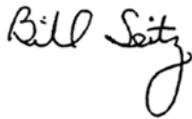


The undersigned hereby adopts as their own the attached *Co-Chairs' Report of the Energy Mandates Study Committee*:



Senator Bob Peterson



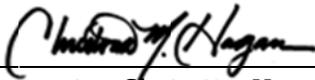
Senator Bill Seitz



Representative Ron Amstutz



Representative Louis W. Blessing, III



Representative Christina Hagan

Date: September 30, 2015

*The Ohio House
of Representatives*



The Ohio Senate

The Energy Mandates Study Committee

Co-Chairs' Report

**State Representative Kristina Roegner, Co-Chair
State Senator Troy Balderson, Co-Chair**

September 30, 2015

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I. INTRODUCTION

The Energy Mandates Study Committee (the “Study Committee”) was created by Substitute Senate Bill No. 310 of the 130th General Assembly (“SB310”). The Study Committee consisted of a bipartisan panel of members of both the Ohio House and Senate and the chairperson of the Public Utilities Commission of Ohio (“PUCO”). SB310 tasked the Study Committee with studying Ohio’s renewable energy, energy efficiency, and peak demand reduction mandates (collectively, the “Mandates”) enacted into law by Amended Substitute Senate Bill No. 221 of the 127th General Assembly (“SB221”).

By September 30, 2015, SB310 requires the Study Committee to submit a report of its findings to the House and Senate that includes, at a minimum, the following:

1. A cost-benefit analysis of the renewable energy, energy efficiency, and peak demand reduction mandates, including the projected costs on electric customers if the mandates were to remain at the percentage levels required under sections 4928.64 and 4928.66 of the Revised Code, as amended by this act;
2. A recommendation of the best, evidence-based standard for reviewing the mandates in the future, including an examination of readily available technology to attain such a standard;
3. The potential benefits of an opt-in system for the mandates, in contrast to an opt-out system for the mandates, and a recommendation as to whether an opt-in system should apply to all electric customers, whether an opt-out system should apply to only certain customers, or whether a hybrid of these two systems is recommended;
4. A recommendation on whether costs incurred by an electric distribution utility or an electric services company pursuant to any contract, which may be entered into by the utility or company on or after the effective date of SB310 for the purpose of procuring renewable energy resources or renewable energy credits and complying with the requirements of section 4928.64 of the Revised Code, may be passed through to any consumer, if such costs could have been avoided with the inclusion of a change of law provision in the contract;
5. A review of the risk of increased grid congestion due to the anticipated retirement of coal-fired generation capacity and other factors; the ability of distributed generation, including combined heat and power and waste energy recovery, to reduce electric grid congestion; and the potential benefit to all energy consumers resulting from reduced grid congestion;

6. An analysis of whether there are alternatives for the development of advanced energy resources as that term is defined in section 4928.01 of the Revised Code;
7. An assessment of the environmental impact of the renewable energy, energy efficiency, and peak demand reduction mandates on reductions of greenhouse gas and fossil fuel emissions; and
8. A review of payments made by electric distribution utilities to third-party administrators to promote energy efficiency and peak demand reduction programs under the terms of the utilities' portfolio plans. The review shall include, but shall not be limited to, a complete analysis of all fixed and variable payments made to those administrators since the effective date of SB221, jobs created, retained, and impacted, whether those payments outweigh the benefits to ratepayers, and whether those payments should no longer be recovered from ratepayers. The review also shall include a recommendation regarding whether the administrators should submit periodic reports to the Commission documenting the payments received from utilities.

The Senate President and the Speaker of the House appointed the following members to the Study Committee:

Senator Troy Balderson, <i>co-chair</i>	Representative Kristina Roegner, <i>co-chair</i> ¹
Senator Cliff Hite	Representative Ron Amstutz
Senator Bob Peterson	Representative Louis W. Blessing, III
Senator Bill Seitz	Representative Christina Hagan
Senator Capri Cafaro	Representative Jack Cera
Senator Sandra Williams ²	Representative Mike Stinziano

Andre T. Porter, in his capacity as the chairman of the PUCO, also served as an ex officio, nonvoting member of the Study Committee.³

From November 2014 through July 2015, the Study Committee conducted eight public hearings. All testimony from those hearings, and testimony separately submitted to the Study Committee, can be found on the Study Committee's webpage at:

<http://esmc.legislature.ohio.gov/testimony>

¹ Replaced former co-chair, Representative Peter Stautberg, after his term of office ended on December 31, 2014.

