

H. B. No. 6 Testimony
to
House Energy Generation Subcommittee

by: Clean Energy Future, LLC

April 24, 2019

CLEAN ENERGY FUTURE'S ELECTRICITY CREDENTIALS

1.

- 39 years developing, financing, and building non-utility electricity generation plants
- W. Siderewicz background:
 - M.S. Engineering – Cornell University
 - MBA Finance – Northeastern University
 - B.S. Engineering – Merrimack College (cum laude)
 - Registered Professional Engineer (P.E.)
- Five (5) large-scale gas-fired plants in Ohio
 - \$4.5 Billion of private investment
 - 5,000 union construction jobs over 34 months
 - \$125 Billion of economic benefit to Ohio
 - Clean Energy Future
- No State/ Federal funds or subsidies
 - Founder and President

HB 6 BY DEFINITION IS A BAILOUT

2.

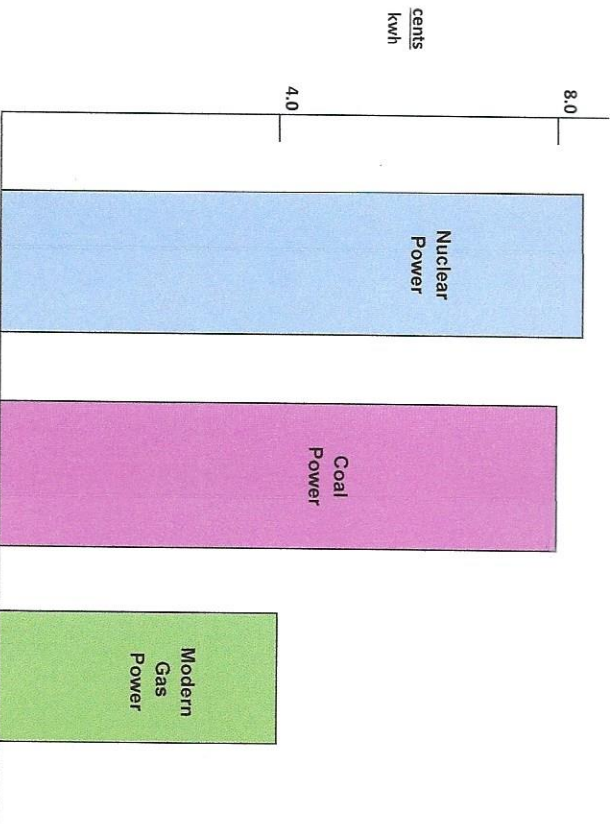
- Dictionary:
 - “Act of giving financial assistance to a failing business.”
- FES has FAILED; in Chap. 11 (3-31-18)
- HB 6 is the very “financial assistance” that FES seeks from the public
- HB 6 extracts \$300,000,000/yr from the public
- HB 6 earmarks at least \$160,000,000/yr to prop up 2 bankrupt Ohio nuclear plants by FES
- HB 6 could allocate added \$ to aging FES coal plants

WHY FES HAS AN UN-SOLVABLE PROBLEM TODAY ?

3.

- Their nuclear and coal plants are not economical
- Even with Chap. 11 write downs of fixed capital costs, FES needs a “Bailout” to survive
- Ohio’s home-grown natural gas is lowest cost in the World
- Ohio is an open and free market for electricity, so high-cost power can’t survive

- Total generation costs (cents/kwh)



Source : 2017 First Energy Annual Report
2018 Chap. 11 filings by First Energy Solutions (Akron, OH)

CLOSING TWO NUKES WILL **NOT** INCREASE OHIO'S POWER COSTS

4.

- FES' "Fake News" claim of higher electricity costs w/o nukes is mathematically **FALSE**
- Davis Besse/ Perry will be replaced by modern lower-cost gas-to-power plants
- New modern gas-fired plants have a total cost 1/2 that of FES' coal/nuclear plants
- A first-year business student at OSU knows lower cost alternatives can not cause electricity rates to rise

TWO OPPOSING VIEWS OF TRUTH RELATED TO FES CHAP. 11 PROCESS

5.

• Chap. 11 Court View

- Judge A. Koschik Order of April 11, 2019 (Exh. A)
- FirstE is unjustly benefiting from FES Chap. 11 process
- FES' re-organization plan (as it relates to FirstE) is an abuse of Chap. 11 process (Exh. B)
- FES re-organization plan is rejected
- At issue: FirstE's plan to convey all coal/nuclear closure \$\$\$ risks to FES (and to public via Bailout)
- Ohio AG, U.S. EPA and NRC all agree with Judge Koschik

• FirstE View

- "We (FirstE) would not financially benefit from any legislation supporting FES-owned nuclear facilities." (Exh. C.)

