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The Attempted Bailout of FirstEnergy's Uncompetitive Nuclear Power Plants: House Bill 6 is a threat to Ohio's economic future

House Bill 6
Opponent Testimony

Before the
Ohio House Energy and Natural Resource Committee
Representative Nino Viitale, Chair
Representative Sedrick Denson, Ranking Member

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The findings, conclusions, and recommendations expressed in this testimony are mine alone and do not represent the views of The Ohio State University, the John Glenn College of Public Affairs, or the Ohio Manufacturing Institute

Ohio House Energy and Natural Resource Committee

Chairman Vitale, Ranking Member Denson, and the members of the Energy and Natural Resource Committee, thank you for providing me with an opportunity to submit testimony in opposition to House Bill 6. My name is Edward [Ned] Hill. I am Professor of Economic Development at The Ohio State University's John Glenn College of Public Affairs and a member of the university's Ohio Manufacturing Institute. Today's testimony is mine alone and does not represent the views of The Ohio State University, the John Glenn College of Public Affairs, or the Ohio Manufacturing Institute.

I am an economist and have worked on economic development policies in general, and on issues that affect Ohio's manufacturing sector in particular, for nearly thirty-four years. I am interested in the performance electricity markets in Ohio and have testified on my findings before the Public Utilities Commission of Ohio (PUCO) and the Ohio Legislature. I have also participated in research relating to the development of Ohio's natural gas resources since 2011.

I have appended an opinion column on House Bill 6 that *Crain's Cleveland Business* published on Monday, May 6. The column was submitted before the substitute bill was available.

I apologize for not being able to testify in person. Family responsibilities and a previous commitment made it impossible for me to testify in person.

As an economist who works on economic development issues, I view the attempts of Ohio's Investor Owned Utilities (IOUs) over the past five years to:

- Bailout failing power plants,
- Re-monopolize the electric generation industry through a mix of regulation and legislation,
- Re-balkanize and degrade an efficient and reliable regional generation market managed by PJM Interconnection,
- Mandate above market rate payments for electricity through anti-competitive purchase price agreements (PPAs), and
- Implement non-bypassable riders that are not connected with the generation, transmission or distribution of electricity service delivery

as being fundamentally detrimental to the state's economic development.

These attempted bailouts, above-market PPAs, and riders all come after transition payments were made to the state's IOUs over the past decade and a half with the legislature's intent that they be used to mark down stranded assets to reflect their market value and adjust to competition in the electricity generation market. The Legislature also advised the IOUs to divest themselves of their generating capabilities. Unfortunately, only Duke Power followed the legislature's advice. The others, particularly FirstEnergy (FE), made a business decision that turned out badly. Today, FE is back before the Legislature seeking a multi-billion dollar bailout without an end date to cover its bad business bet.

Ohio's Consumer Counsel estimates that Ohio's IOUs have collected more than $14 billion in stranded asset payments and non-bypassable riders since 2000. House Bill 6 will add another $3 billion over the next ten years, and the bailout of the nuclear plants has no end date or sunset provision. House Bill 6 provides a bailout that does not.

My testimony is in two parts. First, I review the regulatory and legislative scrum that has taken place since 2014. Second, I discuss the most problematic economic components of H.B. 6. However, the most important problems with the drafted bill should be mentioned up front. The first is its opaque writing. The intent of the bill and its mechanics are needlessly obscured. I am sure that even the drafting party does not fully understand how this beast works. The second is its reliance on data from FirstEnergy without independent verification.

The past five years

If it looks like a duck, waddles like a duck, and quacks like a duck, let's be honest and just call it a duck. And, we should also acknowledge, but not celebrate, the fact that we are close to starting our sixth year of duck hunting. August 2019 marks the sixth anniversary of a determined campaign by Ohio's IOUs to subsidize their (or their affiliates') loss-making power plants.

The bulk of House Bill 6 constitutes the third attempt by FE to bail out its uncompetitive nuclear power plants, with similar levels of non-bypassable charges being demanded in each effort. In my assessment, these non-bypassable charges are *de facto* taxes because the power of the state is required to extract payments from electricity users.