² Replaced former Senator Shirley Smith after her term of office ended on December 31, 2014.

³ Replaced former Chairman of the PUCO, Thomas W. Johnson, who served on the Study Committee from November 2014 through April 2015.

II. FINDINGS OF THE STUDY COMMITTEE

Historical Costs of Mandates

Renewables

Ohio's electric distribution utilities ("EDUs") and competitive retail electric suppliers ("CRES providers") are required to comply with Ohio's renewable mandate⁴ by purchasing renewable energy credits ("RECs").⁵ Ohio's renewable mandate is bypassable, which means customers pay for the mandate by paying their electric provider.⁶ While EDUs specifically bill customers the exact cost of the mandate, CRES providers simply account for all of their costs (including the mandate) in their price offerings.⁷ This is because CRES providers' rates are not set or approved by the PUCO.⁸

The most recent data the PUCO provided to the Study Committee on the cost of RECs in Ohio is from 2012,⁹ which illustrates that in-state RECs were more expensive than out-of-state RECs.

2012 Average Cost of RECs¹⁰

	Ohio Electric Distribution Utilities	Ohio Competitive Retail Electric Service Providers
Category	Avg. \$/REC	Avg. \$/REC
Ohio Solar	\$212.23	\$195.93
Other Solar	\$58.75	\$104.99
Ohio Non-Solar	\$33.51	\$13.08
Other Non-Solar	\$24.93	\$2.04

As of December 2014, the PUCO determined the average monthly charge for the renewables mandate as \$0.001142 per kilowatt hour,¹¹ which averaged out to the following monthly costs for each customer class:¹²

⁴ By 2026 and each year thereafter, EDUs and CRES providers must obtain at least 12.5% of its energy supply from renewables.

⁵ Thomas W. Johnson, PUCO Chairman, p. 3, Dec. 8, 2014.

⁶ Thomas W. Johnson, PUCO Chairman, p. 3, Dec. 8, 2014.

⁷ Thomas W. Johnson, PUCO Chairman, p. 3-4, Dec. 8, 2014.

⁸ Thomas W. Johnson, PUCO Chairman, p. 3-4, Dec. 8, 2014.

⁹ See DRAFT Alternative Energy Portfolio Standard Report by the Staff of the Public Utilities PUCO of Ohio for the 2012 Compliance Year, Issued January 14, 2014 pursuant to R.C. 4928.64(D)(1) (PUCO Case No. 13-1909-EL-ACP). Pursuant to R.C. 4928.64(D), the PUCO is required to submit an annual report to the General Assembly that sets forth whether EDUs complied with the renewables mandate, in addition to the average cost of RECs for the reporting year. The PUCO has not finalized the 2012 report that was due to the General Assembly in 2013. (see PUCO Case No. 13-1909-EL-ACP). The PUCO has not drafted the 2013 report that was due to the General Assembly in 2014, but a case has been opened (see PUCO Case No. 14-2328-EL-ACP). The PUCO has not drafted the 2014 report that was due to the General Assembly in 2015, nor has a case number been opened for that report.

¹⁰ Thomas W. Johnson, PUCO Chairman, Exhibit A, Dec. 8, 2014.

Typical Bill Cost for Alternative Energy Rider (as of December 4, 2014)

Customer Class	AEP		Dayton Power & Light	Duke Energy	FirstEnergy		
	Columbus Southern Power	Ohio Power	DPL	Duke-Ohio	Cleveland Electric Illuminating	Ohio Edison	Toledo Edison
Average Residential	\$1.31	\$0.77	\$0.62	\$0.27	\$1.30	\$1.01	\$0.77
Average Commercial	\$506.52	\$298.65	\$248.04	\$109.20	\$501.60	\$388.20	\$297.30
Average Industrial	\$9,928.80	\$5,854.20	\$4,960.80	\$2,184.00	\$9,738.00	\$7,536.00	\$5,778.00

Note: Average Residential typical usage 750 kWh
Average Commercial typical usage 300,000 kWh
Average Industrial typical usage 6,000,000 kWh

The table above shows that in 2014 the average residential customer incurred a monthly charge between \$0.27 and \$1.31 for the renewables mandate. Multiplying these numbers by 12 months in a year, the average residential customer would have paid between \$3.24 and \$15.72 for the renewables mandate in 2014.