0.0007

≠

\$300,000,000/YR

- This environmental math explains why HB 6 is **fatally FLAWED**
- Closing 2 nuclear plants has no meaningful impact on U.S.'s green house gas amount *
- Increase in U.S. greenhouse gas if 2 new gas-fired plants replace 2 Ohio nuclear plants (0.0007)
- Annual HB 6 Bailout at \$ 300 million/yr is not worth the near zero environmental impact

* USA produces 8,200 million ton/yr of greenhouse gas *

ADDED PROOF HB NO. 6 HAS NO TRUE "GREEN" VALUE

7.

- There are NO environmental agencies advocating HB No. 6
- There are NO environmental advocacy groups supporting HB No. 6
- Other than FirstE, FES, and 2 communities virtually no one supports this Bill No. 6
- What escapes most observers is that both nuclear plants are on-site nuclear waste storage sites (ie. future liabilities FirstE wants to avoid)

PUBLIC'S ROLE IS NOT TO BAILOUT PRIVATE COMPANIES

8.

- Job loss: G.M. Lordstown – 4,500 jobs now
 Davis Besse/Perry – 1,480 jobs (i)
- Did Ohioans Bailout G.M. Lordstown **NO !**
- Did Ohioans Bailout Blockbuster vs. Netflix **NO !**
- Should Ohioans Bailout Ohio Nuclear Plants HB 6 **NO !**
- (i) Nuclear job losses occur well into future; de-commissioning is long-term process

HB 6 - \$300,000,000/YR IS AN OUTRAGEOUS AMOUNT

- Over a mere 10yr period public pays \$3 Billion
- Compared to new Ohio Gas Tax:
 - Proposed 18 cents/gal tax was to provide \$1.2 Billion/yr
 - New 10 cents/gal tax provides \$670 million/yr
 - In effect HB 6 is equivalent to an added 4.5 cents/gallon tax
- Weekly Paycheck Comparison
 - Typical Ohioan is paid \$950/week
 - HB 6 Bailout is \$5,800,000/week
 - Most of Bailout funds going to bankrupt FES

HB NO. 6 BAILOUT:

A HIGHLY REGRESSIVE TAX

10.

- Who gets hurt most by \$300 million/yr BAILOUT
 - Low income families
 - Retirees (AARP letter – Exh. D)
 - Disabled individuals with lessor working capacity
 - Families already helped by government \$\$\$ support
- Who cares least about BAILOUT cost
 - Utility executives with incomes well above \$200,000/yr
 - Work force with above-average salary

HB NO. 6 SIMULTANEOUSLY STYMIES: JOBS & INVESTMENT IN OHIO

11.

- Ohio has been a free-open electricity generation market since 2000
- All ratepayers have saved \$100's of millions/yr on electric bills, thanks to competition
- State-based subsidies (Bailout) de-stabilizes Ohio's electricity market
- Two (2) modern gas-fired plants will displace both OH nuclear plants
 - 2,000 union construction jobs over 34 months
 - \$1.9 Billion in new investment/construction
 - \$52 Billion of economic "ripple impact" in Ohio

HB NO. 6 SHOULD BE REJECTED IN TOTAL

- No measurable environmental value
- \$300,000,000/yr of a highly regressive tax
- If 4,500 GM Lordstown direct jobs not worth saving, then 1,480 direct nuclear jobs aren't either
- Bailout stymies \$1.9 Billion in new Ohio energy investment
- Bailout kills 2,000 union construction jobs (34 months)
- Bailout deprives Ohio of \$52 Billion in added economic benefit

OSU'S DR. NED HILL SUMS UP FIRST E'S GOALS

13.

- Testimony of Dr. Hill on May 16, 2016 regarding nuclear bailout request by First Energy (Exhibit E)

- Page 4 : “First Energy .. is looking for subsidies for its non-competitive power generation units”
...

First Energy “share two goals. The first is to use the power of either the PUCO or the Ohio Legislature to ... ensure that competitive market forces do not force them to either write down the asset –value of their generating assets... or to close them. The second is to upend, circumvent, and destroy the competitive electricity generating market managed by PJM Interconnect.”


EXHIBIT A

On February 11, 2019, debtors FirstEnergy Solutions Corp. and its jointly administered debtors and debtors-in-possession (collectively, the "Debtors"), filed their Motion for Order (I) Approving Disclosure Statement, (II) Establishing Procedures for Solicitation and Tabulation of Votes to Accept or Reject the Debtors' Joint Chapter 11 Plan, (III) Approving the Form of Ballots, (IV) Scheduling a Hearing on Confirmation of the Plan, (V) Approving Procedures for Notice of the Confirmation Hearing and Filing Objections to Confirmation of the Plan, and (VI) Granting Related Relief (Docket No. 2121) (the "Motion"). The Motion sought, *inter alia*, approval of the disclosure statement (Docket No. 2119, as most recently amended at Docket No.

