

Comments of Ned Ford on House Bill 6 – April 22, 2019

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Ned Ford is a veteran advocate for cost-effective clean energy who has promoted cost-effective energy efficiency in Ohio for thirty-five years. He has participated in all of the Ohio utility efficiency collaboratives since 2009, and in the collaboratives of three of the five Ohio utilities which conducted efficiency programs from 1992 through 1996.

The proposal before you today, House Bill 6, has a catastrophic flaw due to the failure of the bill's authors to understand the savings produced by Ohio's utility efficiency programs.

HB 6 will eliminate Ohio's electric utility efficiency programs which saved \$877 million in 2017 at a cost of \$190 million. You have heard testimony that HB 6 would result in savings. That testimony is seriously mistaken. My spoken comments will address the single worst flaw in the proposed law, but my written statement will identify several other flaws. All together these flaws should be recognized as part of a poorly invented wish-list that fails even to give the designated agency proper parameters. Without proper parameters no one can guess what the actual impact of the law would be.

From 2009 to 2018 Ohio's efficiency programs have cost approximately \$1.5 billion dollars. As required by Ohio's law, these programs spend money which is authorized on the grounds that the programs demonstrate expectation of saving much more money. After-the-fact verification is also required by law. Each of the four affected Electric Distribution Utilities (EDU) files a report on May 15th of every year. These reports are prepared by independent consultants who are hired by the utilities to conduct verification for them. My written comments have links to the reports filed in 2017. Since we will not have the 2018 filings for another few weeks I will discuss the cumulative costs and benefits from 2009 to 2017. 2018 will not be a surprise. It will be very much the same as 2017.

Each Annual report by the four Ohio EDU's is 400 to 600 pages long and includes detailed analysis of each program, description of the cost-effectiveness analysis process, and a thorough verification report including description of the methodology. Advocates of efficiency programs supported this level of verification because we did not want to see a repeat of the termination of programs which happened in 2006 due to the failure of an administration to understand how much money the programs were saving. We clearly have the same failure today, but at least it is not due to a lack of available information.

The impact of installed efficiency hardware from 2009 to 2017 is a vital part of the reason Ohio is beginning to move out of the Great Recession. I note the 81,000 jobs reported to result from these efficiency programs by another organization which has produced a report on Ohio's Clean Energy Jobs, in the Notes/Links below. My conservative analysis of the reported savings is that installed hardware through the end of 2017 caused savings of \$4.489 billion dollars. Although this number is large, it is only 3.4% of the \$126 billion Ohio citizens, business and industry spent on electricity over these nine years. I have been tracking Ohio's utility efficiency program

spending and saving since 2009, but just last week a respected consortium of utilities and other organizations that work in the efficiency arena, the Midwest Energy Efficiency Alliance (MEEA), released a fact sheet which suggests my analysis is conservative, and that the correct value is \$5.1 billion in savings from 2009 to 2017.

http://www.mwalliance.org/resources/meea-publications?f%5B0%5D=filter_by_type%3A39

In 2007 we proposed that the PUCO be required to retain its own independent evaluator, who would review the evaluations done by the utility evaluators. This was not included in the law, but the PUCO was required by the original 2008 law to provide the General Assembly with annual reports on the costs and benefits of the efficiency and renewables programs. This has never happened, and in 2013 the law was changed so that the PUCO is not at present in violation of the law, although the failure to produce reports on costs and benefits does fail logical expectation.

Installed hardware to date is going to continue to save energy for some years to come, whether or not we add more in the future. This is easily quantifiable. Installed hardware as of 2017 will save a total of \$7.65 billion, which is \$5.88 for every dollar spent on these programs. MEEA should speak for themselves, but their analysis is about 10% stronger than mine, so they will probably find savings to exceed \$8 billion.

Year	2017	2016	2015
Reported Cost	\$190,152,237	\$141,017,889	\$140,088,236
Reported First Year Savings	1,862 (GWh's)	1,282 (GWh's)	1,661 (GWh's)
Calculated Lifetime Savings	\$7,654,573,322	\$5,778,144,723	\$5,708,530,861
Cumulative Savings Per Year	\$4,491,434,973	\$3,614,537,655	\$2,765,927,159
Savings Caused by Year	\$876,997,318	\$794,180,479	\$951,039,145
Cumulative Savings in Year	\$1,099,371,442	\$757,126,008	\$749,180,941

(2015 and 2016 were years during which the SB 310 “Freeze” was allowed. Only FirstEnergy actually reduced its programs, but the announcement of the pending FirstEnergy “Freeze” caused a surge of commercial program applications in late 2014 which were accounted in the 2015 year, thus reduced spending from 2014 but only slightly reduced reported savings).

Under existing law the efficiency standard is to double in 2021. This was originally set for this year, but the 2014 “freeze” delayed the schedule for two years. This delay has injured Ohio citizens, businesses and industry.

