Before
The Ohio Energy Mandates Study Committee

Testimony
By
Bruce Weston
Ohio Consumers' Counsel

Office of the Ohio Consumers' Counsel

June 1, 2015

Hello Co-Chair Balderson, Co-Chair Roegner, and members of the Energy Mandates Study Committee established by Senate Bill 310. I am Bruce Weston, the Ohio Consumers' Counsel. Thank you for inviting me to appear before this Committee. And thank you for your interest in hearing consumer perspectives on these issues that affect Ohioans in 4.2 million households.

This testimony relates to the Committee's purpose, as stated on its web page and in law, to study Ohio's renewable energy, energy efficiency, and peak demand reduction mandates. The Committee will produce a report with recommendations on legislative action, by September 30, 2015.

Co-Chair Balderson asked me to include a brief overview of the Office of the Ohio Consumers' Counsel. The agency represents residential utility consumers regarding their electric, natural gas, telephone and water services. Members should always feel welcome to inquire of us with any constituent concerns or for consumer perspectives on legislative issues affecting utility consumers. Part of our agency Vision is for Ohioans to have "options to control and customize their utility usage." Energy efficiency fits that part of our vision for Ohio consumers. Another part of our Vision is for Ohioans to have affordable utility services. Energy efficiency fits that part of our Vision as well.

My primary recommendation to the Study Committee is for resumption of the mandates. This recommendation, particularly with respect to energy efficiency, reflects that energy efficiency programs save money for Ohioans. Ohio is one of 25 states with energy efficiency targets. And Ohio is one of 26 states with renewable energy targets.

Here is some documentation of energy efficiency savings for consumers. Dayton Power & Light stated that: "In keeping with the energy efficiency goals of Ohio Senate Bill 221, DP&L launched a series of energy-efficiency programs in 2009

designed to help customers save energy and money. DP&L believes that these efforts to-date have been a success."[1]

Duke Energy Ohio stated that its energy efficiency portfolio "has allowed customers that participated in its programs to take control of their energy usage and realize significant bill savings, as well as allowing all Duke Energy Ohio customers to realize the benefits of millions of dollars of avoided system costs. In fact, the net present value of the system avoided costs associated with the 2014 energy and capacity achievements from its portfolio of programs is over three times the program cost incurred to achieve the impacts."[2]

AEP Ohio's programs in 2014 achieved savings at a levelized cost of 3.5 cents per kWh.[3] This result is the equivalent of the utility being able to buy a multi-year tranche of power to sell to consumers at a fixed retail price of 3.5 cents per kWh. That price compares very favorably with AEP's latest wholesale auction prices that are higher and range from 5.5 to 5.6 cents per kWh.[4] (These auction prices are then grossed up to account for line losses to arrive at a higher customer retail rate.)

---

[1] DP&L Portfolio Plan at 5, PUCO Case 13-833-EL-POR (April 15, 2013).
[2] Testimony of Trisha Haemmerle at 13, PUCO Case 15-534-EL-RDR (March 30, 2015).
[3] Ohio Power Co. Portfolio Status Report at 9, PUCO Case 15-919-EL-POR (May 15, 2015).
[4] *"PUCO Accepts Results of AEP's Latest Auction";* http://www.puco.ohio.gov/puco/index.cfm/media-room/media-releases/puco-accepts-results-of-aep-ohio-s-auction3/#sthash.sMZGaOMc.dpbs

Also, the energy efficiency cost per kWh is significantly less than the price of current marketer offers to residential consumers in AEP's service area.[5]

The table below shows the latest benefit to cost ratios from electric utility filings. These ratios reflect the utility cost savings from the energy efficiency programs. The savings reflect the benefits of avoided power supply costs and, for some utilities, the estimated transmission and distribution savings compared to the total cost of the energy efficiency measures installed.