**ORDER DENYING
MOTION TO APPROVE DISCLOSURE STATEMENT**

In re
)
) FIRSTENERGY SOLUTIONS CORP., *et al.*,
) Chapter 11 Debtors.
) Judge Alan M. Koschik
)
) Case No. 18-50757 (Jointly Administered)

**UNITED STATES BANKRUPTCY COURT
NORTHERN DISTRICT OF OHIO
EASTERN DIVISION**


ALAN M. KOSCHIK
U.S. Bankruptcy Judge



IT IS SO ORDERED.
Dated: April 11, 2019

This document was signed electronically on April 11, 2019, which may be different from its entry on the record.

2431) (the "Disclosure Statement") for the Debtor's joint plan of reorganization (Docket No.

2120, as most recently amended at Docket No. 2430) (the "Plan").

The Court held the first day of hearings on the Motion on March 19, 2019. Following that hearing, on March 21, 2019, the Court entered a scheduling order (Docket No. 2356) (the "Scheduling Order") allowing parties to file supplemental briefs on the central legal issue raised in most of the eleven responses to the Motion—the legality of the proposed nonconsensual third-party releases that the Plan would impose. The Scheduling Order provided that the second day of oral argument on the Motion would be

specifically on the issue of whether the Releases can be shown to render the Plan legally infirm on its face and thus patently unconfirmable—that the Debtors could prove no set of facts at a future confirmation hearing that would allow the Court to confirm a Plan containing such Releases. The Court will not take evidence at the April 2, 2019 oral argument. If the need for an evidentiary record is shown, that would demonstrate that the Debtors have at least the possibility of satisfying the Sixth Circuit's tests for non-consensual third-party releases and injunctions, or other applicable law, and the Court would then defer such issues to a confirmation hearing.

(Docket No. 2356 at 3.) The parties collectively filed a total of eighteen supplemental briefs, joinders, and replies pursuant to that Scheduling Order.

Pursuant to the Scheduling Order, the Court held the final hearing on the Motion on April 2, 2019. The hearing lasted until after the close of regular business hours. The Court took the matter under advisement and convened a further hearing on April 4, 2019, at which time the Court intended to announce its oral decision. At the April 4, 2019 hearing, the Court did

announce its findings of fact and conclusions of law pursuant to Rule 52 of the Federal Rules of Civil Procedure and Rule 7052 of the Federal Rules of Bankruptcy Procedure. Those findings and conclusions are incorporated into this Order. The Court also entertained post-decision

motions on April 4, 2019, noting that it intended to issue a written decision to supplement its oral one and that such opinion could be considered additional findings under Rule 7052 and thus

#

opinion.

conclusions pursuant to Rule 7052 shall become effective when the Court enters its written Procedure 8002(b)(2), any notice of appeal filed before the Court enters its written findings and

run from the date of the Court's written opinion. Pursuant to Federal Rule of Bankruptcy Federal Rule of Bankruptcy Procedure 8002(b)(1)(A), the time for filing a notice of appeal shall 7052. On oral motion made and granted at the omnibus hearing on April 9, 2019, pursuant to

decision and its findings and conclusions pursuant to Federal Rule of Bankruptcy Procedure 2. The Court will enter a written opinion more fully setting forth the reasoning of its

Motion (Docket No. 2121) is DENIED.

280 F.3d 648 (6th Cir. 2002). Any solicitation of such Plan would be futile. Therefore, the pursuant to *Class Five Nev. Claimants, et al. v. Dow Corning Corp. (In re Dow Corning Corp.)*, unconfirmable under 11 U.S.C. § 1123(b)(6), as that provision is applied in the Sixth Circuit proposed in Section VIII.E. of the Plan, the Court concludes that the Plan is patently

1. Due to the breadth and ambiguity of the nonconsensual third-party releases

IT IS HEREBY ORDERED THAT:

Based on the foregoing,

granted it.

additional findings under Bankruptcy Rule 7052. No party opposed that motion and the Court

made an oral motion pursuant to Bankruptcy Rule 8002(b)(1)(A) for the Court to make

At the regularly scheduled omnibus hearing in this case on April 9, 2019, the Debtors

such post-decision motions.

motion of a party. At that time, the parties asked for additional time to consider whether to make

