CLEAN ENERGY *FUTURE*

June 8, 2017

Testimony by William Siderewicz, P.E.; Founder and President of Clean Energy Future, LLC

Ohio Senate Public Utilities Committee

SB-155 National Security Resources

Chairman Beagle and members of the Ohio Senate Public Utilities Committee, I'm Bill Siderewicz, President of Clean Energy Future (CEF). It is a pleasure to be with you today to discuss two (2) coal plants owned by OVEC. I will explain why the proposed $ 4-8 Billion bailout of the antiquated OVEC coal plants is an impediment to new private sector investment for gas-fired plants in Ohio, and why such proposed legislation should be rejected !

In neighboring PA, there is similar debate about what, if anything, should be done about uneconomical and vintage nuclear/coal plants within a functional, open and competitive (PJM) electricity marketplace. The editorial board of The PennLive News (Harrisburg) said it best on June 1, 2017 :

> "***It's Economics 101 : Markets (free) operate best when supply and demand determine price. As soon as someone puts a thumb on this scale, whether it be through regulation, price supports or taxes or surcharges, you get inefficiency which can stifle innovation and force consumers to pay more."***

SB -155 is not simply putting a thumb on the economically balanced scale, it's equivalent to putting both hands on the scale.

Before going into OVEC details, I am pleased to report that by the end of 2017, we will have successfully completed five (5) new modern gas-fired power projects in Ohio representing $ 4.5 Billion of private investment, 1,000's of new jobs and low-cost electricity to Ohioans. In the coming years, Ohio will need at least fifteen (15) more of these similar sized gas-fired facilities ($ 15-17 Billion investment) to make up for Ohio's obsolete coal/nuclear power plants. It is this scale of private sector expansion and the added electricity cost-saving benefits to ratepayers that is at risk via SB-155 !

$ 4-8 Billion Dollar Size of OVEC Bailout: The two (2) OVEC coal plants were built in 1955 and are effectively reaching the end of their useful lives. The economics surrounding the OVEC plants are described in the company's 2015 Annual Report (Exhibit A). Page 2 says that OVEC's 2015 cost to make electricity is about 6.44 ¢/kwh, meaning the cost in 2017 is more like 6.8 cents/kwh. This compares to a typical non-utility modern gas-fired plant that can today make electricity for 3.2¢/kwh. In order for OVEC to compete in today's PJM energy and capacity markets, OVEC needs a BAILOUT or SUBSIDY for the noted cost difference of 3.6¢/kwh. This is a $ 390 million/yr BAILOUT or $ 4 Billion over 10 years (Exhibit B).

OVEC Pollution (Kyger Creek) in Ohio : How much pollution comes from antiquated coal plants ? Local pollution and associated complaints in SE Ohio were so significant that AEP paid off the

local citizens of the coal plant's host community, at a total cost of $ 20 million, to have them **all** leave Cheshire, OH (Exhibit C). An OVEC Bailout would in fact perpetuate "dirty" Ohio power generation, since coal plants have the following characteristics vs. modern same-sized gas-fired plants :

- Use 300 % more water
- Emit 100 % more CO2
- Leave behind ash ponds contaminated with arsenic, lead , mercury and hexavalent chromium to impact both nearby groundwater and surface waters
- Emit magnitudes more : SOx, NOx and particulate matter

Is this the kind of business that now somehow deserves a multi-$ Billion Bailout from Ohio's ratepayers ?

National Security: Bailing out OVEC has absolutely nothing to do with national security. Instead, national security is simply a clever label devised by the utility owners to divert one's attention from the underlying problem. OVEC was designed and built to provide power to the U.S. Government's nuclear program. In exchange for building these two coal plants, the owners received guaranteed revenues from the Government for the period 1955 to 2003 . … . a 48 year period. During this time, all plant costs were recovered and each of the utility owners profited handsomely. In 2003, when the PPA (power purchase agreement) expired, Ohio was then a de-regulated power generation market and generation plants, including OVEC, had to compete in a free and open marketplace called PJM. Owners of OVEC assumed that they knew the PJM marketplace and decided to invest even more capital into OVEC, in the form of more air pollution control dollars in 2011-13, thinking coal would be economical long term. During this

same 2011-13 time period is when nearly everyone else in the power industry (including our firm CEF) recognized natural gas was a far superior power generation choice. In essence OVEC owners guessed wrong in 2011-13.

Most recently in N.J., the utility of PSE&G ($ 23 B market capital) announced on May 30, 2017 (Exhibit D) that it is closing its 57-year old (5 yr. younger than OVEC) Mercer coal plant in PJM, because as their CEO Ralph Izzo stated:

"We made a bet on high gas prices" and "We got that wrong"

PSE&G invested $ 100's of millions in new air pollution control equipment in 2011 (just like OVEC did in 2011) and they made the wrong choice that coal would be more economical than natural gas. Closing old and inefficient coal plants is exactly what OVEC owners should be doing, ... vs. fabricating a story that through a multi-$ Billion Bailout that OVEC has earned a reward for its past service to the nuclear industry. The correct solution here is a Chapter 7 or 11 proceeding for OVEC.

