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## MEMORANDUM

Date: May 24, 2019

To: The Ohio Manufacturers' Association

From: John Seryak, PE and Jordan Nader (RunnerStone, LLC)

RE: Substitute House Bill 6 and the Clean Energy Program – Impact to Manufacturers

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Substitute House Bill No. 6 (Sub. H.B. 6), version 17, was recently introduced into the Ohio General Assembly. Sub. H.B. 6 significantly reworks Ohio's electricity policy in a way that could substantially affect manufacturers. OMA energy counsel Kim Bojko has separately provided a legal analysis on what Sub. H.B. 6 does, and how it works.

In summary, after a phase-in period Sub. H.B. 6 creates a \$198 million annual fund for nuclear power plants, extends a "power purchase agreement" for legacy, uneconomical coal plants in Indiana and Ohio that currently cost Ohioans tens of millions of dollars, defunds Ohio's competitive renewable portfolio standard, creates a mechanism for utility-backed renewable energy projects with no limits, and jeopardizes Ohio's participation in competitive wholesale electricity markets.

These potential changes in Ohio's electricity policy negatively impacts three issues of interest to Ohio's manufacturers: cost, competition, and carbon-dioxide emissions.

### Cost

Sub. H.B. 6 very likely creates a net increase in customer costs, including the potential to increase manufacturers' electricity bills. First, and most obviously, Sub. H.B. 6 creates new customer charges for the Clean Air Program - \$12 per year for residential customers, \$180 /year for commercial customers, \$3,000 /year for

### Impact of Sub. H.B. 6, -17

- \$198 million/year in new subsidies for nuclear power
- Extends subsidies for legacy, uneconomic coal plants in Indiana and Ohio, which cost Ohio tens of millions of dollars each year
- Will remove significant portions of Ohio generation and consumer load from competitive wholesale capacity auctions
- Likely to increase capacity prices
- Effectively eliminates renewable energy standards
- Allows new utility power-purchase agreements and costs for renewable energy
- Allows creation of utility initiated power-purchase agreements for nuclear plants
- Utility power purchase agreements only apply to mercantile customers, including manufacturers
- Utility efficiency programs
  - Continue through 2020
  - Can be continued starting in 2021, at the utility's discretion
  - Subject to mercantile customer opt-out in 2020
- Creates reasonable arrangement mechanisms for trade-exposed industrial manufacturers



industrial customers, and \$30,000 /year for large consumers who use over 45 million kWh per year. Across Ohio's four investor-owned utilities, this would create \$198 million/year in funds for the Clean Air Program.

Second, Sub. H.B. 6 extends an existing subsidy for the Ohio Valley Electric Corporation through 2030. OVEC owns two legacy, uneconomical power plants, Clifty Creek in Indiana and Kyger Creek in Ohio. The OVEC subsidy currently costs Ohioans tens of millions of dollars each year.

Third, Sub. H.B. 6 automatically exempts any customer who pays into the Clean Air Program from paying into the renewable portfolio standard. Because all customers are mandated to pay into the Clean Air Program, this auto-exemption effectively ends the renewable portfolio standard by completely defunding it. We estimate that the renewable standards cost about \$40 million in 2017<sup>1</sup>, and around \$60 million in 2019<sup>2</sup>.

Fourth, Sub. H.B. 6 directs the PUCO to authorize new power purchase agreements (PPA) for utility renewable energy, customer-sited renewable energy, and even nuclear power plants, for 3-year terms or longer. The private market currently provides 3-year or greater terms for PPAs to customers who are seeking such projects. Sub. H.B. 6 would create a whole new set of riders and potential costs for renewable energy, and would not exclude a distribution utility from establishing a PPA for nuclear power plants. Importantly, this language creates a mechanism for distribution utilities to participate in the generation market.