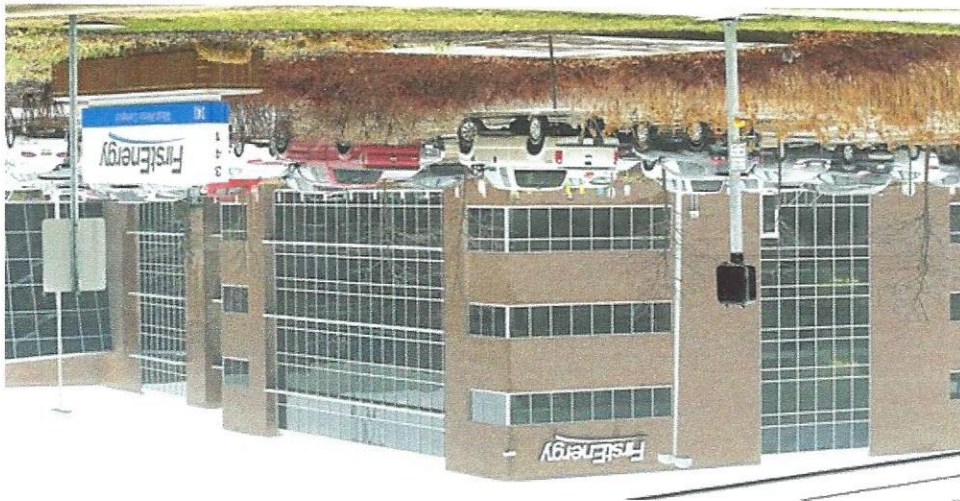
subject to Rule 8002(b)(1)(A) of the Federal Rules of Bankruptcy Procedure, but only on the

EXHIBIT B



FES and FE have created a 'scheme' that is an 'abuse of the bankruptcy system': Feds say

Updated Apr 2, 2019; Posted Apr 1, 2019



The Plain Dealer

Federal authorities have charged in bankruptcy court that the deal struck between FirstEnergy and FirstEnergy Solutions absolving FE of any future responsibilities for power plant environmental problems is a "scheme" and "abuse of the bankruptcy system." The charges come a year after FES filed for Chapter 11 bankruptcy protection.

28

0 shares

By John Funk, The Plain Dealer

CLEVELAND, Ohio -- Federal regulators have jumped into the FirstEnergy Solutions bankruptcy case with charges that FES and its parent FirstEnergy Corp., with a nod from "favored creditors," have cooked up a "scheme" that is an "abuse of the bankruptcy system."

The issue is on the court's docket for Tuesday morning.

In furious filings at the start of this past weekend, attorneys for federal and state Environmental Protection Agencies tore apart the arrangement that FE and FES made last fall in which the parent

promised nearly \$1 billion in cash and commitments in exchange for FES absolving FE from future environmental damages.

The companies want to include the settlement in the bankruptcy case.

The Ohio Consumers' Counsel also objected, arguing that under the plan before the court that "FirstEnergy would be shielded from any claims or causes of action related in any way to the Debtors' businesses and property, including from any liability for the costly decommissioning of its power plants."

The OCC also suggested that if the court were to approve a restructuring deal with the FE-FES settlement included the ruling would shield FirstEnergy and "leave Ohioans with too little protection.

"Were funds for decommissioning to be inadequate, for example, consumers or taxpayers might be (unfairly) called upon to fund FirstEnergy and FES's power plant decommissioning liabilities to federal and state governments."

Bankruptcy Judge Alan Koschik approved that inter-company settlement in September but did not give the FirstEnergy blanket protection from all future liabilities.

That's exactly what FES is trying to obtain now in a document the court must approve before creditors can vote on the the FES restructuring plan. And court approval would make future lawsuits or enforcement against FE over coal ash or nuclear pollutions difficult if not impossible.

Speaking from the bench the judge a week ago said, "I need to really decide the issue that's been raised by the Government" before he would approve a document known as the "disclosure agreement" which, once approved, will be mailed to every creditor which FES owes.

Given the gravity and significance of the charges, Koschik further wondered if sending out the statement before the court resolves the issue of FE indemnity would not only be a waste of time, but would also create a lot of confusion.

That led to a rush of court filings late last week from all of the parties, including arguments from the companies that the release of future responsibilities for FE was narrow in scope -- an argument immediately rejected by the government.

"If [FirstEnergy Solutions and FirstEnergy] would like to clarify that the Governments are not bound by the FE Non-Debtor Release, that clarification may solve many of the most difficult issues in this case; otherwise, the Court should reject this disingenuous explanation implying that the Governments may or may not be bound," the government lawyers responded.

They also then filed demands known as "discovery" with the court seeking every communication concerning environmental problems and potential environmental problems within and between FirstEnergy, FirstEnergy Solutions and all other FE subsidiaries.

The governments are also demanding internal company documents going back as far as 1967 explaining the ownership and operating structure of every power plants and coal ash disposal site.

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EXHIBIT C



76 South Main Street
Akron, Ohio 44308

330-761-7775

Charles E. Jones
President and CEO

February 11, 2019

The Honorable Senator Kenny Yuko
Statehouse Rm. 303
Columbus OH 43215
Dear Minority Leader Yuko,

In 2018, Akron-based FirstEnergy Corp. reached a milestone in its previously announced strategy to exit from its competitive generating business – FirstEnergy Solutions (FES) – and become a premier, fully regulated utility company.

As our company completes this transition, I understand that there may be some confusion regarding the relationship between FirstEnergy Corp. and FES. I want to ensure that Ohio legislators, policymakers and others understand FirstEnergy Corp. and FES are now separate businesses operating independently from each another.