Utilities Already Walked Away with OVEC's Equity: Virtually every utility company in the U.S. funds its capital needs with about 50% +/- debt and 50% +/- equity. The attached Exhibit E shows such a capital ratio for AEP. When one reviews the OVEC Annual Report there are some shocking financial revelations. The first is that there is almost NO EQUITY in the company. Its balance sheet is 98.8 % debt. The OVEC owners have quietly and effectively removed all of the equity out of OVEC, and have left a stripped down "financial carcass" grossly overburdened with loans. What this means is that the proposed multi-$ Billion OVEC Bailout has only one purpose: pay back lenders and note holders who have made ill-advised loans to fund various

OVEC construction projects in previous years. OVEC owners have effectively run both coal plants into the ground and want the public ratepayers to pay for the resultant mess.

Who Will Pay for an OVEC Bailout ? : The OVEC legislation is strangely QUIET on how/who will pay the $ 4-8 Billion Bailout, no doubt by design. There are logically two (2) Options for payment :

Option 1 : Everyone Shares the Pain : The simplest solution is to create a non-by-passable rate adder to every customer in Ohio based on the number of MWhs they use in a year. Who will protest the loudest because of this unwanted financial burden . .. . . correct, almost every single commercial and industrial customer will stampede Columbus over this $ 390,000,000/year handout, which will make every business entity less effective in markets where they have to compete to survive. Examples of such companies : Timken Steel, BP/Husky, Toledo Refining, GM, Jeep, Walmart, etc.

*Option 2 : Downward Economic **Death Spiral***: In Ohio, electricity customers have the ability to freely purchase low cost electricity from an entity other than their local high-priced utility co., this is called "Customer Choice". Industrial customers elect Customer Choice quite readily to save money and remain cost competitive with the sale of their own products. Commercial customers do the same. However, far fewer residential customers have yet to understand that Customer Choice is available to them, so fewer residential customers have yet to switch to cost-saving Customer Choice. Within Exhibit F are two pie-charts illustrating all 3-classes of electricity customers. The chart on the left depicts an approximation of what percentage of the three customer classes have elected Customer Choice.

The OVEC Bailout will be funded by those electricity customers who have not yet elected Customer Choice. This is the **FATAL FLAW** in the OVEC Subsidy/Bailout logic. If those customers (shown in yellow highlight) are the ones paying for the multi-$ Billion Bailout, they will notice their electric bills increase, if SB-155 were to become law. What happens to customers who realize their electric bill is going up because they are not using Customer Choice? The simple answer is that more customers will switch to Customer Choice to: (i) avoid the OVEC Surcharge and (ii) obtain a lower baseline rate for electricity. The pie-chart to the right in Exhibit F shows how the number of customers who will pay the OVEC Bailout financial tab will shrink with time. As a result, the Bailout costs are spread over fewer and fewer customers, which will cause the OVEC Surcharge to grow even faster for each customer that is being charged. The net result is again more and more customers switching to Customer Choice. In the end, who's left to pay the OVEC Surcharge? My 37 years in the electricity generation business tells me it's the residential customers who may not be well informed and have fewer than average financial resources .... just the kind of customer Ohio's utilities target for such a program. . . . . those who are neediest and have no organized lobbying power to fight back. This downward ratcheting effect eventually pushes the full Bailout costs onto fewer and fewer customers .... and thus the appropriate title "Downward Economic Death Spiral".

For any of the Committee members who have played the "Old Maid" card game, this is exactly what the OVEC Plan is .... a deliberate bailout plan to leave the "little guy" holding the "Old Maid" card being dealt by the utilities from a stacked deck.

OVEC Owners Refuse to Use Their Own Money : Exhibit G is a graph showing the amount of CASH dividends AEP, First Energy and DP&L (AES) hand out to their investors each year. That's correct, about $ 1.8 Billion/year of cash. These same utilities are now at the public's door step asking that ratepayer hand them $ 390 million/year as an OVEC Bailout ! This level of Bailout exceeds the average $ 350 million per year ZEN (SB-128) nuclear Bailout !! In fact, when the OVEC Bailout ($390mm/yr) and the ZEN Bailout ($ 350 mm/yr) are added together they equal the value of the **0.5 % SALES TAX** hike ($740 mm/yr) that the **Legislature has already rejected**. OVEC and ZEN are nothing more than simply new OHIO TAXES !! These same utilities appear to be shameless . .. . in that they are collectively flush with their own cash but refuse to use it for their own needs.

SB-155 is a highly sophisticated yet fraudulent scheme to make-up for poor decision making by a collection of utility companies such that financial consequences are placed on the back of those who can least afford to pay (i.e., Bailout payback Option 2, herein).