The actual costs paid by a customer for the renewables mandate in any given month is required to be placed on each customer’s bill.¹³

Energy Efficiency/Peak Demand Reduction

Unlike the renewables mandate, Ohio’s energy efficiency and peak demand reduction mandates apply only to EDUs.¹⁴ The costs associated with complying with the energy efficiency and peak demand reduction mandates are recovered by an EDU through a non-bypassable rider.¹⁵ That rider is recovered from all customers of an EDU regardless of whether they shop for electric generation with the exception of those mercantile customers that obtained a rider exemption from the PUCO pursuant to SB221.¹⁶

As of December 2014, the PUCO determined the average monthly charge for the energy efficiency and peak demand reduction mandates as \$0.007225 per kilowatt hour.¹⁷ The PUCO only provided the range of the costs of the energy efficiency and peak demand reduction

¹¹ Thomas W. Johnson, PUCO Chairman, p. 3, Dec. 8, 2014.
¹² Thomas W. Johnson, PUCO Chairman, Exhibit B, Dec. 8, 2014.
¹³ SB310 required the PUCO to adopt rules that require the costs of each mandate to be placed on each customer’s bill. As of the date of publication of this Report, that rule has not yet been implemented.
¹⁴ Thomas W. Johnson, PUCO Chairman, p. 4, Dec. 8, 2014.
¹⁵ Thomas W. Johnson, PUCO Chairman, p. 4, Dec. 8, 2014.
¹⁶ Thomas W. Johnson, PUCO Chairman, p. 4, Dec. 8, 2014.
¹⁷ Thomas W. Johnson, PUCO Chairman, p. 3, Dec. 8, 2014.

mandates for residential customers, which ranged from \$0.00189 to \$0.004566 per kilowatt hour.¹⁸ The PUCO determined the average monthly costs of the energy efficiency and peak demand reduction mandates for the following customer classes to be:¹⁹

Typical Bill Cost for Energy Efficiency and Peak Demand Rider (as of December 4, 2014)

Customer Class	AEP		Dayton Power & Light	Duke Energy	FirstEnergy		
	Columbus Southern Power	Ohio Power	DPL	Duke-Ohio	Cleveland Electric Illuminating	Ohio Edison	Toledo Edison
Average Residential	\$3.42	\$3.42	\$3.43	\$2.58	\$3.31	\$2.37	\$1.42
Average Commercial	\$1,001.70	\$1,001.70	\$762.27	\$501.00	\$512.40	\$582.30	\$948.90
Average Industrial	\$5,719.80	\$5,719.80	\$13,050.60	\$10,020.00	\$5,076.00	\$14,496.00	\$15,606.00

Note: Average Residential typical usage 750 kWh
Average Commercial typical usage 300,000 kWh
Average Industrial typical usage 6,000,000 kWh

The table above shows that in 2014, the average residential customer incurred a monthly charge between \$1.42 and \$3.43 for the energy efficiency and peak demand reduction mandates. Multiplying these numbers by 12 months in a year, the average residential customer would have paid between \$17.04 and \$41.16 for the energy efficiency and peak demand reduction mandates in 2014.

As of December 2014, the PUCO found that the total amount of the Mandates averaged out to be the following percentages of customers' total bills:²⁰

Alternative Energy and Energy Efficiency/Peak Demand Rider as a Percentage of Estimated Total Bill (as of December 4, 2014)

Customer Class	AEP		Dayton Power & Light	Duke Energy	FirstEnergy		
	Columbus Southern Power	Ohio Power	DPL	Duke-Ohio	Cleveland Electric Illuminating	Ohio Edison	Toledo Edison
Average Residential	3.61%	3.20%	3.64%	3.07%	4.75%	3.54%	2.25%
Average Commercial	3.59%	3.09%	3.05%	1.96%	2.80%	3.04%	3.54%
Average Industrial	2.47%	1.82%	2.96%	2.39%	2.63%	4.11%	3.89%

¹⁸ Thomas W. Johnson, PUCO Chairman, p. 4, Dec. 8, 2014

¹⁹ Thomas W. Johnson, PUCO Chairman, Exhibit C, Dec. 8, 2014.

²⁰ Thomas W. Johnson, PUCO Chairman, Exhibit D, Dec. 8, 2014.

