

House Energy and Natural Resources Committee
 Chairman Wilson
 Opponent Testimony on Substitute House Bill 6
 Gary A. Swanson, PE
 President, Energy Management Solutions, Inc.
June 18th, 2019

Chairman Wilson, Vice-Chair McColley, Ranking Member Williams and the members of the Senate Energy & Public Utilities Committee. My name is Gary A. Swanson, President of Energy Management Solutions. Thank you for the opportunity to speak to you today as an opponent to Ohio House Bill 6.

Energy Management Solutions (EMS) has held a strong presence in Ohio for the last 8 years, growing its portfolio to over 500 industrial and commercial clients. These Ohio clients represent a combined electrical energy usage exceeding 3,000,000,000 kWh, with over 100,000 Ohio based employees. EMS continues to assist these facilities in order to identify and process rebates; a history that has saved its clients over 1,000,000,000 kWh of energy. The incentives associated with these energy efficient electrical savings results in \$450,000,000 to EMS clients to be utilized towards future projects and company growth within Ohio. These energy efficiency projects carry additional value that has saved all Ohio customers approximately \$265,000,000 by lowering future electrical infrastructure costs. In addition, without the savings from these incentivized energy efficiency projects, Ohio would have had to spend \$171,000,000 to build new power plants for power reliability. Although headquartered in Minneapolis, EMS has a company apartment and office in Ohio which results in 75% of EMS' revenue. As a company doing business in Ohio, EMS pays Ohio state tax and contributes greatly to the companies and economy in Ohio. As a small company, EMS has helped Ohio save \$886,232,876.

We oppose the bill and want to share some information that may help you reconsider this bill.

1. Costs will increase dramatically

- a. An 8.2% increase or added \$88 to each resident is a lot of money
- b. A 6.6% increase to industrial customers could force them out of business
- c. You will be passing a very expensive bill with no guarantee it will work
- d. Increased costs with capacity costs, wholesale power, OVEC, and others

Table 1.0 - Clean Air Bill Impact to Rates

Customer	Annual Increase	% increase
Residential	\$ 88	8.2%
Com	\$ 2,237	1.1%
Ind 2	\$ 42,458	0.6%
Ind 3	\$ 301,345	6.6%

2. What is the cleanest power plant? – One that does not have to be built.

- a. EE eliminates the need for Power Plants
 - i. The cost of EE energy is \$9/MWh in Ohio vs. \$95/MWh for Nuclear (Charts 2.0 and 2.1 – EIA)
 - ii. 30 States have EE programs – Why are so many states participating?

- iii. Ohio ranked #2 in best operated EE program in the USA (Chart 1.0 – Berkeley Study)

3. Would you rather subsidize the two nuclear plants with a plan that may not work, or eliminate the need for 4 nuclear plants? - Allow EE to continue along its regulated path through 2027.

- a. EE has been very successful – Already saved 8,820 GWh of energy, and second best run program in the US behind Illinois
- b. The EE savings already put in place since approved in 2008 is equivalent to 51% of the Nuclear plants
- c. Do you really need to bailout the Nuclear plants if EE can avoid the need for them at 1/10th the cost?
- d. EE Programs will save 36,377 GWh compared to 17,000 GWh for Nuclear plants
- e. Also **save everyone in the state** an estimated **\$15,145,275,330** in infrastructure costs
- f. Help lower Wholesale power costs (**\$293,286,000/Year**) and PJM Capacity Costs (**\$1,455,080,000/Year**) even if they don't participate

4. Would you rather lose 81,000 jobs or 1,500 jobs?

- a. Since EE has been so successful in Ohio, it has allowed the EE jobs to grow to 81,000 to support this very successful program

5. Has all of the low hanging fruit been picked? ABSOLUTELY NOT

- a. Every customer can still save 20-40% of their energy costs by using rebates to help buy down the costs

6. Why mandate the EE Program?

- a. It saves everyone 2.65 times the EE cost in infrastructure savings and new power plant avoidance. Even if a company does not participate in the EE program, they are still saving costs
- b. Everyone can benefit from the program
- c. A utility needs enough participation in the EE program to get economies of scale and keep total program costs down
- d. Existing EE will essentially end 1/1/2020 by allowing mercantile to opt out. No substantial program will be able to be formed later with these rules
- e. All neighboring states have programs. Difficult for customers to compete

7. What else is needed to help support clean energy in Ohio at much more reasonable rates than nuclear or coal?

- a. **CHP** – Combined heat and Power is 30% more efficient than traditional generation
 - i. Helps customers reduce costs to better compete with neighbors
 - ii. Helps improve the reliability of the grid
- b. **Renewable sources at customer sites**
 - i. Clean energy
 - ii. Avoids losses in the transmission system (up to 8% of the power plant needs)

- iii. Helps to support grid reliability
- iv. Helps customers compete with neighboring states
- c. These projects are cleaner and better for customers. Why not allow these to gain access to the same credits as being offered to Nuclear plants and OVEC coal plants?