Any subsidy/bailout paid to OVEC would be a blatant violation of two (2) free-market principles.

"Public Trust Principle": Poll after poll affirm by more than 7:1 margins, that the public wants Customer Choice and rejects utility Bailouts (like OVEC). It seems Legislators have an obligation to meet the needs/wants of their constituents.

"Open Market Competition": Non-utility co.'s invested Billions in Ohio to build new

low-cost gas-fired electricity plants, to make cost-saving ($3 Billion/yr) Customer Choice work for everyone. Investments have been made in good faith that Ohio is/remains an open competitive marketplace. The OVEC Bailout undermines this very principle of open markets in Ohio, and is equivalent to trying to "put just some of the tooth paste back in the (de-regulation) tube."

The facts are very clear, Ohio's vintage coal and nuclear plants will all eventually succumb to unavoidable economics that force their retirement. Ohio has 23,300 MW of coal firing (both closed and open) and 2,130 MW of out dated nuclear power that will need to be replaced. To date, about 10,200 MW of modern gas-fired generation is built or in advanced development in Ohio. In the coming years, another fifteen (15) large scale gas-fired projects will be needed. The non-utility industry will respond to this need and bring the needed $15-17 Billion of new investment to Ohio. However, that private investment will come only if investors perceive that Ohio remains an open and free market place for power generation. If the OVEC Bailout were to become law, the Legislature would be complicit in sending a loud and clear signal to the financial marketplace that Ohio's electricity market is NOT OPEN and FREE, but is instead is subject to subsidies that destroy a free and open market for competition. An erosion of Ohio's functional power generation market will stop new non-utility investment, that happens to be the prime engine driving annual Customer Choice savings of $ 3 Billion/year to Ohioans (OSU Study ; Jan. 2017).

Within House testimony for HB -178, Dr. Hill of the Ohio State University testified that utilities have two objectives :

> " ***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 the generating units, 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."***

The neatly packaged and crafted OVEC story is exactly what Dr. Hill was referring to.

For all of the reasons noted herein, **SB-155 should be rejected**.

Exhibit B

Ohio Utility Interests in OVEC

	%
Allegheny Energy (FirstE)	3.01
Appalachian Power (AEP)	15.69
DP&L	4.90
Duke- Ohio	9.00
First Energy Solutions	4.85
Monongahela Power (First E)	0.49
Ohio Power Co. (AEP)	19.93
Total	**57.87**

Notes : % Ownership data from Page 1 of the OVEC 2015 Annual Report

SB-155 does not prohibit Ohio utility affiliates located outside of Ohio from transferring/assigning their OVEC interests to their parent/affiliate in Ohio.

Since OVEC would be handed a Bailout, the assumption is that out-of-State affiliates will logically transfer MWh production ownership back into a related Ohio entity, to make more profit

This same mechanism of out-of-State transfer back into Ohio is envisioned in the ZEN Bill (SB-128), to accommodate First E's nuclear power in western Penn. via the Beaver Valley nuclear plant

A SB-155 Bailout applies to electricity output of a major power plant in Indiana. Ohioans are being asked to bailout a major out-of-state power plant !

Since OVEC's coal plants are un-economical today, they now only run when their cost of generation is below PJM market clearing prices. Due to poor OVEC economics, their recent capacity factors have fallen below what the plants were designed to achieve.

If an OVEC Bailout were to occur, OVEC would have every incentive to run both plants at "full throttle" 24/7, and thus a more typical baseload capacity factor would be achieved (to maximize profits) and is noted in these calculations at 90 %

Exhibit A

OVEC Annual Report

ANNUAL REPORT — 2015

OHIO VALLEY ELECTRIC CORPORATION

and subsidiary

INDIANA-KENTUCKY ELECTRIC CORPORATION

Ohio Valley Electric Corporation

GENERAL OFFICES, 3932 U.S. Route 23, Piketon, Ohio 45661

Ohio Valley Electric Corporation (OVEC) and its wholly owned subsidiary, Indiana-Kentucky Electric Corporation (IKEC), collectively, the Companies, were organized on October 1, 1952. The Companies were formed by investor-owned utilities furnishing electric service in the Ohio River Valley area and their parent holding companies for the purpose of providing the large electric power requirements projected for the uranium enrichment facilities then under construction by the Atomic Energy Commission (AEC) near Portsmouth, Ohio.

OVEC, AEC and OVEC's owners or their utility-company affiliates (called Sponsoring Companies) entered into power agreements to ensure the availability of the AEC's substantial power requirements. On October 15, 1952, OVEC and AEC executed a 25-year agreement, which was later extended through December 31, 2005 under a Department of Energy (DOE) Power Agreement. On September 29, 2000, the DOE gave OVEC notice of cancellation of the DOE Power Agreement. On April 30, 2003, the DOE Power Agreement terminated in accordance with the notice of cancellation.