Note: Average Residential typical usage 750 kWh
Average Commercial typical usage 300,000 kWh
Average Industrial typical usage 6,000,000 kWh

Future Costs of Mandates

The Study Committee heard testimony from Ryan M. Yonk, Ph.D. of Utah State University. Dr. Yonk, along with five individuals from Utah State University, published a comprehensive report in April 2015 entitled “Renewable Portfolio Standards: Ohio.” That report concluded that Ohio’s renewables mandate will lead to the following:²¹

- Significant increases in fiscal and economic costs between now and 2026
- A \$1,920,000,000 burden on Ohio ratepayers
- A \$52,000,000 decrease in investment
- A decrease in personal disposable income of \$258 million in 2026
- An increase in the unemployment rate by 10%, which equates to 29,366 jobs

The Study Committee did not receive any definitive data from the PUCO on the projected future costs of the energy efficiency and peak demand reduction mandates. In a letter from the PUCO to the Study Committee dated September 14, 2015, the PUCO stated that they do not currently have the capability to independently forecast the costs of implementing the energy efficiency mandates in future years with a high level of significance.

²¹ Ryan Yonk, Ph.D., Utah State University, p. 8, July 20, 2015.

Grid Congestion

PJM Interconnection testified at a Study Committee hearing about grid reliability and congestion. PJM is the Regional Transmission Organization operating in Ohio. PJM testified that there are adequate resources to meet the forecasted demand of customers plus a reserve margin.²² PJM also ensured the power grid will remain reliable with the retirement of generating plants because the PJM forward capacity market is attracting new resources. As shown on page 4 of PJM's slide attachment,²³ the PJM capacity market has successfully attracted over 35,000 MW of new generation or upgrades throughout the PJM region, compared to the 26,000 MW in retirement notices to date.

²² Andrew Ott, PJM Interconnection Executive Vice President of Markets, p. 3, Mar. 18, 2015.

²³ Andrew Ott, PJM Interconnection Executive Vice President of Markets, slide 4, Mar. 18, 2015.

The Clean Power Plan

On August 3, 2015, the United States Environmental Protection Agency (“US EPA”) released a final version of its proposed Clean Power Plan (“CPP”), a rule that sets performance rates and individual state targets for carbon dioxide emissions from existing power plants. Issued under the apparent authority of Section 111(d) of the Clean Air Act, the CPP seeks to reduce emissions by 32% nationwide by 2030, relative to 2005 levels.²⁴

Each state is given specific targets under the final version of the CPP. Under a rate-based carbon reduction plan, Ohio would be required to reduce its carbon dioxide emissions by 37% between 2012 and final implementation of the CPP.²⁵ That mandated target was increased by roughly 11% from the US EPA’s original proposed rule.²⁶ As illustrated in the US EPA’s chart below, under a mass-based carbon reduction plan, in which reductions are measured in short tons, Ohio would be required to reduce its carbon emissions by approximately 27%.

Interim (2022-2029) and Final Goals (2030)²⁷

	CO₂ Rate (lbs/Net MWh)	CO₂ Emissions (short tons)	
2012 Historic [*]	1,900	102,239,220	
2020 Projections (without CPP)	1,742	103,946,835	
	Rate-based Goal	Mass-based Goal (annual average CO₂ emissions in short tons)	Mass Goal (Existing) & New Source Complement
Interim Period 2022- 2029	1,383	82,526,513	83,476,510
Interim Step 1 Period 2022-2024 ^{**}	1,501	88,512,513	88,902,150
Interim Step 2 Period 2025-2027 ^{**}	1,353	80,704,944	82,020,069
Interim Step 3 Period 2028-2029 ^{**}	1,252	76,280,168	77,522,714
Goal 2030 and Beyond	1,190	73,769,806	74,607,975

^{*}US EPA made some targeted baseline adjustments at the state level to address commenter concerns about the representativeness of baseline-year data. These are highlighted in the CO₂ Emission Performance Rate and Goal Computation TSD.

^{**}Note that states may elect to set their own milestones for Interim Step Periods 1, 2, and 3 as long as they meet the interim and final goals articulated in the emission guidelines. In its state plan, the state must define its interim step milestones and demonstrate how it will achieve these milestones, as well as the interim goal and final goal. See section VIII.B of the final rule preamble for more information.

²⁴ Craig Butler, Ohio EPA Director, Testimony Before the U.S. House of Representatives, p. 1-2, Sept. 11, 2015.

²⁵ Craig Butler, Ohio EPA Director, Testimony Before the U.S. House of Representatives, p. 2 Sept. 11, 2015.