Longer term, Sub. H.B. 6 will have an impact on wholesale electricity markets, and the impact could be severe and costly to manufacturers. The exact cost is still elusive. This is because of a domino-effect of state-level nuclear power plant subsidies has left the regional grid operator, PJM, without a FERC-approved capacity auction construct. Based on recommendations from FERC, electricity generators receiving funds from the Clean Air Program, or via a PPA, would be subject to a "bifurcated" capacity auction, in which the state of Ohio would likely set capacity prices for these power plants instead of PJM, and this potentially higher price would be flowed through to Ohioans.

On energy efficiency, the requirement for a utility to run an efficiency program is effectively eliminated. Sub. H.B. 6 allows utility run efficiency programs to persist through 2020, and then a utility may choose to extend their programs into additional years. If a utility chooses to do so, Sub. H.B. 6 does allow for a "mercantile opt-out" of the efficiency programs. Any customer that consumes over 700,000 kWh/year will be allowed to opt-out of paying into the efficiency programs, but will then not be allowed to receive financial assistance from the programs. Non-mercantile customers would be required to continue paying into energy efficiency programs. In cases where a utility does not continue its efficiency program, the full cost of the programs will be reduced, but that utility's customers will have no access to efficiency programs.

For context, Sub. H.B. 6 sets up a similar situation to the so-called efficiency program "freeze" in 2015-16. During these years, AEP Ohio, Duke, and DP&L continued their programs, while

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<sup>1</sup> Renewable Portfolio Standard Report to the General Assembly by the Public Utilities Commission of Ohio For the 2017 Compliance Year.

<sup>2</sup> Pro-rated from 2017's RPS benchmark to the 2019 RPS benchmark. Costs would increase to \$142 million by 2026 at 2017 prices, though could be held in check if renewable energy credit prices fall.



FirstEnergy suspended theirs. In testimony on the original H.B. 6, AEP Ohio, Duke, and DP&L have all expressed interest in operating energy-efficiency programs. While we cannot fully predict the effect of Sub. H.B. 6 on efficiency programs, a good likelihood is that three of Ohio’s four utilities will continue offering their programs. Because more customers will have the choice to opt-out of efficiency programs, we do expect some reduced participation in efficiency programs. Some cost shifting amongst customers is likely to occur since program budgets are not being modified in response to participation rates. Manufacturers should note that there is sharp disagreement over whether efficiency programs represent a cost, or a net benefit, to customers.

### Competition

Sub. H.B. 6 significantly erodes competition in electricity markets by subsidizing old nuclear and fossil fuel power plants, while eliminating renewable portfolio standards and their costs. It is important to note that the renewable portfolio standards were created to support new and emerging technologies and energy management practices with the *goal to create functioning, competitive markets* in what was until recently a monopolistic industry dominated by incumbent businesses, that had themselves received full cost recovery without competition. Moreover, renewable energy has been shown to reduce prices in the wholesale electricity markets.

Instead, Sub. H.B. 6 creates subsidies for older generating technologies that have already received cost-recovery from Ohio’s ratepayers several times, are unable to compete in the wholesale electricity markets, and are announced for retirement. Moreover, Sub. H.B. 6 provides distribution utilities a pathway back into the generation business, allowing distribution utilities to create power purchase agreements (PPAs) for Clean Air Resources – nuclear power and renewable energy - where mercantile customers “commit to satisfy a material portion of their electricity requirements from the output of a clean air resource.”<sup>3</sup>

Put another way, Sub. H.B. 6 creates subsidies to reverse the competitive electricity market formation that Ohio has supported for 20 years. This is serious - competitive electricity markets save Ohio’s manufacturers, businesses, and residents around \$3 billion per year<sup>4</sup>.