OVEC and the Sponsoring Companies signed an Inter-Company Power Agreement (ICPA) on July 10, 1953, to support the DOE Power Agreement and provide for excess energy sales to the Sponsoring Companies of power not utilized by the DOE or its predecessors. Since the termination of the DOE Power Agreement on April 30, 2003, OVEC's entire generating capacity has been available to the Sponsoring Companies under the terms of the ICPA. The Sponsoring Companies and OVEC entered into an Amended and Restated ICPA, effective as of August 11, 2011, which extends its term to June 30, 2040.

OVEC's Kyger Creek Plant at Cheshire, Ohio, and IKEC's Clifty Creek Plant at Madison, Indiana, have nameplate generating capacities of 1,086,300 and 1,303,560 kilowatts, respectively. These two generating stations, both of which began operation in 1955, are connected by a network of 705 circuit miles of 345,000-volt transmission lines. These lines also interconnect with the major power transmission networks of several of the utilities serving the area.

The current Shareholders and their respective percentages of equity in OVEC are:

Allegheny Energy, Inc.[1]	3.50
American Electric Power Company, Inc.*	39.17
Buckeye Power Generating, LLC[2]	18.00
The Dayton Power and Light Company[3]	4.90
Duke Energy Ohio, Inc.[4]	9.00
Kentucky Utilities Company[5]	2.50
Louisville Gas and Electric Company[5]	5.63
Ohio Edison Company[1]	0.85
Ohio Power Company**[6]	4.30
Peninsula Generation Cooperative[7]	6.65
Southern Indiana Gas and Electric Company[8]	1.50
The Toledo Edison Company[1]	4.00
	100.00

These investor-owned utilities and affiliates of generation and transmission rural electric cooperatives comprise the Sponsoring Companies and currently share the OVEC power participation benefits and requirements in the following percentages:

Allegheny Energy Supply Company LLC[1]	3.01
Appalachian Power Company[6]	15.69
Buckeye Power Generating, LLC[2]	18.00
The Dayton Power and Light Company[3]	4.90
Duke Energy Ohio, Inc.[4]	9.00
FirstEnergy Solutions Corp.[1]	4.85
Indiana Michigan Power Company[6]	7.85
Kentucky Utilities Company[5]	2.50
Louisville Gas and Electric Company[5]	5.63
Monongahela Power Company[1]	0.49
Ohio Power Company[6]	19.93
Peninsula Generation Cooperative[7]	6.65
Southern Indiana Gas and Electric Company[8]	1.50
	100.00

Some of the Common Stock issued in the name of:

*American Gas & Electric Company
**Columbus and Southern Ohio Electric Company

Subsidiary or affiliate of:
[1]FirstEnergy Corp.
[2]Buckeye Power, Inc.
[3]The AES Corporation
[4]Duke Energy Corporation
[5]PPL Corporation
[6]American Electric Power Company, Inc.
[7]Wolverine Power Supply Cooperative, Inc.
[8]Vectren Corporation

A Message from the President

Ohio Valley Electric Corporation (OVEC) and its subsidiary, Indiana-Kentucky Electric Corporation (IKEC), continue to focus on operating the generating facilities in a safe, reliable and environmentally compliant manner. In 2015, the impact of a generally weak economy, mild weather conditions and low natural gas prices has created a depressed energy market that has limited the demand for OVEC generation sales to the Sponsoring Companies. We have seized this opportunity to address our generating maintenance challenges and to explore new ways to control costs, improve operating performance, engage our motivated employees and focus on the future business plan of positioning OVEC-IKEC to be the provider of choice.

SAFETY

OVEC and IKEC are committed to providing a safe and healthy place to work for all employees. In 2015, the Companies continued making progress on their transition to a culture that leads with safety through continued skill development in the area of human performance improvement (HPI) originally initiated in 2012. Strong leadership, the implementation of a self-assessment process and the involvement and commitment from all employees and our contractors will help ensure that we ultimately achieve and sustain the desired goal of zero harm.

RELIABILITY

In 2015, the combined equivalent availability of the five generating units at Kyger Creek and the six units at Clifty Creek was 64.7 percent compared with 69.8 percent in 2014. The combined equivalent forced outage rate (EFOR) at both plants was 18.9 percent in 2015 compared with 14.1 percent in 2014. Boiler tube leaks resulting from boiler refractory wastage were identified in 2015 and significant physical and operational changes have been made to decrease these forced outages.

Through the first quarter of 2016, the combined EFOR was 10.0 percent, with three units at Clifty Creek and two units at Kyger Creek operating with EFORs of less than 2.5 percent.