FirstEnergy Corp. yielded any remaining control rights in FES on March 31, 2018, when FES voluntarily filed for bankruptcy. All decision-making, operational and financial control of FES is vested in an independent board of directors separate from FirstEnergy Corp. and subject to the jurisdiction of the bankruptcy court.

On September 25, 2018, the bankruptcy court approved a definitive settlement between FirstEnergy, FES and key creditors. As such, FES's current and future financial performance does not impact FirstEnergy Corp. or its subsidiaries. In addition, the settlement does not require any ongoing financial support to FES from FirstEnergy Corp., or from any of its subsidiaries. Conversely, the settlement requires no support to FirstEnergy Corp. and its subsidiaries from FES.

Recognizing that the names of FirstEnergy Corp. and FirstEnergy Solutions are similar merely due to their shared history, once FES completes its bankruptcy proceedings – and assuming it continues to operate thereafter – it will work to establish a non-FirstEnergy brand name.

As FirstEnergy Corp. moves forward as a fully regulated utility company and turns its attention to other legislative priorities, the fact remains that sustaining Ohio's nuclear plants is vital to consumers, communities and the environment. Keep in mind that we would not financially benefit from any legislation supporting FES-owned nuclear facilities.

Thank you for your continued interest in FirstEnergy Corp.

Sincerely,

Charles E. Jones

EXHIBIT D



17 S. High Street, #800 | Columbus, OH 43215 | 1-866-389-5653 | Fax: 614-224-9801 | TTY: 1-877-434-7598
aarp.org/oh | ohaarp@aarp.org | ohaarp@aarpo.org | facebook.com/AARPOH

April 11, 2019

The Honorable Larry Householder

Speaker

Ohio House of Representatives

77 S. High St. 14th Floor

Columbus, OH 43215

The Honorable Jamie Callendar

Chair, Public Utilities

Ohio House of Representatives

77 S. High St. 11th Floor

Columbus, OH 43215

The Honorable Nino Vitale

Chair, Energy & Natural Resources

Ohio House of Representatives

77 S. High St. 11th Floor

Columbus, OH 43215

Dear Speaker Householder, Chairman Callendar and Chairman Vitale:

AARP Ohio, on behalf of its 1.5 million members and families, strongly opposes any surcharge or tax on utility customers in our state that would serve to subsidize the for-profit nuclear power industry. Our position is simply this: any legislation that would impose a tax or surcharge paid by utility customers—including residential, commercial and industrial customers—would raise prices for our constituents while citizens of other states that receive power generated by Ohio's nuclear plants pay lower rates for their electricity. That is patently unfair—why should Ohio customers supplement the electricity bills for those living in other states?

This is especially alarming given the significant number of older Ohioans living on a fixed income who are already struggling with utility rates, rampant increases in drug prices, and the rising costs of healthcare. There have been several previous attempts to subsidize our state's for-profit nuclear power industry and through every analysis AARP has failed to see any benefit to utility customers. There is a surplus of power in the region and we have yet to hear a reasonable answer as to why Ohioans should have to bailout a profitable company? AARP Ohio asks that you help protect and prioritize the financial interests of your constituents over the industry's shareholders by opposing such legislation.

At AARP, we will be aggressively fighting to defeat any attempt to subsidize the nuclear industry on the backs of Ohio utility customers. Please join us in protecting Ohio consumers by opposing such ill-advised legislation. Please do not hesitate to reach out to AARP Ohio if you have any questions or comments regarding our position on this issue.

Sincerely,

Barbara A. Sykes, AARP Ohio
State Director

CC: Rep. Kick, Rep. O'Brien, Rep. Denson, Rep. Baldrige, Rep. Cross, Rep. Wiggam, Rep. Stein, Rep. Hillier, Rep. Ghanbari, Rep. Holmes, Rep. Leland, Rep. Weinstein

EXHIBIT E



Before
The Public Utilities Committee
Of the
Ohio House of Representatives
Representative Bill Seitz, Chairman

Testimony of
Edward W. [Ned] Hill, Ph.D.
Professor of Public Affairs and City & Regional Planning
John Glenn College of Public Affairs
The Ohio State University and Faculty of the Ohio Manufacturing
Institute

On
House Bill 178
May 16, 2016

*The findings, conclusions, and recommendations expressed in this testimony are mine
and do not represent the views of either The Ohio State University and the John Glenn
College of Public Affairs.*

Good afternoon Chairman Seitz and members of the House Public Utilities Committee. Thank you for the opportunity to testify against House Bill 178 and its likely effects on FirstEnergy's customers and the market for electricity generation in the state as a whole.

The proposed bill is a bailout for a company that is financial trouble, it will help destroy a competitive market for electricity generation that is providing billions of dollars of savings to Ohioans and their employers, and it will make economic development and job creation more difficult not only in FirstEnergy Ohio's distribution territories but in the state of Ohio as a whole. This is a bill with anti-competitive intent.