Initially, the IOUs tried to use the Electric Security Plans (ESPs) required by the Public Utilities Commission of Ohio (PUCO) as vehicles to gain approval for uncompetitive, non-bypassable power purchase agreements (PPAs) from their loss-making power plants. FE submitted the initial version of its plan to the PUCO in August 2014. The PUCO did not approve the PPA, but the ESPs that were approved contained a slew of non-bypassable riders that funneled above-market payments to the state's IOUs, turning the Electric Security Plans into Egregious Subsidy Proposals.

Next in line was FE's invention of a synthetic form of a PPA to subsidize its two loss-making Ohio nuclear plants along with had what appeared to be a backdoor subsidy from Ohio customers to its Beaver Valley nuclear facility located along the Ohio River in Shippingport Pennsylvania. Unsatisfied by the negative reception of this proposal at the Public Utilities Commission of Ohio and the Federal Energy Regulatory Commission (FERC), FirstEnergy shifted its attention to the legislature.

FE petitioned for approval of synthetic Zero-emission nuclear credits, or ZECs, tied to non-bypassable power purchase agreements to subsidize its nuclear plants in House Bill 178 that was before the Legislature in 2016. FE sought a subsidy of $300 million a year in that bill. And now we have House Bill 6, pegged at $300 million a year—the same number as found in the 2016 legislation.

What H.B. 6 and its previous incarnations gets fundamentally wrong is the core public policy goals of competitive wholesale energy markets, provide reliable power at

the lowest cost to consumers. As former Federal Energy Regulatory Commissioner Tony Clark wrote in a July 2017 white paper: “For many, a ‘freer market’ was never the end goal. The market was a tool. Affordable power was the goal .... but many state public policy makers no longer see that as the only goal ... (Electricity generating markets) were never designed for job creation, tax preservation, politically popular generation, or anything other than reliable, affordable electricity.”[1]

The electricity generation and capacity markets are working in Ohio and benefit consumers and employers. There is no economic rationale for introducing subsidies into the electricity generating markets; they amount to nothing more than corporate welfare.

Is the Electricity Market Working? A Four-part Test

There is a straight forward four-part test that determines if electricity markets are working for consumers and the industry:

First: *Are prices lower than they would have been without competitive electricity markets?* The answer for Ohio is definitive and positive. Savings occur in two ways. The cost of Standard Service Offerings from the IOUs declined when competition for purchasing generated electricity became effective, and the spread between competitive pricing and SSO pricing has narrowed over time. Narrowing differences between prices offered by established electricity providers through their SSOs and from competitive new market entrants are the expected result in operating free markets. Electricity transmission and distribution remain natural monopolies for now. Distribution is regulated by the PUCO, while transmission is jointly regulated by the PUCO, PJM Interconnection, and FERC.

The second source of savings from competition in the market for purchasing electricity generation occurs when commercial and industrial customers shop for power. In 2016 a research team that I was a part of estimated that nearly $3 billion a year in savings resulted from the entrance of new competitors.[2]

Savings from competitive generation markets have been clawed back to some extent through the expansion of non-bypassable riders by the PUCO. These riders are costs paid for by most electricity users and are not associated with charges for energy generation, capacity reserves, transmission, distribution, or losses — most of the riders are used for their named purposes. However, an exception exists in a grid modernization rider which allows FE to collect $168 million a year from 2017 to 2019. The company can apply to renew it for another two years. These funds appear to be fungible; they do not have to be spent on their named use, such as modernizing FE's

[1] Clark, Tony. *Regulation and Markets: Ideas for Solving the Identity Crisis*. Wilkinson, Baker, Knauer. July 2017. https://www.wbklaw.com

[2] Thomas, Andrew, et al. *Electricity Customer Choice in Ohio: How competition has outperformed traditional monopoly regulation*. Northeast Ohio Public Energy Council, November 2016.

transmission or distribution grids. The corporation appears to be able to use the funds as it wishes—including making good on losses from generating subsidiaries.[3]

Dormady et al. state that the riders paid for by residential customers may have fully offset their savings.[4] Thomas et al. (I was a member of this research team) also noted the rise in riders but did not apply the cost of the riders against the savings in electricity generating charges that were paid for by the various classes of customers. What is the impact of these riders on aggregate electricity spending in Ohio?

Competitive electric generation markets were in effect in most of Ohio in 2016. At that time non-bypassable riders constituted 14 percent of total electricity spending; generation costs were 48 percent of the aggregate bill. In 2018 generation costs are 41 percent of aggregate payments, and non-bypassable riders were 21 percent. There was a 7 percent swap between the two cost categories.