ENERGY SALES

OVEC's use factor — the ratio of power scheduled by the Sponsoring Companies to power available — for the combined on- and off-peak periods averaged 73.1 percent in 2015 compared with 86.5 percent in 2014. The on-peak use factor averaged 85.4 percent in 2015 compared with 96.2 percent in 2014. The off-peak use factor averaged 57.2 percent in 2015 and 74.1 percent in 2014.

In 2015, OVEC delivered 8.7 million megawatt hours (MWh) to the Sponsoring Companies under the terms of the Inter-Company Power Agreement compared with 11.2 million MWh delivered in 2014.

POWER COSTS

In 2015, OVEC's average power cost to the Sponsoring Companies was $64.402 per MWh compared with $56.382 per MWh in 2014. The total Sponsoring Company power costs were $559 million in 2015 compared with $631 million in 2014.

2016 ENERGY SALES OUTLOOK

For the first quarter of 2016, the demand for energy was lower than expected due to moderate winter temperatures and sustained lower natural gas prices. OVEC projects to be more normalized and to remain competitive in the energy market during the remainder of 2016. OVEC's updated projection for 2016 is a combined use factor of 65 percent, which will result in energy sales estimated at 9 million MWh at a cost of approximately $62 per MWh.

COST CONTROL INITIATIVES

The collaborative endeavors of the OVEC and IKEC employees to control costs and improve operating performance through its continuous

improvement process (CIP) remain a fundamental method of operation for the Companies. Since 2013, CIP has obtained $18.7 million in sustainable savings and process improvements. The employees are the driving force behind these culture changes that will ensure that these continuous improvement efforts are sustainable.

In 2015, OVEC-IKEC began implementing Open Book Leadership (OBL) as a cost-control initiative to further improve our culture and overall business success. OBL is a management philosophy that focuses on empowering employees by providing them the information, education and communication necessary to understand how the Company performs and how they can impact that performance.

ENVIRONMENTAL COMPLIANCE

The two flue gas desulfurization (FGD) scrubbers at Kyger Creek (in-service dates of November 2011 and February 2012) and the two Clifty Creek FGD systems (in-service dates of March 2013 and May 2013) continue to perform well. The overall pollution control systems installed at both plants have illustrated the capability to meet emission limitations under the Mercury Air Toxics Standards (MATS), which became applicable on April 2015, as well as the Cross-State Air Pollution Rule (CSAPR), which became effective on January 1, 2015. OVEC and IKEC have a strong commitment to maintain compliance with all applicable federal, state and local environmental rules and regulations.

OVEC and IKEC continue to market the gypsum generated from our new scrubber operations as an agricultural soil amendment in both Ohio and Indiana. We also continue to explore the opportunity to market the gypsum for other forms of beneficial reuse. In 2015, OVEC and IKEC initiated various compliance activities associated with the new Coal Combustion Residuals Rule and are currently gathering groundwater monitoring data that we expect will ultimately show compliance with the new groundwater quality standards established under that program. Finally, we are conducting a series of studies necessary to demonstrate compliance with aquatic life impingement and entrainment requirements under the Clean Water Act, Section 316(b) regulations and have also initiated a series of other studies to refine our capital cost estimates for meeting the newly established Steam Electric Effluent Limitations Guidelines. We expect to have cost estimates available by the end of 2016.

DOE ARRANGEMENTS WITH OVEC

OVEC continues to work toward the termination of the "arranged power" Letter Agreement with the Department of Energy (DOE) pursuant to which OVEC procures power and energy from third parties to serve the load at the DOE's Piketon facility. The DOE and OVEC have extended the date for termination of the Letter Agreement to October 31, 2016.

PSEUDO-TIE OF PJM SPONSORS' SHARES OF OVEC-IKEC GENERATION

On February 27, 2014, the PJM-member Sponsors asked the OVEC Operating Committee to approve the pseudo-tie of the PJM Sponsors' shares of OVEC's generation into the PJM market, in order to comply with new market rules instituted by PJM. This was unanimously approved by the OVEC Operating Committee, with implementation to be completed by June 1, 2017. On March 27, 2015, in response to other market changes in PJM, the PJM-member Sponsors asked the OVEC Operating Committee to advance the implementation by one year to June 1, 2016. Again, the Operating Committee unanimously approved the change. Working through the Operating Committee, OVEC developed the procedures needed to enable OVEC to become the market interface for the PJM Sponsors. The operation of the pseudo-tie functionality began on May 27, 2016.

The use of the pseudo-tie allows the PJM Sponsors to participate in PJM's Capacity Performance Market. Previously, the OVEC generation was sold as a combined total of all units with an average fuel cost representing the units. Under the PJM pseudo-tie model, the individual cost of each OVEC generating unit is offered into PJM. This allows for the individual generating units to be economically dispatched by PJM.