Ohio Electric Distribution Utilities	2014 Energy Efficiency Portfolio Benefit-Cost Ratios
Ohio Power[6]	**1.9**
Dayton Power & Light[7]	**1.6**
Duke Energy Ohio[8]	**3.0**
Ohio Edison[9]	**2.8**
CEI	**2.4**

[5] http://www.energychoice.ohio.gov/ApplesToApplesComparision.aspx?Category=Electric&TerritoryId=2&RateCode=1

[6] Ohio Power Co. Portfolio Status Report at 9, PUCO Case 15-919-EL-POR (May 15, 2015).

[7] DP&L Portfolio Status Report at 4, PUCO Case 15-777-EL-EEC (May 15, 2015).

[8] Duke Testimony of Trisha Haemmerle at 13, PUCO Case 15-534-EL-RDR (March 30, 2015).

[9] FirstEnergy Portfolio Status Report at 7, PUCO Cases 15-901, 15-902, 15-903-EL-EEC (May 15, 2015

Toledo Edison	**2.7**

There are three attachments to my testimony. The first attachment provides a short explanation of the energy efficiency and peak demand reduction life-cycle benefit to cost ratios for an example of one utility. The utility is Dayton Power & Light Company, in the year 2014. The attachment illustrates the major components of the two primary tests used by the PUCO when examining the costs and benefits of a utility's energy efficiency portfolio for consumers.

The second attachment shows another example of the benefits and costs for one utility, DP&L. This example shows benefits and costs for the six years the energy efficiency requirements have been in place.

The final attachment shows benefit to cost ratios for the energy efficiency programs of all of Ohio's electric utilities, since the inception of the mandates in 2009. The chart is based on information filed by the utilities at the PUCO.

To date, the energy efficiency programs are benefiting consumers. I will next discuss the benefit of energy efficiency for saving money for consumers regarding

the cost of the upcoming clean-power plan regulations of the U.S. Environmental Protection Agency.

The Study Committee has been considering the implications of the U.S. EPA's regulation known as 111(d). The regulation is expected to require reductions in electric power emissions by 30 percent from 2005 levels.

As you have heard, energy efficiency can be used toward compliance with the U.S. EPA's regulations. We have made an effort to assess the potential of energy efficiency to gain compliance with the expected federal regulations. Our preliminary assessment is that resuming the mandates could have a very significant impact toward achieving compliance with the expected regulations. And, therefore, resuming the mandates could have a very significant impact toward minimizing the cost to consumers for compliance with the U.S. EPA's regulations.

Finally, I remain concerned about energy efficiency becoming a profit center for utilities, at the expense of Ohio consumers. If changes are made to the 2008 law, I recommend that the changes not include increasing utilities' profits from energy efficiency at consumer expense. In this regard, I recommend that utility charges to customers for what are called shared savings or other utility profit mechanisms be strictly limited. Similarly, charges to customers for lost distribution revenues

should be limited. The 2008 law (Senate Bill 221) already has very favorable--too favorable--ratemaking terms for electric utilities at consumers' expense. There is not a need to change that law to increase opportunities for utility charges to consumers. If anything, the ratemaking aspects of the law should be changed toward lowering consumers' electric bills.

In conclusion, by creating the Study Committee, you and your colleagues enabled a public discussion of important issues related to Ohio energy policy. Thank you for that good dialogue. My recommendation is to resume the mandates, for the benefit of consumers. Please call upon me if I may help you in the work of the Study Committee for the benefit of Ohio and Ohioans.

Dayton Power and Light Energy Efficiency Portfolio Benefit-Cost Data Example

	2014
Utility Portfolio Program Costs	$ 18,173,233
Net Portfolio Program Benefits (UTC)	$ 43,681,754
Net Portfolio Program Benefits (TRC)	$ 27,049,435
B/C Ratio UCT	3.40
	($61.9M/$18.2M)
B/C Ratio TRC	1.64
	($69.6M/$42.6M)

Incentives
Direct Measure Costs
DP&L Staff Costs
Implementation Vendor & Marketing

External Vendor Evaluations
Education, Awareness Building & Market Transformation