The riders are a competitive problem for Ohio's economic development, especially when firms that recruited to invest in the state asked for "reasonable rates" or "reasonable arrangements" and get riders waived by the PUCO. These costs do not disappear, however. The IOUs get paid. The portion of a rider that is forgiven under a reasonable arrangement is pooled and shifted onto other non-abated customers to pay.

Second: *Is investment in new generating capacity taking place in PJM Interconnection's region and is investment taking place in Ohio?* The answer to this question is also, yes. Approximately $11 billion in new power plant investments in Ohio are operating, approved for operation, or in the approval process. The combined generating capacity is 11.1 MW.[5]

Testimony before this Committee's Subcommittee on Energy Generation on April 24th indicates that the ground is beginning to shift among investors who are interested in building and operating natural gas power plants in Ohio. Some investors in approved projects that have not yet broken ground are heading for the sidelines.[6] They want to know if, and how, Ohio is changing from a competitive generating market to a re-regulated monopoly generating market. House Bill 6 has not yet received a vote and it is already hurting the economy.

Third: *Have uncompetitive generating plants closed? Yes*. Between 2010 and 2022 48 coal-fired power boilers located at 16 separate power stations are, or will be

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[3] Kowalski, Kathiann M. *FirstEnergy won't say what it's done with Ohio grid modernization money*. Midwest Energy News. https://energynews.us/2018/07/30/midwest/firstenergy-wont-say-what-its-done-with-ohio-grid-modernization-money/

[4] Dormady, Noah, et al., *Why Ohio's Retail Deregulation Has Been Bad for Households and Why Re-regulation Would Be Even Worse*. Policy Brief, John Glenn College of Public Affairs, 2018a. Dormady, Noah, et al., "Do Markets Make Good Commissioners? A Quasi-Experimental Analysis of Retail Electric Restructuring in Ohio," *Journal of Public Policy*. Published online July 3, 2018b.

[5] Ohio Independent Power Producers. Testimony before the Ohio House Energy and Natural Resource Committee, Subcommittee on Energy Generation, March 19, 2018.

[6] See the testimony of Mayor Arno Hill of Lordstown Ohio at https://ohiochannel.org/video/ohio-house-energy-and-natural-resources-subcommittee-on-energy-generation-4-24-2019-part-2 and Oregon Ohio's City Manager Michael J. Beasley at https://ohiochannel.org/video/ohio-house-energy-and-natural-resources-subcommittee-on-energy-generation-4-24-2019-part-3.

retired, with 14MW of power generation capacity. These power stations are located throughout the state, with most located along the Ohio River.[7]

The sites these former power stations occupy have the best development potential in Southeast Ohio. Connections to transmission grids exist at these sites. Many abut the river. They are perfect locations for natural gas-fired combined cycle power plants and for operations that need water, water transportation, and power. The irony is that one critical element of infrastructure is missing, an industrial scale natural gas pipeline that extends south along the Ohio River past Portsmouth to Adams County and possibly snaking its way toward Cincinnati. The legislature is fiddling away at propping up failed nuclear power plants in northern Ohio as Appalachia declines. We should learn from what transpired in Oregon Ohio when an industrial natural gas pipeline reached its borders.[8] We can also learn by examining the new investment occurring on Ashtabula's docks thanks to an industrial pipeline extension.

Fourth: *Has the reliability of the electric grid improved with the onset of competition?* The answer to this question is also positive. The power reserve standard for summertime peak usage under the previous state regulatory regime was between 12 and 16 percent. From 2008 to 2010, before competition in purchasing electricity was fully effective in Ohio, the reserve margin for PJM Interconnection was between 16.6 percent and 18.0 percent. PJM's reserve margin for 2019 is 27.5 percent. PJM estimates that reserves will peak in 2021 at 28 percent. The reserves will decline a bit, yet still stay ten percentage points above the old regulatory rule-of-thumb, to a still-robust 26 percent in 2023.[9]

Reliability has increased with effective regional transmission networks and competitive capacity markets that combine power generation capacity over a 13-state region. When weather events shift power demand, or outages dislocate power supplies, reserve power can be dispatch throughout PJM Interconnection's grid. Reliability is now more robust than when electricity generation capacity was balkanized. A large regionally interconnected transmission grid is electricity's version of the Law of Large Numbers.

