdf.

Conclusion

In conclusion, government mandates are misguided attempts to manipulate markets and pick winners and losers from among our businesses and innovators. The AEPS is no exception and should be repealed. The AEPS costs consumers, businesses, and taxpayers; risks jobs and stymies economic growth; hampers innovation; and threatens the reliability of electric grids on which we all depend. The mandates prop-up today's non-competitive energy sources through government subsidies and costly regulations that thwart full competition. Eliminating the AEPS mandate will help level the energy playing field, lower energy costs, strengthen Ohio's energy infrastructure, and keep our economy on the road to recovery.

Thank you again for your time. My colleague and I will be glad to respond to any questions that the committee might have.