²⁶ Craig Butler, Ohio EPA Director, Testimony Before the U.S. House of Representatives, p. 2, Sept. 11, 2015,.

²⁷ <http://www2.epa.gov/cleanpowerplanttoolbox/clean-power-plan-state-specific-fact-sheets>

A summary of Ohio's targets and requirements can be found at:

<http://www2.epa.gov/cleanpowerplantoobox/clean-power-plan-state-specific-fact-sheets>

The final version of the proposed CPP also made energy efficiency optional, rather than a core requirement of the rule.²⁸

The US EPA estimates that its proposed CPP will cost between \$5,100,000,000 and \$8,400,000,000 in 2030.²⁹

²⁸ Craig Butler, Ohio EPA Director, Testimony Before the U.S. House of Representatives, p. 4, Sept. 11, 2015.

²⁹ U.S. EPA, Regulatory Impact Analysis for the Clean Power Plan Final Rule, August 2015, page ES-9.

Third Party Administrators

Third party administrators are “organizations that partner with utilities to find potential qualifying energy efficiency work or projects that will assist a utility in meeting its statutory obligations. Such administrators are often trade associations who are able to help facilitate finding energy efficiency savings through their unique relationships with, and knowledge of, their members’ operations.”³⁰ In most cases, third party administrators are afforded lump sum, periodic, or performance-based payments in exchange for their services.³¹ Instances vary case-by-case, but are often tied to performance.³² Performance is measured as a nominal amount for every kilowatt hour of realized energy savings.³³

Performance payments to third party administrators are paid by the EDU, but those expenses are recovered directly from ratepayers.³⁴

The PUCO submitted to the Study Committee the following list of third party administrators who have been previously paid by an EDU:³⁵

FirstEnergy Ohio

- Council of Small Enterprises (COSE)
- County Commissioners Association
- Industrial Energy Users-Ohio (IEU)
- Ohio Hospital Association (OHA)
- Ohio Manufacturers’ Association (OMA)
- Ohio Schools Council
- Roth Brothers
- The E Group
- Association of Independent Colleges and Universities (AICUO)

AEP-Ohio

- Ohio Hospital Association (OHA)
- Ohio Manufacturers’ Association (OMA)

Dayton Power and Light Company

- Ohio Hospital Association (OHA)
- Ohio Manufacturers’ Association (OMA)

Duke

Not applicable

³⁰ Thomas W. Johnson, PUCO Chairman, p. 2, Nov. 24, 2014.

³¹ Thomas W. Johnson, PUCO Chairman, p. 3, Nov. 24, 2014.

³² Thomas W. Johnson, PUCO Chairman, p. 3, Nov. 24, 2014.

³³ Thomas W. Johnson, PUCO Chairman, p. 3, Nov. 24, 2014.

³⁴ Thomas W. Johnson, PUCO Chairman, p. 3, Nov. 24, 2014.

³⁵ Thomas W. Johnson, PUCO Chairman, Exhibit E, Dec. 8, 2014.

IV. RECOMMENDATIONS

After an extensive and comprehensive review of the Mandates, including eight public Study Committee hearings, seventeen witnesses, additional written testimony separately submitted, and two onsite visits, the following recommendations are submitted to the General Assembly:

Recommendation #1

Extend the SB310 Freeze Indefinitely

The US EPA, by promulgation of the proposed CPP, seeks to change the energy landscape significantly across the United States. Each state, including Ohio, will be handed interim and final targets that dictate carbon dioxide emission levels. However, there are a number of outstanding questions about the CPP that the US EPA has yet to answer, in addition to federal court lawsuits that challenge the very foundation of the rule. Until the US EPA provides greater clarity on the operation of the CPP, and until litigation is resolved, the General Assembly should freeze the Mandates at their current levels.

First, there are significant legal questions as to whether the federal government has the right to govern state electricity policy. For this reason, in addition to a number of others, Ohio has joined in a lawsuit with 14 other states to argue that Congress did not intend to grant the US EPA authority under section 111(d), directly or indirectly, to remake the national power system.³⁶ Governor Kasich also recently submitted a letter to President Barack Obama asking him to stay implementation of the rule until legal matters have been resolved.³⁷ Ohio Environmental Protection Agency (OEPA) Director Craig Butler also testified to Congress that “we are marching down the road toward implementing a rule with far-reaching economic consequences without any assurance that the rule is even a legal exercise of U.S. EPA’s authority.”³⁸

Consequently, as long as legal questions remain pending, the General Assembly should refrain from allowing escalating costs to be paid by Ohio ratepayers in the form of increased Mandates or making any significant changes to the State of Ohio’s energy policies without knowing whether the CPP will ever apply.