Some in the legislature listen to industry lobbyists who claim that energy insecurity is increasing in the state of Ohio because of the number of shuttered coal-fired power plants and the prospect of two northern Ohio nuclear generating plants closing. Statements circulate that Ohioans are at the mercy of an uncaring and incompetent PJM Interconnection. All of this is self-serving foolishness.

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[7] The data were collected from: *Impact of Coal Plant Retirements on the U.S. Power Markets: PJM Interconnect Case Study*, Appendix A, Energy Ventures Analysis, July 2018; Seth Feaster, Record Drop in U.S. Coal-Fired Capacity Likely in 2018. IEEFA October 2018. http://ieefa.org/wp-content/uploads/2018/10/Record-Drop-in-U.S.-Coal-Fired-Capacity-in-2018_October2018.pdf; List of Power Stations in Ohio, Wikipedia; Individual pages maintained by Sourcewatch, example: https://www.sourcewatch.org/index.php/Eastlake_Power_Plant

[8] Testimony of Oregon Ohio's City Manager Michael J. Beasley before the Subcommittee on Energy Generation at https://ohiochannel.org/video/ohio-house-energy-and-natural-resources-subcommittee-on-energy-generation-4-24-2019-part-3.

[9] PJM Interconnect, Reserve Margin Graph, 2019. https://www.pjm.com/~/media/planning/res-adeq/20190409-forecasted-reserve-margin-graph.ashx

Electrons do not come in state colors, and the location of a power plant on one side of the Ohio River or the other makes no difference to the grid. Electrons generated in Ohio, Pennsylvania, West Virginia, Kentucky, or Indiana all work the same way.

Lobbyists are peddling another fable that is associated with their false assertions on system reliability—and that is supply vulnerability. Members of the legislature are being told that the reliability of electricity in Ohio is at risk because of the power that is imported. We need to be self-sufficient. Again, hooey. Ohio has been a net importer of electricity every year but one since 2001, while being the 8th largest producer of electricity. We just happen to be a larger consumer because of the structure of our economy. Most of the foreign-made electricity comes from the Ohio River Valley. In a transition from nuclear power our out-of-state imports will increase. And as time passes investment in new gas-fired power plants and alternative sources of power and conservation should also increase. That is, as long as Ohio preserves a competitive market for electricity consumption.

Has regulatory capture occurred over the past five years? It has. Non-bypassable costs in the transmission and distribution portions of the business have grown faster among the IOUs that own generating capacity than for the utility that does not. We all can observe the results of a natural experiment that occurred when Duke Energy shed its electricity generation capacity while AEP and FirstEnergy did not. We found out how an IOU with a fleet of generating plants behaves in the PUCO and Legislature compared to one that sold off its generating fleet.[10] The one without generating capacity has fewer and less costly non-bypassable riders in its ESP.

Core Problems with House Bill 6

I have already referred to a number of the problems in House Bill 6. They are so fundamental and numerous that I do not see how the bill can be fixed or how an altered bill can be useful economic development policy. The reason is that the assumptions made in this bill about how markets work are nonsense.

House Bill 6 is reacting to the competitive failure of nuclear power as a near term political issue instead of the long-term economic issue. If the problem were merely political, then a deal could be cut, and we could end this six-year duck hunt.

Unfortunately, in the long term, the challenge presented by the two upside-down nuclear power plants in Ohio is fundamentally an economic problem.

The members of the legislature should understand that markets will beat politics over time because investment moves to avoid higher prices and seek higher returns. Investment either does not take place or it slows down when the state government denies investors opportunities to compete against existing firms. In some sense, markets move like water in search of its own level. If we constrain competition, as is proposed by H.B. 6 investment will flow elsewhere, using Ohio-drilled natural gas.

What the drafters of House Bill 6 got wrong is their understanding of how competitive markets work. If the members of this Committee, and the other members of the House of Representatives, do not take the operation of competitive markets

[10] Thomas, *et al*., *op. cit*.

seriously for the sake of political expediency, we are going to make mistakes. Electricity users in Ohio will end up with higher prices and less reliable power.

Increases in the cost of power will be higher than the bailout payments mandated in House Bill 6 because of the way the pool of power consumed will be constructed. (This is explained after the short microeconomics lesson that immediately follows.) Ohio will also see an increase in special-interest petitions by sophisticated and connected employers for "reasonable rates." Electricity rates will decline to some negotiated level for politically connected or recruited businesses through an economic development attraction and retention process run by the PUCO. The negotiated rates will be confidential business secrets, and the negotiated savings will be passed on to other commercial and residential customers to pay.