BOARD OF DIRECTORS AND OFFICERS CHANGES

In July 2015, Thomas Alban, vice president, power generation of Buckeye Power, Inc., was elected a director of OVEC and was appointed to the OVEC Human Resources Committee, replacing Anthony J. Ahern. Also in July 2015, Patrick W. O'Loughlin, senior vice president and chief operating officer of Buckeye Power, Inc., was elected a director of IKEC and appointed to the OVEC and IKEC Executive Committees, succeeding Mr. Ahern. Mr. Ahern had

6. LONG-TERM DEBT

The following amounts were outstanding at December 31, 2015 and 2014:

	Interest Rate	2015	2014
Senior 2006 Notes:			
2006A due February 15, 2026	5.80 %	$ 245,132,192	$ 261,689,554
2006B due June 15, 2040	6.40	58,583,884	59,530,005
Senior 2007 Notes:			
2007A-A due February 15, 2026	5.90	110,522,644	118,269,553
2007A-B due February 15, 2026	5.90	28,055,674	30,022,192
2007A-C due February 15, 2026	5.90	27,834,043	29,785,026
2007B-A due June 15, 2040	6.50	29,262,260	29,740,287
2007B-B due June 15, 2040	6.50	7,369,412	7,489,798
2007B-C due June 15, 2040	6.50	7,428,091	7,549,435
Senior 2008 Notes:			
2008A due February 15, 2026	5.92	34,492,978	36,907,905
2008B due February 15, 2026	6.71	69,698,688	74,433,137
2008C due February 15, 2026	6.71	71,449,681	76,117,755
2008D due June 15, 2040	6.91	42,439,930	43,081,900
2008E due June 15, 2040	6.91	43,177,347	43,830,471
Series 2009 Bonds:			
2009A due February 1, 2026	0.12	25,000,000	25,000,000
2009B due February 1, 2026	0.12	25,000,000	25,000,000
2009C due February 1, 2026	0.12	25,000,000	25,000,000
2009D due February 1, 2026	0.12	25,000,000	25,000,000
2009E due October 1, 2019	5.63	100,000,000	100,000,000
Series 2010 Bonds:			
2010A due February 1, 2040	1.58	50,000,000	50,000,000
2010B due February 1, 2040	1.58	50,000,000	50,000,000
Series 2012 Bonds:			
2012A due June 1, 2032	5.00	76,800,000	76,800,000
2012A due June 1, 2039	5.00	123,200,000	123,200,000
2012B due June 1, 2040	0.24	50,000,000	50,000,000
2012C due June 1, 2040	0.12	50,000,000	50,000,000
Series 2013 Notes:			
2013A due February 15, 2018	1.83	100,000,000	100,000,000
Total debt		1,475,446,824	1,518,447,018
Total premiums and discounts (net)		(528,264)	(550,863)
Total debt net of premiums and discounts		1,474,918,560	1,517,896,155
Current portion of long-term debt		295,659,471	243,000,194
Total long-term debt		$1,179,259,089	$1,274,895,961

OHIO VALLEY ELECTRIC CORPORATION
AND SUBSIDIARY COMPANY

CONSOLIDATED BALANCE SHEETS
AS OF DECEMBER 31, 2015 AND 2014

CAPITALIZATION AND LIABILITIES	2015	2014
CAPITALIZATION:		
Common stock, $100 par value—authorized, 300,000 shares; outstanding, 100,000 shares in 2015 and 2014	$ 10,000,000	$ 10,000,000
Long-term debt	1,179,259,089	1,274,895,961
Line of credit borrowings	45,000,000	20,000,000
Retained earnings	7,866,994	7,031,723
Total capitalization	1,242,126,083	1,311,927,684
CURRENT LIABILITIES:		
Current portion of long-term debt	295,659,471	243,000,194
Accounts payable	38,614,644	54,104,896
Accrued other taxes	9,564,756	9,410,141
Regulatory liabilities	17,522,792	14,065,394
Accrued interest and other	21,954,895	23,614,552
Total current liabilities	383,316,558	344,195,177
COMMITMENTS AND CONTINGENCIES (Notes 3, 11, 12)		
REGULATORY LIABILITIES:		
Postretirement benefits	44,780,419	33,650,545
Decommissioning and demolition	11,219,680	14,102,619
Total regulatory liabilities	56,000,099	47,753,164
OTHER LIABILITIES:		
Pension liability	27,889,880	32,475,646
Asset retirement obligations	31,249,839	29,547,185
Postretirement benefits obligation	32,235,745	44,875,752
Postemployment benefits obligation	2,526,541	1,437,151
Other noncurrent liabilities	911,204	1,123,868
Total other liabilities	94,813,209	109,459,602
TOTAL	$1,776,255,949	$1,813,335,627

See notes to consolidated financial statements. (Concluded)