My name is Edward [Ned] Hill, and I am a Professor of Public Affairs and City and Regional Planning at The Ohio State University's John Glenn College of Public Affairs. I am also a member of the Ohio Manufacturing Institute. I am an economist, and have worked on economic development policies in general and issues that affect Ohio's manufacturing sector for over thirty years. Additionally, I have been actively engaged in research on Ohio's electricity markets over the past three years both in testimony before the Public Utilities Commission of Ohio [PUCO] and in research supported by the Northeast Ohio Northeast Ohio Public Energy Council [NOPEC].

I have never been paid for my testimony before the PUCO. While I have testified previously on behalf of the Ohio Manufacturers' Association, I contacted the OMA so that I could have a vehicle for opposing the IOUs' proposed monopolistic Power Purchasing Agreements. I did this because I viewed the attempts of Ohio's Investor Owned Utilities [IOUs] to re-monopolize the electric generating industry, re-balkanize an efficient and reliable regional generating market managed by PJM Interconnect, and to pre-monopolize emerging new technologies of electric generating capacity to be antithetical to the operation of free markets and against the best interests of the people of the state of Ohio.

The bill before you does not stand alone. It is the latest in a multi-year series of attempts by Ohio's IOUs to thwart the intent of the state of Ohio to allow competition in the market for electricity generation and provide lower prices for Ohio's electricity users. First came uncompetitive, non-bypassable power purchasing agreements (PPAs). The non-bypassable PPAs were accompanied and followed by a slew of non-bypassable riders that funneled above-market electricity payments to the state's IOUs. Next in line was a synthetic form of a PPA that rivaled the now infamous Synthetic Collateralized Debt Obligations [CDOs] as marvels of irresponsible financial engineering. And, now the Committee is confronted with legislation to approve *synthetic* Zero-emission nuclear credits, or ZECs, allowing FirstEnergy to recover the cost of these credits from all electricity users in its service territories with a non-bypassable rider.

The Four-part Test

The Committee members have heard that energy markets are complex. And the Committee has been presented with a complex, Rube Goldberg-like financial instrument. My advice to you: Protect your constituents' wallets whenever an issue is advertised as being complex, and the person offering testimony does not try to provide clarity and simplicity.

Yes, there is complexity as a sophisticated and competitive electricity market serves as the foundation for a transmission market that is currently a natural monopoly, which, in turn, is the supplier of a distribution system that is also a natural monopoly. However, there is a simple four-part test that should be applied to any issue related to the electricity market:

1. Are prices lower than they would have been without competitive electricity generating markets?
 2. Is new investment in generating capacity taking place in the PJM region and is investment taking place in Ohio?
 3. Are uncompetitive generating boilers and plants closing down?
 4. Has the reliability of the electric generating system improved?
- If the concern is truly about carbon reduction in the atmosphere then add one more question:

The LSC Fiscal Note also reflects the uncertainty of the fiscal impact on Northeast Ohio's electricity users. In all cases, the charges are large. LSC, FirstEnergy and the Ohio Consumers Counsel all agree that the *minimum* cost of the non-bypassable rider to subsidize the nuclear plants is near \$300 million a year and totaling nearly \$5.25

6).

Ohio Legislative Service Commission in its Fiscal Note and Local Impact Statement, p. call that took place three days later on April 28, 2017. (These comments are cited by the in his remarks on April 25, 2017, but noted the possibility in a transcript of an earnings Ohioans. The Chairman of FirstEnergy downplayed this possibility before the committee notes that AEP's Donald C. Cook plant in Michigan may also receive subsidies from Ohio's ratepayers subsidizing FirstEnergy's Beaver Valley plant in Pennsylvania. LSC wording coupled with the purchase requirement opens a very wide door for Northeast Ohio's ratepayers subsidizing FirstEnergy's Beaver Valley plant in Pennsylvania. LSC "environmental and other benefits" to the region. The word "region" is not defined. This A second concern is wording that amends state policy to extend long-term

pay \$21.5 million a year to subsidize out-of-state nuclear electricity production. approximately 18 million Megawatts per year. (cite?) Northeast Ohioans can expect to five years average output is 16.7 million Megawatts, while the one-third requirement is FirstEnergy's two nuclear plants is 15.8 million Megawatts per year, and over the past territory." John Seryak of Runnersstone, LLC, has explained that the output of compared against recent trends in energy consumption within the FirstEnergy service limitation seems unlikely to be reached when recent trends in nuclear generation are However, the Ohio Legislative Service Commission [LSC] Fiscal Note states (p. 5) "the consumption in FirstEnergy's service territory over the most recent two-year period.

The House Bill requires that ZEC credits be assigned to one-third of end-user
The financial engineering behind the ZEC proposal is fanciful.