It is inescapable to conclude that House Bill 6 is an attempt to raise electricity rates in the state of Ohio. *And, as we wrestle over potential rate increases, our competitors in the multi-state region served by the Tennessee Valley Authority to our south is taking action to lower their electricity rates*.[11] TVA serves southern Kentucky and a connecting piece of southwestern Virginia. Residents of most of Tennessee, as well as those who live in adjoining western North Carolina, are TVA's customers. Sophisticated manufacturing employers in northern Mississippi benefit from TVA's rates, as do those in northern Alabama's Muscle Shoals and Huntsville regions. Chattanooga and Atlanta's northern suburbs are also customers of TVA. In other words, a good portion of Ohio's day-to-day economic competition purchases power from TVA. *Ohio is heading in the wrong direction.*

House Bill 6, if enacted, will hurt Ohio's economic development by increasing electricity costs and diminish the reliability of the state's electric grid. The bill subsidizes cost inefficient nuclear power plants and paves the way to pre-monopolize alternative energy production in the state of Ohio. House Bill 6 will also discourage investment in efficient natural gas-fired combined cycle power plants. House Bill 6 ensures that Ohio's abundant and clean sources of natural gas will be drilled, put into pipes, shipped out-of-state, and the value that could have been added in Ohio will be added elsewhere. That prospect is an economic development nightmare and a loss for employment opportunity in Ohio's shale country.

How do competitive markets work?

Competitive markets work by having the lowest cost products enter a market first. More expensive sources of the very same product enter markets after the more efficient sources of supply are exhausted. That is the reason why the standard supply curve taught in introductory economics courses climbs the vertical price axis as the supply of the product increases. It also explains why economists state that in perfect markets profits are zero. However, the only producers who truly make no profit are the last ones to have their products purchased because their marginal cost of production equals the revenue earned from the last sale that is made. All other suppliers who have production costs that are lower than marginal revenue make money. There are also some

[11] Gardner, Timothy, "U.S.-owned utility to close two coal plants, in blow to Trump," *Reuters*, February 14, 2019 and James Brugger, "TVA Votes to Close 2 Coal Plants, Despite Political Pressure from Trump and Kentucky GOP," *Inside Climate News*, February 14, 2019.

unfortunate companies that cannot sell their products at all because they are so inefficient, that it does not make sense to turn the lights on.

Supply enters the market until the marginal cost (the price at which producers are willing to sell the last units that enter the market) equals the consumer's willingness to pay. The amount that is the lowest that a consumer is willing to pay and still take the product home is referred to as marginal revenue (the revenue created by the last unit sold). And, of course, once the lowest price is known, rational consumers are unwilling to pay a higher price for the same thing. Markets clear when marginal cost equals marginal revenue; this is what "supply equals demand at the equilibrium price" means. Those with production costs that are too high do not sell their products and are expected to exit the market either voluntarily or by bankruptcy.

There are two exceptions. Suppliers with very high fixed costs—costs that stay the same when production is either underway or stopped—will sell their product as long as the variable cost of production, the marginal cost, pays for all of the materials used in the production process, and there is a something left over to pay down fixed, or non-operating, costs. This systematic production decision making is what occurs in the electricity market. Fixed costs are high, especially for nuclear and coal-fired production. However, companies can only survive for a short time using this strategy because their losses will keep piling up and they will eventually run out of cash.

The second exception to the operations of competitive markets as I have described them is if the product is differentiated in some meaningful way. In the electricity market, an electron is an electron no matter how it is produced—electricity is an undifferentiated commodity. Well, there is one disruptive exception. Electrons that are made using solar, wind, or water power are considered differently by a growing number of consumers because CO^2 is not created as a harmful by-product, what economist term a negative externality. The question is how much of a premium some customers are willing to pay so that they avoid consuming non-green energy. Green energy is the only electron that has a color.

How does basic microeconomic theory apply to House Bill 6?

Microeconomics makes a difference in anticipating the outcomes from House Bill 6. The bill gets market mechanisms entirely backward; not once, but twice. The bill's drafters are not even allowed to ride along on a grading curve and earn a gentle C. Rather than having electricity supplied to users based on lowest-cost energy being the first units consumed the bill mandates that the state's consumers purchase and consume the most expensive power first. There are two places where this occurs.