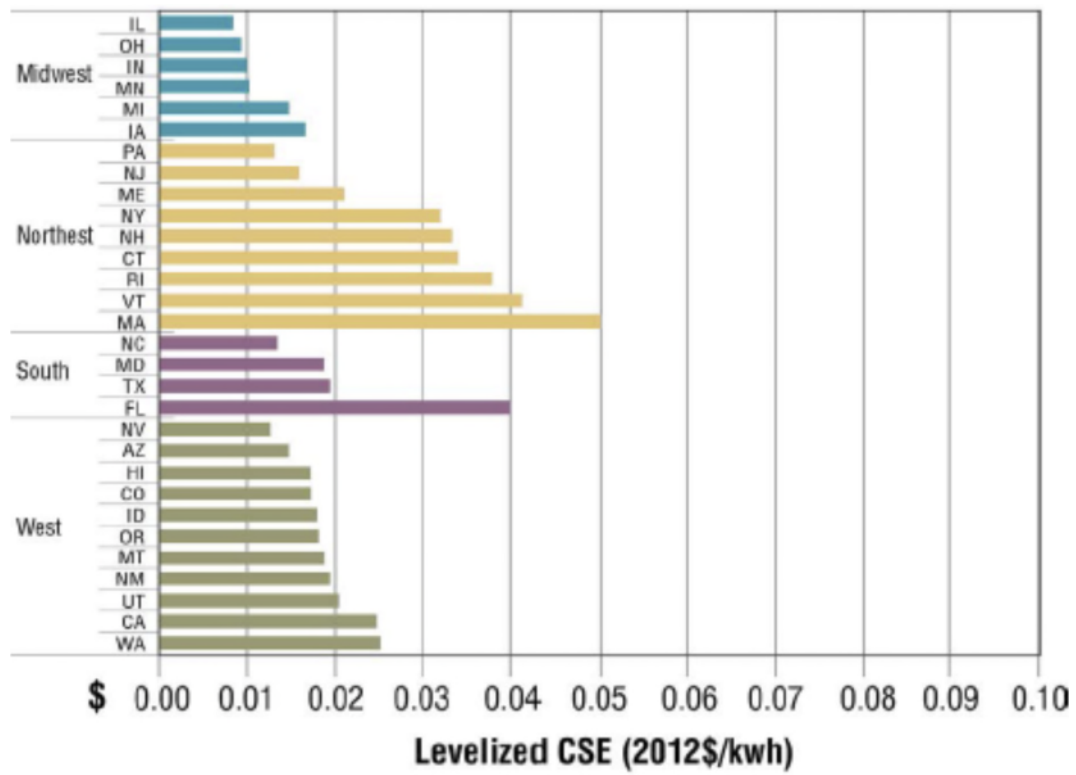
Conclusion – These are huge numbers with an incredible impact to the people of Ohio.

It may be best to take the time to look at the whole energy issues to make sure you are not costing people of Ohio billions of dollars and losing out of these opportunities. If you need to bailout the nuclear plants, handle it separately and provide time to look at everything closely so that you are making the right decision for Ohio.

I would be happy to answer any questions.

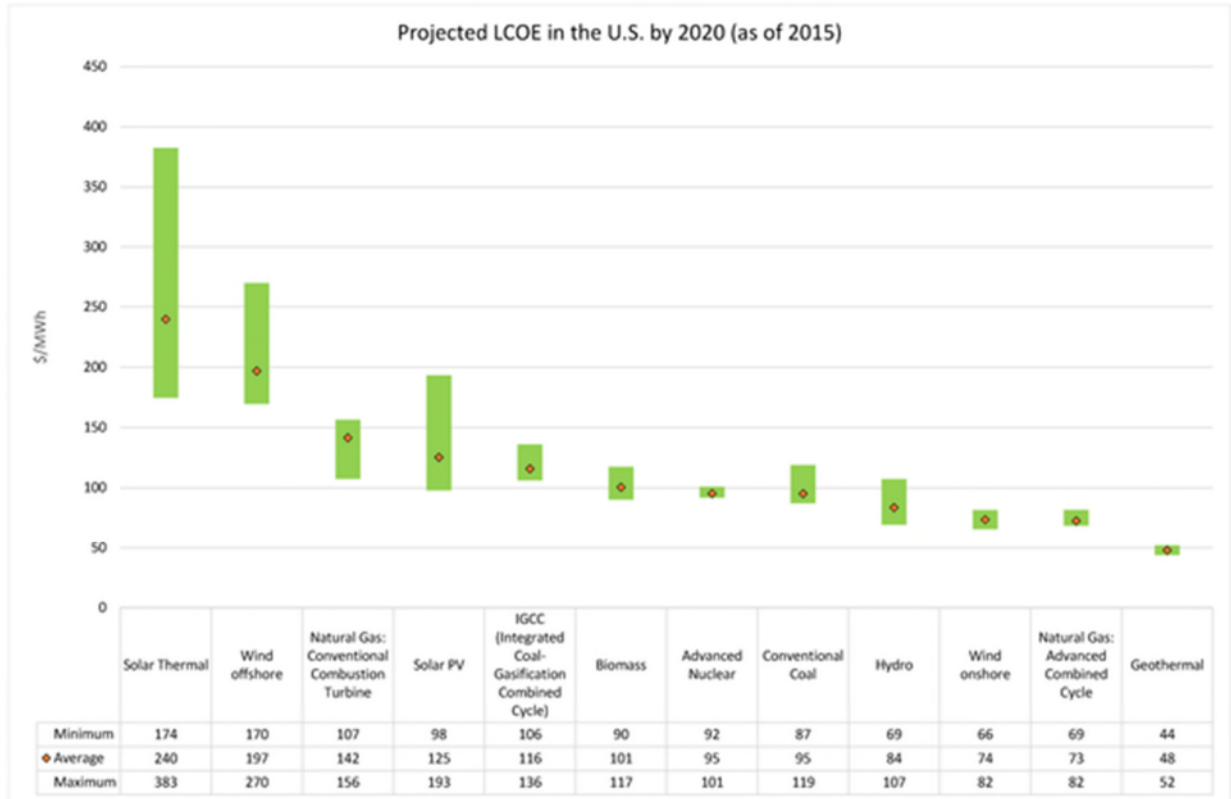
Gary A. Swanson, PE
Energy Management Solution, Inc.
gswanson@EMSenergy.com
(612) 819-7975