The ZEC Proposal

5. Is the proposal before you the cheapest and most effective way to achieve carbon reduction?

billion over 16 years. The LSC Fiscal Note states that if the gap in nuclear power production is filled with power from out-of-state plants, then the subsidy can grow to nearly \$11.2 billion.

The environmental air quality benefits are also fanciful.

The air quality benefits from the nuclear plants are compared to a hypothetical power plant. The bill requires that the air emissions from the nuclear plant be compared to the emissions from a hypothetical power plant fueled by "the predominant electric generating source" at the same location as the nuclear plant. The result is to simulate the impact on air quality of replacing the nuclear plant with a 30 to 40-year old coal-fired plant with the same generating capacity as the existing nuclear plant. The result will be an increase in emissions in a region that is a non-attainment region.

This argument is arithmetic nonsense. If the nuclear plants are closed electricity will be replaced with a combination of out-of-state generated power, new investment in lower-emitting gas fired continuous cycle power plants, energy efficiency investments, and renewable energy. The alternative power production will be located within the PJM transmission grid and throughout eastern Ohio. Further movement toward air quality attainment can be reached by having PJM create a market for carbon and sulfur dioxide emissions.

What is the end game?

FirstEnergy has been consistent. It is looking for subsidies for its non-competitive power generation units, and it looks to Ohio's Statehouse and its Ohio customers as the source of subsidy for its loss-making Ohio and Pennsylvania power plants.

Many of the IOUs share two goals. The first is to use the power of either the PUCO or the Ohio Legislature to mandate the purchase of expensive existing Ohio power plants first and to ensure that competitive market forces do not force them to either write down the asset-value of their generating assets, protecting their stock values, or to close the

plants. The second is to upend, circumvent, and destroy the competitive electricity generating market managed by PJM Interconnect.

Competitive markets work by having the cheapest sources of electric power being purchased first and the most expensive sources of power being purchased last—or rationed out of the market. Competitive markets work by having new sources of investment displace older, less efficient, more expensive technologies.

I end by going back to answering the four-part test and the fifth environmental question:

Q: Are prices lower than they would have been without competitive electricity generating markets?

A: Yes. Competitive electric generating markets will save Ohioans \$2.8 billion a year and resulted in \$15 billion in savings from 2011 to 2015. Merchant purchasers of electricity saw their generating costs drop by between 30 and 40 percent when competition entered their regional markets. Retail consumers experienced savings 16.4%. Some of these savings have been clawed back by non-bypassable riders.

Q: Is new investment in generating capacity taking place in the PJM region and is investment taking place in Ohio?

A: Yes. \$9 billion in investments in new gas-fired technology in Ohio that can out-compete older coal-fired and nuclear technologies have either been built, are under construction, or are in the approval process. The investments are a commitment of 9,157 Megawatts of power.

Q: Are uncompetitive generating boilers and plants closing down?

A: Yes. 56 uneconomic coal-fired boilers with 10,000 Megawatts of power have closed in Ohio

Q: Has the reliability of the electric generating system improved?

A: Yes. PJM system reliability, or reserve capacity, is at 22.4%. The old regulatory norm was between 12 and 16%. In 2010-2011 before Ohio's IOUs started purchasing power competitively the margin was 16.5%.

Q: Is the proposal before you the cheapest and most effective way to achieve carbon reduction?

A: No. Competitive markets for emissions will result in more cost-efficient ways of improving air quality.

Two other myths have become prominent in the continuing debate during the IOUs' attempts to re-monopolize the electric generating markets: fuel diversity and importing power.

Fuel diversity in both Ohio generation and the PJM generating market has improved with the advent of competition. In 2010, 82 percent of Ohio's generating capacity was fueled by coal. In 2015, that was down to 59 percent. Yes, nuclear accounted for 23 percent of production. However, Ohio has not tried conservation, the benefits of natural gas production are still to be fully realized, and alternative sources of energy produced across the PJM grid are entering Ohio's homes and businesses.

Importing power: Ohio has been a net importer of electricity in all years except 2006 since the 1970s. Most of this power comes from plants that border the Ohio River. The real issue is what is happening to the reliability and cost of power and in both of these measures Ohio has benefited from the competition.

I have appended more of my thoughts of the undesirability of subsidizing nuclear power in the appendix to this testimony. I look forward to answering any questions that you may have.

Thank you.

This testimony is mine alone and does not represent the views of either The Ohio State University or of the John Glenn College of Public Affairs

APPENDIX

Say No to States Bailing out Nuclear Power

The IOUs are attempting to end multi-state electricity generating markets to protect their generating assets and to shift regulation from theFERC to state based PUCs where they can exercise their political muscle.

- Nuclear power plants, as is true for any power plant, are part of the regional electricity power market. Having states protect significant power sources from competition will disrupt the operation of a competitive market for power.
- Increases in system reliability are due to the expanded geography provided by the regional generation-transmission grids.
- Re-monopolizing the electricity generation markets at the level of the states poses a serious public safety threat and the loss in public benefit that would come through re-monopolization should violate the Commerce Clause of the Constitution.