The first place is at the heart of the bill when taxes, called non-bypassable riders, are enacted by the PUCO under the direction of the legislature to establish clean air credits. As mentioned earlier, the credits secure the nuclear plants and keep them operating. The second step in the dance takes place when the long-term mandated Power Purchase Agreements are executed between an IOU and its generator. The PPAs ensure that the power from the nuclear plants enters the market and that the purchase price provides a profit for the operating company. These two actions guarantee that the most expensive energy source comes into the power market first and stays in the mix of power sources. The outcomes are:

- Consumers pay for the clean air credits,
- Consumers pay for more expensive power,
- The PPAs will have a 10 to 20-year life,
- The most inefficient producers never leave the market because of “clean air credits,” which are the revenue the bailout provides, and
- New investment in lower cost, disruptive, power generation, is deterred

The lack of exit cannot be denied because this is the entire purpose of the bill. How competitive do you think that the price of power will be coming from the nuclear plants with no competitive pressure to keep operating costs in check? The support for an inefficient producer that is either uninterested in changing its operations, or cannot change them, cannot be denied either because House Bill 6 does not have a realistic end date to the subsidy payments. Not even inflation can erode the real value of the credit over time. The $9.25 per MW clean air credit will automatically increase over time because it is linked to an inflation index.

While the inflation adjustment will protect the value of the credit over its uncertain lifetime, it also invalidates a statement that was made consistently and emphatically by subcommittee members during the hearing previous to my testimony. Under House Bill 6 the cost of the clean air credits to residential customers is supposed to be locked in at $2.50 per month, commercial customers will pay $200 a month, industrial customers $250 a month, and customers that use more than 45 KWH in a single location will pay $2,500 a month. However, these payments are not adjusted for inflation while the production credit will be changed. Who pays the deficit that will occur when the cost of the program starts to exceed the revenue that comes in through the non-bypassable charge? The funding mechanism does not work, and the promises made will not be kept.

Why do I refer to House Bill 6 as a bailout for FirstEnergy and FirstEnergy Solutions?

Using the taxing power of the state to prop up a failed company and thwart market forces is what makes House Bill 6 a bailout for FirstEnergy and FirstEnergy Solutions. This fact answers any question as to why the payments in House Bill 6 are a bailout and not a subsidy.

Comparisons drawn between the bailout of the domestic automotive industry during the Great Recession and the support for Ohio’s failed nuclear plants throughout the hearing are also wrong. Before the bailout of GM and Chrysler was executed both companies were bankrupt and existing stockholders lost their ownership interest in the companies. Ford took a different route by not taking federal money. Ford protected its shareholders and pledged all of its assets including the blue oval as collateral for its financing.

Second, the loss of GM and Chrysler would have had an enormous negative economic impact regionally and nationally as its supply chain fell apart. It is likely that the economic decline would have been more severe than it was, and the recovery would have been slower in getting started. This is not a threat posed by the prospective closure of the two nuclear power plants.

Third, the support provided to GM and Chrysler was transitional. The federal government held stock in the New GM and Chrysler and took a subordinated ownership position in the companies. The Treasury sold its shares as the new automakers stabilized, making a little money in the process. The federal support was transitional because the government wanted to end its ownership as soon as possible.

Under House Bill 6 the subsidy is permanent, the companies and their stockholders and investors are kept whole, and the subsidy is never paid back. The subsidy is a permanent bailout.

House Bill 6 is lemon socialism and crony capitalism.

How is it possible that the cost of power will be higher than under a functioning market?

The clean air non-bypassable rider is paid for by all consumers and the market price of electricity will become artificially high causing further welfare losses among consumers. We know this because the clean air credits are designed to keep the most expensive producer in the market. If the first layer of electricity in the market is the costliest, then the average price of the entire bundle has to cost more than if the highest priced power was excluded from the power bundle. The conclusion is straightforward arithmetic.

The second reason why power will become more expensive than it would be in the absence of this legislation is that it deters entry by producers with potentially lower costs. *An increase in the overall cost of power in Ohio is an intended outcome of House Bill 6.* Keeping the most expensive power in the consumption bundle and the cheapest power out is not accidental drafting; it is intentional.