The 2013 and 2014 laws also weakened the standards by allowing industrial customers to escape their fair share of the program costs. That weakening was called “opt-out”. If HB 6 is proposed, customers of all classes will not “opt-in” because their sense of fairness will overcome their personal interest in having the utility secure the cheapest resource possible – which is what efficiency does. HB 6 requires a customer to send a letter to the PUCO asking to be charged for the efficiency resources, and this will not happen. HB 6 would terminate Ohio’s efficiency programs if it were treated like a reasonable proposal and not the uninformed wishlist that it is.

The opt-out is based on the false assertion that customers who do not participate in programs do not benefit. Capacity savings created by nine years’ worth of programs

through 2017 were 1,583 MW's. When the reserve margin and transmission and distribution hardware needed to facilitate the consumption of the output of 1,583 MW's of generation are considered, the value of avoided equipment created by Ohio's efficiency programs is well over \$3 billion. The value does not need to be determined with any precision, as long as it is acknowledged that the value provides benefit to customers of all classes – even when they do not participate directly in the programs – which is greater than their fair share of program costs.

Proponents of HB 6 have made much of the jobs which would be lost if Ohio's two nuclear plants were closed. But the job loss is insignificant compared to the jobs which could be created if Ohio lawmakers stopped passing legislation that weakens Ohio's development of efficiency, wind and solar. Or the jobs which would be lost if Ohio rejects the Clean Energy revolution by passing HB 6. A link to Ohio's clean energy jobs (see notes) shows 9,841 Ohio jobs from renewable generation. This is small compared to the 81,676 jobs produced by efficiency, but it could be doubled within a year or so and expanded greatly every year for decades to come if the 2014 wind setback law is returned to the original setback, or if Senator Matt Dolan's alternative bill from the 132nd General Assembly is reintroduced and passed.

The nuclear plants required massive rate increases when they were first built, and those rate increases weakened the economy in Northern Ohio for decades. In fact the high rates required by the two Ohio nuclear plants are a major reason that Youngstown, Cleveland and Toledo had the highest home foreclosure rates in the nation during the Recession. Detroit, which was also subject to high home foreclosures during the Recession was similarly impacted by a different, expensive and subsidized nuclear plant that also required much higher rates than the rest of the state or the rest of the nation. The FirstEnergy companies were in the top 20 most expensive utilities in the United States for most of a quarter century as a result of these two plants. If these plants need a new subsidy which is so large that it cannot be borne by the customers of the utility which owns the plants, then it is a subsidy which must be rejected.

Other Flaws with HB 6:

Proponents of HB 6 are fond of saying that the two aging nuclear plants are responsible for 90% of Ohio's carbon free generation. This is not true. The \$4.4 or \$5 billion in saved energy created by the Ohio efficiency standards has eliminated the need for close to 7% of Ohio's total electric consumption. Assuming this would have been coal generation, the **efficiency programs have eliminated over 10.5% of Ohio's electric sector carbon** – more than half as much as the nuclear plants – and at a tiny fraction of the cost of those plants even without the new added subsidy.

HB 6 is a steeply regressive tax, which costs a customer who uses \$50 worth of electricity per month the same as a customer who uses \$500 per month, but even worse because it costs a residential or commercial customer more than twice as much per KWh as it does an industrial customer. That by itself is an irrational distribution of the alleged costs in relation to the alleged benefits of HB 6.

HB 6 is – by acknowledgement of the bill's sponsor – not written with sufficient definition to enable anyone to know just what this bill will do. It is so poorly

written in fact that it can be interpreted to provide Ohio's 3,000 MW's of new natural gas with \$9.25 per MWh and to neglect the Ohio nuclear plants. While this is not the stated intention of the bill sponsors there is no more definition in this regard than in whether the bill will provide funding to coal plants which improve efficiency by 1% in the amount of 100% of their output in preference to new wind and solar generation.

It is not my intention to offer advice on how to improve HB 6. **There is nothing here to improve.** My recommendation to this committee, to the Ohio House of Representatives and to any other concerned government entities, organizations or interested parties is to cease the follies of repeated attacks on clean energy, to **learn about the economics of electric generation in Ohio** and to get on with the business of making Ohio a better place to live.

What Should Be Done:

Ohio should repeal the three modifications of the existing clean energy standards, 2013's SB 315, 2014's SB 310 and the wind setback which never had hearings and was inserted in a budget reconciliation bill. All three changes to Ohio law were based on false assumptions. The harm done by these three laws has increased as efficiency, wind and utility scale solar grow cheaper while conventional resources get more expensive. ***The wind setback restriction has cost Ohio billions of investment dollars. The original setback was fully protective of neighbor's property rights without inappropriately restricting the property rights of property owners.***

My testimony does not directly address the radical shift in price relationships which has occurred in Ohio as well as the rest of the world. In 2019 utility scale solar and wind generation can undercut fossil generation by 20 to 50%. The average cost of wholesale electricity in Ohio is about 5.5 cents per KWh, and wind can be generated for less than 3 cents, while solar can be generated for less than four cents. The Federal wind tax credit is gone at the end of this year and wind will still be the cheapest form of generation available to Ohio. Solar tax credits will phase out over the next four years, and solar is likely to be even cheaper than wind after that.