Providing subsidies to nuclear power to retain sources of non-carbon power generation should be done by the multi-state power grids

- The problem of carbon reduction is a multi-state public policy issue, not a state issue.
- The benefits from carbon-free electricity generation from a nuclear plant do not stop at any one state's border. The benefits from carbon reduction are enjoyed across the entire air-shed. There is no reason why the cost of subsidy should be borne just by ratepayers in the state or service territory where the generating plant is located.
- If subsidies to nuclear power come from either a state or sub-state EDUs the cost of power will be higher than in competing areas creating an economic development drag.

is subsidizing existing nuclear plants the most cost efficient and effective way to achieve carbon reduction? The answer is no. A market should be established for carbon reduction so that goals are met in the least costly way to electricity users.

- The RTOs can establish markets for reducing carbon emissions from electricity generation. A market adjusted tax or traded permit will give price advantages and investment incentives to low-carbon and no-carbon generating technologies.
- If that solution be nuclear, so be it, as long as the full costs of nuclear power production are covered.
- If the solution is a combination of energy efficiency investments and wind, solar and natural gas production that is fine as well.

IOUs are looking to guarantee the sale of the most expensive, and uncompetitive, sources of electricity first. They are offering to support carbon free electric generating technologies under three conditions. (1) Carbon-free generation that they invest in be subject to a regulatory guaranteed rate of return. (2) Carbon-free generation that is not owned by the IOUs be placed under a regulatory regime. And, (3) natural gas

generation in the state of Ohio that is not owned by the IOUs be placed under a regulatory regime.

- Such actions will deter investment in carbon-reducing generation capacity because these actions will prevent existing high carbon output plants from leaving the market.
- Placing carbon-free and reduced carbon generating plants under regulatory control will not allow markets to work to reduce their costs, thereby lowering demand for green energy.
- Re-monopolization will effectively pull the subsidizing state out of the competitive portion of the PJM auction markets resulting in (1) higher electricity prices for consumers, (2) reduce economic activity in the state, and (3) and reduced demand for carbon-free electricity generation and conservation.

Keeping expensive and technically obsolete nuclear power plants in subsidized operation will be a barrier to lower-cost, lower-carbon electricity production.

- Competitive, or free, markets work by having lower cost producers of a product replace higher cost producers and forcing them out of the market. This is what is happening with nuclear power.
- Keeping nuclear power plants operating by reestablishing the states as the regulatory authority and balkanizing the generating market will result in the most expensive power being purchased first and the plant not exiting the supply-side of the market.
- With the nuclear generated supply being locked in place, the risk of entering the generating market increases and investments in new, lower-cost and more reliable, power will not be made.
- I do assume that once the generating market is re-monopolized at the state level, market forces will play a much smaller role in power pricing and that non-competitive coal plants will also be protected.

Nuclear power and Ohio

The claims of economic benefit to GDP, jobs, and Tax payments made by FirstEnergy are standard outputs from input-output models and the typical assumptions made are that:

- The plant closes and no economic activity replaces it
- No competing generating investments are made
- Increased electricity costs borne by consumers does not affect sales, employment, tax payments, value added [GDP] from other industries, or site location decisions and expansions decisions.
- Nuclear is recognized as the most expensive power source; nuclear plants have not been bid into capacity auctions due to their prices.

Ohio and the importation of electricity

- Ohio has imported power in all years but one since the early 1970s.
- Most of Ohio's "imported" power comes from power plants located along the Ohio River or in other bordering states.

- The FirstEnergy document assumes that no new generating capacity will be constructed in Ohio. That offsetting power from nuclear will only come from imported electricity or renewable sources of energy.
- Removal of 17MWh of power will be replaced by a combination of non-Ohio power generation, investments in natural gas-fired combined cycle plants in Ohio and Pennsylvania, and a mix of alternative energy and energy conservation as long as a competitive regional electricity generation market exists.
- FirstEnergy assumes that the way to offset the "reductions" in carbon, NO_x, and SO₂ will be from 17MWh of renewable power. A better, and cheaper, solution can come from a multi-state regional electricity generating market that combines a mix of renewable generation, energy conservation, natural gas-fired combined cycle power plants, or reductions that can take place outside of the energy sector through market mechanisms. If there is a market requirement for nuclear power this would be revealed through markets for carbon, NO_x and SO₂ reduction that allows conservation to compete with nuclear.
- FirstEnergy has no incentive to encourage conservation.

There are important unanswered questions about the environmental impact of nuclear electricity generation.

- Nuclear power generation is heavily subsidized. The most troublesome is its relief from liability insurance.
- Long term storage of spent fuel rods has not been resolved and they remain on site.
- FirstEnergy's maintenance and safety record is troublesome.