Second, freezing the Mandates indefinitely should provide the OEPA maximum flexibility to recommend a State Implementation Program, at the appropriate time, as well as corresponding legislation targeted to meet the goals of that program. Resumption of SB221 or any revised Mandates before resolution of the CPP could impede OEPA’s flexibility. The PUCO estimated the proposed CPP would have cost \$2,500,000,000³⁹ (the PUCO has yet to conclude a cost analysis of the final CPP). Given the magnitude of the cost impacts to Ohio ratepayers, the General Assembly should not impede OEPA’s flexibility at this time by either allowing the Mandates to resume or imposing any additional mandates. Once there is 100% certainty the CPP

³⁶ Craig Butler, Ohio EPA Director, Testimony Before the U.S. House of Representatives, p. 3, Sept. 11, 2015.

³⁷ Craig Butler, Ohio EPA Director, Testimony Before the U.S. House of Representatives, p. 3, Sept. 11, 2015.

³⁸ Craig Butler, Ohio EPA Director, Testimony Before the U.S. House of Representatives, p. 3, Sept. 11, 2015.

³⁹ Craig Butler, Ohio EPA Director, Testimony Before the U.S. House of Representatives, p. 2, Sept. 11, 2015.

becomes effective, any efficiency or renewable mandates should be imposed in a way to minimize the overall cost impact to Ohio ratepayers.

Finally, many questions remain unresolved, including, but not limited to, the following questions posed by the OEPA Director:

- How will advanced energy and qualifying technologies be determined?
- How will renewable energy credit be recognized from out-of-state sources?
- How will the demonstrated economic hardship aspects of Ohio's law be recognized by the US EPA?
- Will the US EPA allow credit for improvements already in place?
- Will Ohio's final targets be adjusted? If so, how?⁴⁰

The Director also testified that:

“The most common question we are asked is whether the targets in SB 221 or 310 are enough for Ohio to meet the Clean Power Plan carbon dioxide reduction targets. I wish I could provide a clear answer to this Subcommittee. Unfortunately, that is not possible. Throughout our comment process U.S. EPA has provided little guidance or clarity. Rather, they have repeatedly asked for advice and a thorough critique of their proposal.”⁴¹

“Ohio power plants have significantly reduced carbon dioxide emissions from electricity generation below 2005 emissions levels. In fact, carbon dioxide emissions have dropped from 138 million tons in 2013 to 107 million tons in 2015 and we expect an additional 33.8 million tons by 2016...⁴² While the stated target of the CPP is to reduce CO2 emissions by 32% below 2005 levels by 2030, the USEPA is using 2012 as a baseline for CO2 emissions. Nothing done to meet the energy mandates outlined in SB221 prior to 2012 will count towards CO2 emission reduction.”⁴³

Based on all of these facts, it is evident that an indefinite freeze of the Mandates is the best path forward for Ohio. Prematurely enacting legislation to comply with a federal rule that may never go into effect seems irrational and could saddle Ohio ratepayers with extraordinary and unnecessary costs. At this point, there is also insufficient guidance from the US EPA to rely upon in determining whether any of the energy efficiency achieved in Ohio under Ohio law prior to 2012 will count towards the emissions reductions of the CPP.

While the General Assembly should extend the freeze of the Mandates, the State of Ohio should simultaneously prepare for the possibility that the CPP may take effect in some form or fashion.

⁴⁰ Craig Butler, Ohio EPA Director, p. 9, Feb. 5, 2015.

⁴¹ Craig Butler, Ohio EPA Director, p. 9, Feb. 5, 2015.

⁴² Director Butler mentioned while testifying that he had reversed the numbers. The numbers here reflect that correction while the online written testimony still contains the error. A fact sheet with the updated numbers can be found at: <http://epa.ohio.gov/dapc/111drule.aspx>. It is unclear how significantly the Mandates affected these reductions, as SB221 was enacted during the period in question.

⁴³ Craig Butler, Ohio EPA Director, p. 6, Feb. 5, 2015.

Thus, the director of the OEPA must work closely with the General Assembly in addressing the uncertainty surrounding the CPP.