OHIO VALLEY ELECTRIC CORPORATION
AND SUBSIDIARY COMPANY

OVEC PERFORMANCE—A 5-YEAR COMPARISON

	2015	2014	2013	2012	2011
Net Generation (MWh)	**8,899,619**	11,410,006	10,471,693	10,514,762	14,468,168
Energy Delivered (MWh) to:					
DOE [1]	**221,610**	211,337	195,470	207,692	253,157
Sponsors	**8,681,829**	11,193,643	10,304,107	10,340,568	14,199,025
Maximum Scheduled (MW) by:					
DOE [1]	**40**	42	33	36	39
Sponsors	**2,047**	2,162	2,160	2,165	2,247
Power Costs to:					
DOE [1]	**$10,249,000**	$11,758,000	$9,282,000	$9,097,000	$11,643,000
Sponsors	**$559,123,000**	$631,120,000	$671,648,000	$650,027,000	$722,153,000
Average Price (MWh):					
DOE [1]	**$46.248**	$55.636	$47.483	$43.802	$45.993
Sponsors	**$64.402**	$56.382	$65.183	$62.862	$50.859
Operating Revenues	**$565,329,000**	$656,174,000	$675,649,000	$670,819,000	$716,938,000
Operating Expenses	**$492,803,000**	$587,900,000	$594,742,000	$599,891,000	$653,696,000
Cost of Fuel Consumed	**$246,582,000**	$315,461,000	$311,900,000	$302,926,000	$397,543,000
Taxes (federal, state, and local)	**$11,646,000**	$12,426,000	$12,312,000	$11,659,000	$12,059,000
Payroll	**$63,909,000**	$62,275,000	$63,175,000	$61,907,000	$57,141,000
Fuel Burned (tons)	**4,134,871**	5,183,311	4,958,872	5,290,009	7,310,107
Heat Rate (Btu per kWh, net generation)	**10,681**	10,483	10,715	10,581	10,467
Unit Cost of Fuel Burned (per mmBtu)	**$2.59**	$2.64	$2.78	$2.72	$2.63
Equivalent Availability (percent)	**64.7**	69.8	73.9	78.9	83.0
Power Use Factor (percent)	**73.07**	86.48	75.05	69.40	89.61
Employees (year-end)	**738**	775	781	828	810

[1] OVEC purchases power from third party generators and provides certain services for the Department of Energy (DOE) at its Portsmouth facility under the terms and conditions of an Arranged Power Agreement (APA) dated May 1, 2003. On April 28, 2015, DOE and OVEC signed an agreement to terminate the APA effective July 31, 2015. The DOE and OVEC extended the date for termination of the agreement to October 31, 2016.

Exhibit B

Size of OVEC Bailout

- Ohio's utilities and affiliates own 57.9 % of OVEC's generation output
- The two (2) coal plants in IN and OH are 2,390 MW in capacity size
- At a 90 % capacity factor Ohio's utilities control (MWh/yr) :

  = 2,390 MW x 8,760 hr/yr x 90 % x 57.9 %

  = 10.9 million MWh/year

- Annual **OVEC Bailout** is :

  = 10.9 million MWh/year x 1,000 kw/MW x 3.6 cents/kwh

  = **$ 390,000,000/year**

- An OVEC Bailout over **10 years** : **$ 4 Billion**

- An OVEC Bailout over **20 years : $ 8 + Billion**

Exhibit B

Ohio Utility Interests in OVEC

	%
Allegheny Energy (FirstE)	3.01
Appalachian Power (AEP)	15.69
DP&L	4.90
Duke- Ohio	9.00
First Energy Solutions	4.85
Monongahela Power (First E)	0.49
Ohio Power Co. (AEP)	19.93
Total	**57.87**

Notes : % Ownership data from Page 1 of the OVEC 2015 Annual Report

HB-239 does not prohibit Ohio utility affiliates located outside of Ohio from transferring/assigning their OVEC interests to their parent/affiliate in Ohio.

Since OVEC would be handed a Bailout, the assumption is that out-of-State affiliates will logically transfer MWh production ownership back into a related Ohio entity, to make more profit

This same mechanism of out-of-State transfer back into Ohio is envisioned in the ZEN Bill (HB-178), to accommodate First E's nuclear power in western Penn. via the Beaver Valley nuclear plant

A HB-239 Bailout applies to electricity output of a major power plant in Indiana. Ohioans are being asked to bailout a major out-of-state power plant !

Since OVEC's coal plants are un-economical today, they now only run when their cost of generation is below PJM market clearing prices. Due to poor OVEC economics, their recent capacity factors have fallen below what the plants were designed to achieve.

If an OVEC Bailout were to occur, OVEC would have every incentive to run both plants at "full throttle" 24/7, and thus a more typical baseload capacity factor would be achieved (to maximize profits) and is noted in these calculations at 90 %

Exhibit C

AEP Buys Out Cheshire, OH

The Atlantic

For $20 Million, a Coal Utility Bought an Ohio Town and a Clear Conscience

Today, all that remains in Cheshire are two power plants and the few people who refused to leave.