DPL Shared savings incentive $4.5 M

NPV Portfolio UTC Benefit ($61,854,987)

minus

NPV Utility Portfolio Cost

NPV Portfolio TRC Benefit ($69,630,296)

minus

NPV TRC Cost (utility program overhead & installation costs + participant cost) ($42,580,861)

Table 80. Line Loss Assumptions Used in Cost-Effectiveness Calculations

Sector	Energy Line Losses	Demand Line Losses
Residential	7.37%	8.37%
Commercial/Industrial	4.06%	5.21%

Table 79. Summary of Avoided Costs

Year	Average Hourly Energy Cost ($/MWh)	Capacity ($/kW)
2014	$35.38	$25.07
2015	$36.93	$47.30
2016	$38.75	$51.31
2017	$40.06	$57.84
2018	$41.53	$62.20

Avoided Energy = 180,624 MWH saved per year x cost of energy
Avoided Capacity = 31 MW saved per year x capacity cost
Avoided T&D = projects postponed or eliminated

DPL's 2014 EE/PDR Portfolio was Cost-Effective. Their cost for procuring energy and capacity resources was less with the EE/PDR programs deployed than if the utility purchased all of its electricity supply at auction.

Information is from DPL Portfolio Status Filing Case No 15-777-EL-POR

Dayton Power & Light Energy Efficiency Benefit-Cost Data

	2009	2010	2011	2012	2013	2014	Total
Portfolio Costs	$7,648,311	$12,157,075	$13,980,047	$15,053,114	$14,251,983	$18,173,233	**$81,263,763**
Portfolio Program Benefits (UTC)	$45,155,356	$54,402,000	$54,913,505	$52,846,731	$47,404,942	$43,681,754	**$298,404,288**
Portfolio Program Benefits (TRC)	$32,607,330	$34,480,926	$28,730,997	$23,837,839	$34,623,722	$27,049,435	**$181,330,249**
B/C Ratio UCT	6.90	5.37	4.92	4.51	4.33	3.40	
B/C Ratio TRC	2.61	2.07	1.71	1.54	2.00	1.64	

Ohio Utility Energy Efficiency Portfolio Benefit-Cost Ratios 2009 - 2014

Ohio Utility	2009	2010	2011	2012	2013	2014
DPL						
B/C Ratio UCT	6.9	5.37	4.92	4.51	4.33	3.4
B/C Ratio TRC	2.61	2.07	1.71	1.54	2	1.6
Duke*						
B/C Ratio UCT	1.40 - 3.81	4.9	0.60 - 5.41	1.26 - 5.80	1.33 - 5.80	0.75 - 5.41
B/C Ratio TRC	1.21 - 29.79	2.1	0.98 - 10.77	2.31 - 7.83	1.23 - 7.83	0.98 - 10.77
CSP						
B/C Ratio UCT	7	4.6				
B/C Ratio TRC	2.5	1.3				
OP			**AEP-Ohio Combined**			
B/C Ratio UCT	10.5	5.1	5.2	3.8	3.8	4
B/C Ratio TRC	2.1	2.3	4.2	1.8	1.8	1.9
OE*						
B/C Ratio UCT	na	na	na	na	na	na
B/C Ratio TRC	0.21 - 494	0.26 - 156	3.92	2.2	3.04	2.76
CEI*						
B/C Ratio UCT	na	na	na	na	na	na
B/C Ratio TRC	0.22 - 1376	0.23 - 453	2.62	2.02	3.56	2.41
TE*						
B/C Ratio UCT	na	na	na	na	na	na
B/C Ratio TRC	0.19 - 3.70	0.12 - 319	3.6	2.8	2.98	2.65

To date, all of the utility EE/PDR portfolios have been cost-effective.

* Where an overall Portfolio benefit-cost (B/C) ratio was not supplied, the range of program benefit-cost ratios is given. Even though some programs are not cost-effective, the portfolios as a whole have been cost-effective.