Recommendation #2

Provide an Expedited Process at the PUCO for the Review of New Utility Plans for Energy Efficiency

Whether the General Assembly allows the Mandates to resume at their current law rates or if an indefinite freeze is enacted, the General Assembly will need to address the issue of how to deal with the four EDUs' existing 3-year energy efficiency portfolio plans,⁴⁴ all of which are set to expire on December 31, 2016. While interested parties should no doubt have the opportunity to be heard on any future portfolio plan applied for by an EDU, the General Assembly should consult with the PUCO on how to develop an expedited review process that will enable portfolio plans to be effective by January 1, 2017.

Separately, beginning on January 1, 2017, all large industrial users are permitted to opt-out of the portfolio plan that is applicable to them by way of an expedited process at the PUCO.⁴⁵ Undoubtedly, the General Assembly should maintain the current law opt-out mechanism. Many, if not all, of the large industrial users invest millions of dollars in energy efficiency projects at their facilities because those projects provide an individual company with a competitive advantage. Such investments should be encouraged, and maintaining the opportunity for these large users to opt out of a portfolio plan will help accomplish that. Similarly, the General Assembly should extend to all mercantile customers, as defined in R.C. 4928.01, the same opportunity to opt-out if they choose to do so beginning on January 1, 2019.

Recommendation #3

Investigate and Ensure Maximum Credit for All of Ohio's Energy Initiatives

Ohio has a robust and diverse set of energy assets. As policymakers, the General Assembly should remain diligent in ensuring that the State of Ohio counts all forms of emerging renewable resources, advanced energy, and energy efficiency initiatives that have been implemented to date across the state. To do this, the General Assembly should do all of the following:

- Count “advanced energy projects” and “advanced energy resources,” as those terms are respectively defined in R.C. 4928.01, towards the 12.5% benchmark that EDUs and CRES suppliers currently must obtain by 2027. Because wind and solar are intermittent renewable resources, PJM values their capacity contribution at 13% and 38%, respectively, of their nameplate capacity.⁴⁶ This means that of the 8,800 MW of wind

⁴⁴ Pursuant to R.C. 4928.6610(C), a portfolio plan is a “comprehensive energy efficiency and peak-demand reduction program portfolio plan required under rules adopted by the public utilities commission and codified in Chapter 4901:1-39 of the Administrative Code or hereafter recodified or amended”.

⁴⁵ See R.C. 4928.6610 through 4928.6616

⁴⁶ Andrew Ott, PJM Interconnection, p. 4, March 5, 2015.

resources that are expected to be in operation by 2017, these resources contribute only about 1,150 MW of capacity or reliability value.⁴⁷ As such, the State of Ohio should not rely exclusively on highly variable resources, but instead look to any and all sources of alternative energy so that the state can count as many of those sources as possible.

- Determine the most effective way to further incentivize the deployment and counting of combined heat and power (“CHP”). A CHP system produces electricity and usable thermal energy using the same input fuel source.⁴⁸ At the beginning of September, the Study Committee visited Kent State University to visit a CHP facility. The CHP Panel that testified before the Study Committee identified 147 potential CHP sites in Ohio, each about 5 MW, for a total potential of 5,951 MW.⁴⁹ Benefits that this technology offers include: efficiency, reliability (and back-up capabilities), limiting grid congestion, reducing peak demand, and cost effectiveness.⁵⁰ Facilities that utilize CHP for their own power use can save significant amounts on monthly electric bills.⁵¹ Current Ohio law allows CHP to be counted as energy efficiency, but it is treated as a renewable on a very limited basis.⁵² If CHP is energy efficient, it should be counted towards the energy efficiency mandate. Simultaneously, if some portion of CHP is a renewable resource, that portion should also be counted towards the renewables mandate.
- Count all energy efficiency projects that have been implemented in the State of Ohio to date since 2008. This will require substantially broadening the types of energy efficiency savings that count towards compliance with the energy efficiency and peak demand reduction mandates, as compared to how the current PUCO rules and practices, which need correction, currently operate. In order to count as many energy efficiency projects as possible, the General Assembly should work in coordination with the Ohio EPA and the PUCO to come up with a method for counting projects that have not historically been counted. It is likely that the most effective way to do this is for the General Assembly to work with the EDUs to develop a method for them to capture energy efficiency projects that they previously could not, in order for those projects to be accounted for with the PUCO moving forward in the future.
- Investigate and maximize extra credit for low-income and multi-family housing. The CPP grants states “extra credit” for low-income and multi-family housing efficiency programs. If the recently passed measure in the budget bill (Amended Substitute House Bill No. 64 of the 131st General Assembly) that requires the Development Services Agency to separately bid out the PIPP load is successful, then the savings could be devoted to funding such a program.