Chart 1.0 - Cost of Energy Efficiency programs in the US.



*Study Berkeley National Laboratory 2014.

Chart 2.0 – Future Cost of Generation



- EIA Data

Chart 2.1 Historical summary of EIA's LCOE projections (2010–2019)

Estimate in \$/MWh			Coal convent 'l	Nat. Gas combined cycle		Nuclear advance d	Wind		Solar	
of year	ref	for year		convent 'l	advance d		onshore	offshore	PV	CSP
2010	[61]	2016	100.4	83.1	79.3	119.0	149.3	191.1	396.1	256.6
2011	[62]	2016	95.1	65.1	62.2	114.0	96.1	243.7	211.0	312.2
2012	[63]	2017	97.7	66.1	63.1	111.4	96.0	N/A	152.4	242.0
2013	[64]	2018	100.1	67.1	65.6	108.4	86.6	221.5	144.3	261.5
2014	[65]	2019	95.6	66.3	64.4	96.1	80.3	204.1	130.0	243.1
2015	[60]	2020	95.1	75.2	72.6	95.2	73.6	196.9	125.3	239.7
2016	[66]	2022	NB	58.1	57.2	102.8	64.5	158.1	84.7	235.9
2017	[67]	2022	NB	58.6	53.8	96.2	55.8	NB	73.7	NB
2018	[68]	2022	NB	48.3	48.1	90.1	48.0	124.6	59.1	NB
2019	[69]	2023	NB	40.8	40.2	NB	42.8	117.9	48.8	NB

Nominal change 2010–2019	NB	-48%	-49%	NB	-71%	-38%	-88%	NB
---------------------------------	-----------	-------------	-------------	-----------	-------------	-------------	-------------	-----------

**Note: Projected LCOE are adjusted for inflation and calculated on constant dollars based on two years prior to the release year of the estimate.
Estimates given without any subsidies. Transmission cost for non-dispatchable sources are on average much higher.
NB = "Not built" (No capacity additions are expected.)**

*EIA Data released in 2015

Customer	New Rider Per Month	OVEC Estimate	Monthly kWh	kW	Capacity Costs (15%)	Increased Taxes	Increased Wholesale Costs	Total Increased Bill	Increased Cost (Increased cost-Nuke rider)	Monthly Increase	Annual Increase	% increase
Residential	\$ 1.00	\$ 1.00	892	4	\$ 2	\$ 3	\$ 4	\$ 11	\$ 7	\$ 7	\$ 88	8.2%
Com	\$ 15.00	\$ 15.00	21,900	50	\$ 24	\$ 50	\$ 99	\$ 123	\$ 112	\$ 186	\$ 2,237	1.1%
Ind 2	\$ 250.00	\$ 250.00	876,000	1,500	\$ 722	\$ 833	\$ 3,329	\$ 4,051	\$ 2,778	\$ 3,538	\$ 42,458	0.6%
Ind 3	\$ 2,500.00	\$ 2,500.00	5,840,000	10,000	\$ 4,814	\$ 8,333	\$ 19,272	\$ 24,086	\$ 14,768	\$ 25,112	\$ 301,345	6.6%

Bio – Gary Swanson

- Worked as an energy consultant for 30 years
- Professional Engineer in Ohio
- Office and apartment in New Albany, Ohio
- Presently working with over 500 Industrial and Commercial sites in Ohio
- Saved nearly 1,000,000,000 kWh for customers in Ohio
 - Saved \$450,000,000 in Energy
 - Saved \$171,000,000 in avoided new power plants
 - Saved \$265,000,000 in avoided infrastructure costs
- Won dozens of energy efficiency awards in Ohio since 2011
- Completed more rebates than anyone else in Ohio
- Completed more rebates for PJM than any non-utility company
- Audited over 10,000 sites