The fear expressed by representatives of the workforce at the Gavin Power Plant at the hearing is the subcommittee hearing in April is legitimate.[12] Coal-fired power plants that have played by the rules of competition and spent money to meet clean air mandates are the most likely losers in House Bill 6's market changes. The bill does not provide shelter from competition for the coal-fired plants, and it should not do so. Since these generating stations are likely to be the most expensive source of power in a flat market, after nuclear power it will be the source that will get rationed out of the market. While Gavin's power may be less costly than FES's nuclear product, the PPAs and legislative mandate will protect FES' production.

House Bill 6 contains the same PPA flaw in its design for supporting utility-scale solar power. The bill will make it easier to approve high-cost investments in solar that are supported by PPAs that remove incentives for efficient management. The IOU that executes the PPA will receive an authorized rate of return from the PUCO over the life of the PPA, and the investment of the solar investor is guaranteed as well. Meanwhile, investors in other sources of green power, which do not receive the same protection, will face the possibility of failing. They have investment risk. The favored alternative energy providers have no investment risk

[12] Testimony of Michelle LeMaitre, Electrical Maintenance Supervisor at Gallia County's Gavin Power Plant. https://ohiomfg.informz.net/ohiomfg/data/images/Testimony_MichelleLemaitre_Lightstone_Opp.pdf

There is a market for more expensive green electricity, and the cost of solar continues to fall. Take advantage of markets.

Carbon reduction in electricity consumption can take place in Ohio. The first step is to remove all regulatory barriers buried in the ESPs that reduce the payback that companies can receive from their investments in energy efficiency, co-generation, and behind the meter, or plant wall, clean energy production. IOUs should not earn money for energy that is not produced. The second step is to make it easier to market green power by offering carbon reduction credits to the consumer of green energy rather than to producers, these could be limited to in-state power production. Consumption credits will stimulate demand and provide incentives for efficient green energy production. They can also sunset, limiting the subsidy. Unfortunately, Ohio cannot consider imposing a carbon tax on its own because that will drive up the cost of production in our state compared to neighboring states and drive investment across our border. Finally, judiciously support investments in an industrial natural gas pipelines through loan guarantees so that Appalachia can benefit from abandoned power generating sites and help bring hope and opportunity to the river counties of Ohio.

Using political power to affect the competitive organization of the power market increases investment risk for investors in new sources of power production. They are investing in a market with stagnant demand. They are investing because they have lower cost technologies. They are investing with the intention of crowding out their expensive competitors. This is how capitalism works.

Thank you for providing me the opportunity to testify. My opinion article in the May 6th issue of *Crain's Cleveland Business* follows.

CRAIN'S CLEVELAND BUSINESS
https://www.crainscleveland.com/opinion/personal-view-bailing-out-firstenergys-failed-nukes-harms-ohios-economic-future

OPINION

Personal View: Bailing out FirstEnergy's failed nukes harms Ohio's economic future

Ned Hill, May 05, 2019

The bailout of Northeast Ohio's two nuclear power plants under House Bill 6 has the momentum of a bowling ball rolling down an alley after the world's most expensive wax job. The bill will result in higher electricity generating and capacity charges for all Ohioans, deter investment in electricity generation not controlled by Ohio's investor-owned utilities, lower the reliability of the state's electric system and hurt economic development prospects.

FirstEnergy is pushing Ohio House Bill 6 to bail out its multibillion-dollar obligations to close and clean up its failing nuclear and coal-fired power plants.

In addition to the bailout money, disguised as clean-air tax credits, H.B. 6 will result in higher electricity generating and capacity charges for all Ohioans, deter investment in electricity generation not controlled by Ohio's investor-owned utilities (IOUs), lower the reliability of the state's electric system (known as reserve capacity) and hurt economic development prospects.

There is so much wrong with the bill that legislative horse-trading on its minor provisions will not remove the harm. And there is so little known about FirstEnergy's legal obligations on plant closing and cleanup, how the hedge funds that invested in FirstEnergy last year will benefit, and the rewards promised to FirstEnergy's senior management for bringing home the pork that supporting or voting for H.B. 6 is irresponsible.

Ohio's Consumers Counsel and the Legislative Service Commission put the direct cost of the bill at $300 million a year. RunnerStone, an independent energy-efficiency consulting firm, estimates the direct cost at $310 million. But that is just the start. RunnerStone states that H.B. 6 will trigger additional new capacity charges amounting to $80 million per year or more. Another $88 million per year in profit currently received by the IOUs for energy-efficiency services will not be eliminated, as implied by the bill's supporters. Instead, it becomes a new unearned revenue stream.