### Carbon

An intriguing aspect of Sub. H.B. 6 is its treatment of carbon dioxide emissions and other environmental emissions. When considering carbon emissions, it is important to note several trends:

- Many global manufacturers and their supply chains are adopting greenhouse gas reduction goals, energy reduction goals, or renewable energy supply goals. Thus, the carbon intensity of the regional electric grid is important to a growing number of manufacturers. The carbon intensity of the electric grid counts towards a manufacturer’s internal accounting of Scope 2

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<sup>3</sup> Sub. H.B. 6 -14, Line 1046-1047

<sup>4</sup> “Electricity Customer Choice in Ohio: How Competition Has Outperformed Traditional Monopoly Regulation”, Thomas, A., Bowen, W., Hill, E., Kanter, A., Lim, T. [https://engagedscholarship.csuohio.edu/cgi/viewcontent.cgi?article=2420&context=urban\\_facpub](https://engagedscholarship.csuohio.edu/cgi/viewcontent.cgi?article=2420&context=urban_facpub)

emissions and thus impacts a manufacturer's ability to meet their own corporate emissions reductions goals.

- The US has canceled implementation of the Clean Power Plan, and announced withdrawal from the global Paris Treaty. As a result, there is thus no current federal carbon emissions policy for electricity generation.
- States that have created their own carbon reduction policy for the electricity sector often join regional carbon markets to reduce costs, such as the Regional Greenhouse Gas Initiative comprised of mid-Atlantic and New England states.
- Competitive wholesale electricity markets produce efficiencies of several types, lowering not just cost but carbon emission as well, as producers reduce waste in order to stay competitive. Thus, maintaining competitive markets is an important aspect of reducing wastes and improving efficiencies, as supported by multiple academic studies<sup>5</sup>.
- Ohio's existing diverse electricity generation mix is keeping costs low, as well as reducing emissions by 38% from 2005 levels<sup>6</sup>. This lower carbon transformation has occurred in a competitive wholesale electricity market.

In light of these trends, a state policy intended to cost-effectively reduce carbon dioxide emissions from the electric sector would likely have the following components:

- Preserve competitive electricity markets.
- Develop a carbon market, typically with regional partners and a fluctuating price.
- Allow broad competition for carbon credits that is technology neutral, and would include nuclear, large scale renewable energy, smaller scale renewable energy, behind-the-meter generation, and energy efficiency.

Sub. H.B. 6 does none of this, and in fact, subsidizes uneconomical coal plants. It could impair Ohio's already successful trend of reducing carbon-dioxide emissions in several ways. First, it erodes competitive electricity markets by introducing subsidies for specific technologies and plants. Even zero-carbon nuclear plants are shown to reduce more emissions when they are in competitive markets<sup>7</sup>. Second, Sub. H.B. 6 creates subsidies for the OVEC coal plants. Third, Sub. H.B. 6

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<sup>5</sup> Cicala, Steve. 2015. "When Does Regulation Distort Costs? Lessons from Fuel Procurement in US Electricity Generation." *American Economic Review*, 105 (1): 411-44

Fabrizio, Kira, R., Nancy L. Rose, and Catherine D. Wolfram. 2007. "Do Markets Reduce Costs? Assessing the Impact of Regulatory Restructuring on US Electric Generation Efficiency." *American Economic Review*, 97 (4): 1250-1277.

Craig, J. Dean, and Savage, S., 2013, "Market Restructuring, Competition and the Efficiency of Electricity Generation: Plant-level Evidence from the United States 1996 to 2006", *The Energy Journal*, 34 (1): 1-31

<sup>6</sup> Ohio EPA letter to the US Environmental Protection Agency, Oct. 30<sup>th</sup>, 2018, Docket ID No. EPA-HQ-OAR-2017-0355

<sup>7</sup> Davis, L., Wolfram, C., 2012. "Deregulation, Consolidation, and Efficiency: Evidence from US Nuclear Power," *American Economic Journal: Applied Economics*, American Economic Association, vol. 4(4), pages 194-225, October.



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eliminates support for renewable energy technologies and their significant associated emissions reductions.

In conclusion, Sub. H.B. 6 is a major reworking of Ohio's energy policy, and could result in significantly higher electricity prices for Ohio's manufacturers, would erode functioning electricity markets, and could even increase Ohio's carbon-dioxide and other emissions from the electricity sector.