Ohio can create tens of thousands of new jobs and billions of dollars of new economic activity across the state, providing real economic growth, tax revenue growth and new job opportunities to every Ohio community, not just a lucky handful who happen to have a multi-billion-dollar legacy in their district. The Oregon, Ohio natural gas plant opened in 2017 just 20 miles from the Davis Besse plant, so the economic harm of closing the plants has been vastly overstated by the proponents of HB 6.

This hearing is not the place to explore the new economic reality of clean energy in Ohio, but a proper decision on HB 6 cannot be made without some awareness of what the real economic potential is.

Thank you for your attention to this vital matter.

Notes/Links:

The following four links are to the four Ohio Electric Distribution Utility filings which comprise the complete Ohio efficiency standard outcome for 2017. For prior years, either the filings will refer to them, or a collection is available from Ned.Ford@fuse.net

American Electric Power's 2017 Efficiency Compliance filing
<https://dis.puc.state.oh.us/CaseRecord.aspx?CaseNo=18-0835-EL-EEC>
Costs and first year savings are on page 12 of the filing

Dayton Power and Light's 2017 Efficiency Compliance filing
<https://dis.puc.state.oh.us/CaseRecord.aspx?CaseNo=18-0742-EL-POR>
The values for program cost and first year savings are on Pages 3 and 6 of the filing

Duke Energy Ohio's 2017 Efficiency Compliance filing
<https://dis.puc.state.oh.us/CaseRecord.aspx?CaseNo=18-0396-EL-EEC>
Duke's 2017 energy and capacity savings are on page 10 of the filing. Program costs are on page 198 of the filed pdf which is page 2 of Jim Ziolkowski's Appendix.

FirstEnergy's 2017 Efficiency Compliance filing
<https://dis.puc.state.oh.us/CaseRecord.aspx?CaseNo=18-0841-EL-EEC>
The values for program cost and first year savings are on page 5 of the filing

74% of the U.S. coal fleet is now uncompetitive with wind and solar, and by 2025 86% will be.

<https://www.renewableenergyworld.com/ugc/articles/2019/04/02/the-coal-end-game-building-new-renewables-cheaper-than-running-existing-coal-plants.html>

This is a well-referenced report that examines each plant in the context of wind and solar prices for its location. What this report does not say is that a significant fraction of existing natural gas and nuclear plants are also not competitive with new wind and solar generation, and/or with efficiency programs.

The Midwest Energy Efficiency Alliance is a consortium of utilities and other interested parties concerned with utility efficiency programs. This link is to a fact sheet which finds that Ohio's efficiency programs saved \$5.1 billion by the end of 2017.

http://www.mwalliance.org/resources/meea-publications?f%5B0%5D=filter_by_type%3A39

This link displays other parameters of Ohio's efficiency programs, including jobs created and annual bill savings and some projections into the next decade.

www.mwalliance.org/sites/default/files/media/Ohio-State-Fact-Sheet.pdf?current=/taxonomy/term/11

This link is a website which shows that Ohio's clean energy industries (efficiency, wind and solar) have created 112,486 jobs. Ohio has lost its rank as the strongest clean energy employer as a result of the consistent undermining efforts by Ohio Republicans since 2013, but is still one of the strongest states.

<https://www.cleanjobsmidwest.com/>

There are multiple similar reports in past years, including one done by the Ohio Development Services Agency which was done in 2013 for 2012, and found 31,000

jobs at that time. This is approximately level to the report at the above link in proportion to the clean energy in Ohio at the time.

The Public Utilities Commission of Ohio filed a report on February 11th of this year on the 2017 Renewable Portfolio Standards.

<https://dis.puc.state.oh.us/CaseRecord.aspx?CaseNo=19-0387-EL-ACP>

This report was finalized on March 20th and we have done only a quick review. The RPS has continued a trend of declining costs for the last four reported years. Windpower now provides 31% of the non-solar REC's in Ohio, and Ohio wind now provides 38% of that 31%, or 461,701 MWh's of the 1,215,003 MWh's wind which is used to meet the total 3,919,366 MWh non-solar requirement of the 2017 Ohio RPS law. To put this in context, Ohio's 2017 wind generation was 1,588,560 MW's, which is 3.4 times the amount of wind used for compliance with the RPS and 1.3 times the total amount of wind used for compliance from all states. Many people assume wind power is the primary means of compliance with the Ohio RPS but this is not the case. In past years biomass has been the primary compliance resource, and in 2017 for the first time, hydropower provided more compliance than biomass.

Neither biomass nor hydropower are going to expand much in the near future. Ohio's wind and utility scale solar are poised to leave the RPS far behind. The barrier to wind is Ohio's most restrictive wind setback law in the U.S. and it is not clear that there is any barrier to utility scale solar development now that it is able to undercut fossil and nuclear generation in Ohio.