H.B. 6 is a bailout without an end date. The charges will go on for as long as the nuclear plants operate. The real increase in electricity charges will be about a half-billion dollars a year (conservatively $468 million, plus the increased cost in electricity generation charges), which will be adjusted to offset the impact of inflation.

The cost to electricity users is underestimated. H.B. 6 forces all of Ohio's electricity users to pay for the bailout, not just those in FirstEnergy's service territory. The bill orders residential customers to pay $2.50 a month, commercial businesses $20 a month, industrial customers that use fewer than 45 megawatts (MW) of electricity a year $250 a month, and large industrial users $2,500 a month. Most assume that "customer" means a residence or a business at a specific address, but in electricity-world, this is expensively incorrect.

A customer is an account, and each account is an electric meter. If your business has multiple meters, multiply the bailout tax by the number of meters. For an eight-person manufacturing business with four electric meters and a $803 monthly bill, or an annual bill of $9,636, the proposed law will increase the total monthly bill to $1,785: (4 meters x $250 from the clean-air rider) + ($803 in existing charges) – (4 x $4.39 from the eliminated energy-efficiency rider). The annual bill nearly doubles to $21,420. The nearly $12,000 increase is a 122% jump.

Companies in older buildings that have expanded over time are likely to have multiple meters. Those that metered specific locations or machines to track usage accurately will face much higher bills.

Can the accounting be shifted back to a business at a single address instead of an account? No. The $300 million in annual "clean-air credits" was used to back into the promised monthly charges, spreading the cost over the number of meters. If customers were defined by address, rather than meter, then the pool of available credits would drop.

Can the promised payment schedule be kept? No. The bill adjusts the $9.25-per-megawatt value of a clean-air credit for inflation. It does not change the amount that customers are forced to pay similarly. Over time, the gap between the payments made to the utility and the amount of money collected from users will grow.

The classification of a nonresidential customer is also fuzzy. The bill states the classification depends on the business's utility classification; however, utility classifications do not align with the bill's terminology. How are large nonindustrial electricity-using businesses, such as grocery stores and back-office facilities, classified?

If H.B. 6 passes, the cost of electricity generation will increase, the cost of reserve capacity will increase, and reliability will diminish. This becomes clear once you understand how H.B. 6 will re-regulate and re-monopolize electricity generating markets in Ohio.

- Nuclear-generating plants and utility-scale alternative-energy generation will be able to execute long-term, above-market-price power purchase agreements (PPA). They will be the first electrons used in the pool of power consumed. In a flat power market, these government-protected, first-in, high-priced electrons will cause lower-cost power to be kicked out of the pool. The result will be higher average generating charges than would be found in a competitive market.

Keeping the most expensive power in the consumption bundle and the cheapest power out is not accidental. It is intentional.

- Federal regulators are trying to protect the multistate generating and capacity markets from predatory behavior from state-subsidized power production. A rule supported by FirstEnergy would allow utilities to opt out of the multistate capacity market and generate or contract for electricity themselves. The result: profit-maximizing utility choice substituted for cost-minimizing customer choice. And higher power bills.
- Ohio also will see an increase in special-interest petitions made to the PUCO by connected employers for "reasonable rates." Electricity rates will decline to some negotiated level for certain businesses through an economic development and retention process run by the PUCO. The negotiated rates will be held as confidential business secrets. The negotiated savings will become expenses passed on to unconnected businesses and residential customers to pay.
- H.B. 6 also will discourage investment in efficient natural gas-fired, combined-cycle power plants. The bill helps ensure that Ohio's abundant and clean sources of natural gas will be drilled, put into pipes and shipped out of state so the value that could have been added in Ohio will take place elsewhere. Using political power to affect the competitive organization of the power market increases investment risk for investors in new sources of power production. They are investing in lower-cost technologies to crowd out their expensive competitors. This is how capitalism works.

As the Tennessee Valley Authority lowers its electricity rates in our competitor states to the south, Ohio is going in the other direction. If enacted, H.B. 6 will trade the economic future of Ohio to bail out a badly run company that made large campaign donations. It's crony capitalism and lemon socialism.

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