⁴⁷ Andrew Ott, PJM Interconnection, p. 4, March 5, 2015.

⁴⁸ CHP Coalition Presentation to the Energy Mandates Study Committee, slide 19 April 16, 2015.

⁴⁹ CHP Coalition Presentation to the Energy Mandates Study Committee, slide 12, April 16, 2015.

⁵⁰ Patrick Smith Testimony, IGS Generation, p. 1, April 16, 2015.

⁵¹ Greg Collins Testimony, Energy Systems Group, p. 2, April 16, 2015.

Greg Collins cites in his testimony a 30 MW project that ESG is working to secure. The project would generate approximately \$10 million in annual benefits to the company.

⁵² CHP Coalition Letter, p. 1, Sept. 9, 2015.

Recommendation #4

Switch from Energy Mandates to Energy Incentives

SB221 required EDUs to meet specific energy efficiency benchmarks that total over 22% of energy savings by 2025 and peak demand reduction benchmarks that result in a 7.75% reduction in demand by 2018. SB310 effectively extended the deadlines to 2027 and 2020, respectively.⁵³ If the PUCO determines that an EDU has failed to comply with the Mandates, the PUCO must assess a forfeiture on the EDU.

SB221 also included renewable benchmarks that require EDUs and CRES providers to provide, by 2025, 25% of their electricity supply from alternative energy. A specific portion of that amount would need to be from solar energy. SB310 placed a temporary two year freeze on the above dates, and reduced the 25% benchmark to 12.5% by repealing the advanced energy component.

The continuation of the Mandates will be costly for Ohioans, and the penalties for not attaining the Mandates are overly punitive. At the same time, energy efficiency can provide great value if it is structured properly so that Ohio ratepayers pay less for electricity and the state uses less electricity overall. Therefore, during the indefinite freeze of the Mandates recommended above, the General Assembly should consider enacting legislation that would expressly allow EDUs to offer voluntary energy efficiency programs that operate to reduce Ohio ratepayers' electricity bills and overall electricity consumption in the State of Ohio. EDUs should continue to be able to provide cost-effective programs to customers, with possible opportunities to share resulting savings. Voluntary programs of this nature have worked successfully in other states.

The following are additional suggestions on how to switch from a mandate driven state to an incentive-based, energy efficiency driven state:

- Allow EDUs and CRES providers who provide material financial assistance to persons wishing to build projects that can be net metered to negotiate a lower price at which to buy the net metered electricity product. (Current law requires payment at the higher standard service offer (SSO) prices.)
- Consider other constructs for EDUs to fairly participate in distributed generation opportunities.
- Expand the Property Assessed Clean Energy program whereby the capital costs of energy efficiency or renewable improvements can be financed through property tax assessments paid over a period of years. There is current legislation pending in both chambers on this topic (SB185 and HB72 address this issue).

⁵³ SB310 gave utility companies the opportunity to choose to continue or modify their existing portfolio plans. If continued, the Mandates and deadlines from SB221 remained effective; however, if modified, the Mandates and deadlines from SB221 were extended two years. FirstEnergy chose to modify its portfolio plan, so the 2-year extension applies to it. AEP Ohio, Duke Ohio and Dayton Power & Light chose to continue their plans, so the 2-year extension did not apply to any of them.

- Incentivize the use of smart thermostats in residential homes so that consumers can remotely control energy usage while they are away.
- Investigate a market-based certification instrument for energy efficiency.

Recommendation #5

Declare that the General Assembly Retains Statutory Authority with Respect to Energy Policy and Dispatch Protocols

As stated previously, the General Assembly should have the freedom to independently make and determine the energy policy of this state. As such, the General Assembly must do the following:

- Clarify that, regardless of the fate of the CPP, OEPA has no new state statutory authority, absent action by the General Assembly, to:
 - require utilities to acquire renewable energy
 - require the achievement of specific energy efficiency goals
 - promulgate a state or regional cap and trade system
- Ensure that all state agencies will work in concert with the General Assembly before submitting a State Implementation Plan under the CPP

Finally, the General Assembly should continuously review the energy landscape in Ohio and once the final determinations have been made as to the applicability of the CPP, stand ready to restructure the Mandates as necessary.