The Gen. James M. Gavin Power Plant in Cheshire, Ohio

Richard Martin

RICHARD MARTIN | OCT 16, 2014 | BUSINESS

Scotty Lucas is the former mayor of a town that no longer exists. This double obsolescence seems to faze him little, which is not all that surprising considering that he has outlived his wife, one of his children, and the town he spent most of his 81 years in.

Lucas's one-story brick home, with a bass boat in the driveway and wrought-iron patio furniture, is one of the few still standing in Cheshire, Ohio. This riverside village became briefly famous in 2002, when American Electric Power, the utility that operates two large coal-fired power plants here, bought it for $20 million—a deal the company preferred over dealing with residents' ongoing complaints about air pollution.

I visited Lucas, who presided over the now 140-year-old town a few years before the AEP buyout, on a mild September afternoon, as puffy white clouds melded with the smoke and steam billowing from the nearby Gen. James M. Gavin Power Plant. Built in the early '70s, Gavin is the largest coal plant in Ohio and one of the largest in the United States. Just down the Ohio River is the smaller, older Kyger Creek plant, which has been burning coal to make electricity since 1954.

Lucas, a hospital administrator, served as Cheshire's part-time mayor from 1970 to 1998. He kept getting re-elected, he says, because "nobody else wanted to catch the flack." His successor, Tom Reese, helped negotiate the AEP buyout, which cost the utility $20 million and absolved it from any future liability for damage to the locals' health or their property. All but a handful of the town's 450 or so residents accepted the buyout; the elderly and the infirm were allowed to remain in their homes for the rest of their lives.

This might sound like a black-and-white story: the evil coal company pushing out the simple, sturdy townsfolk. But it's not that simple.

I asked Lucas, one of whose sons is now a foreman at the Gavin plant, if the buyout was a good thing for the town and its residents. He paused for nearly a minute.

"We were given a lifetime estate. My wife was ill, she didn't want to relocate. It was okay for our particular needs."

Lucas's wife died "inch by inch," as he puts it, of pulmonary fibrosis, finally succumbing in 2012. It's not clear whether her illness was caused by their proximity to the coal plants. "That question arose," he said. "The doctors, they wouldn't comment." And what does he think? "Naturally, it lights up. It certainly could be."

Later on in our conversation he returned to the question of the buyout's consequences. "I hate it that they uprooted that many people, especially in a place with a history like this village. It wasn't a good outcome."

Exhibit D

PSE&G Closing Mercer Coal Plant (June 2017)

Business (Http://Www.philly.com/Business)

— Energy (http://www.philly.com/philly/business/energy)

PSEG shuts down its last coal plants: `It's just economics'

Updated: MAY 30, 2017 — 3:01 AM EDT

(http://www.philly.com/philly/business/energy/pseg-shuts-down-its-last-n-j-coal-plants-its-just-economics-20170530.html?viewGallery=y) (http://philly.reprintmint.com/006-default.html?

http://www.philly.com/philly/business/energy/pse -shuts-down-its-last-n-j-coal- lants-its-just-economics-20170530.html?mobi=true
The Philadelphia Inquirer
PSEG shuts down its last coal plants: `It's just economics'

HAMILTON TOWNSHIP, N.J. — Like many 57-year-olds, the Mercer Generation Station can still do its job, which is producing electricity from Appalachian coal for a public hungry for power. But this former workhorse of the grid has been eclipsed by a new generation of power plants, and on Thursday it will shut down for good.

Public Service Enterprise Group of Newark, N.J., announced in October that it would shut down Mercer and the Hudson Generation Station on June 1, retiring its two remaining coal-fired power plants in New Jersey, casualties of a sustained low-price environment brought on by inexpensive natural gas.

The closures take place just six years after the company's power-generation subsidiary, PSEG Power, completed more than $1 billion in upgrades to environmental controls at the two sites to comply with new federal emissions standards. Though the company correctly anticipated stricter environmental regulations, it did not foresee the tumble in energy prices brought on by shale gas.

With the plant's shutdown, Mercer's coal supply is being sold and loaded onto barges.

"We made a bet on high gas prices," Ralph Izzo, PSEG's chief executive, said in an interview last week. "We got that wrong." The company took a loss of $555 million last year on the plant closures and anticipates an additional non-cash write-off of up to $960 million in 2017.

Environmentalists claimed credit for forcing the two coal plants to close, but PSEG says it was really fracking that undermined them. "The way the market works, the economics don't work," Bill Thompson, PSEG Power's senior director of operations, said during a Mercer plant tour last week. "They're not getting shut down for equipment conditions. It's just economics."

The Mercer station, just downriver from Trenton, was built when Dwight D. Eisenhower was in the White House and can produce 632 megawatts, slightly more than the Hudson plant. Mercer performed like a star professional athlete for much of its career, before moving down in the regional power-generation lineup. In recent years, it was strictly a bench player.

Ten years ago, the plant ran nearly every day, producing more than three million megawatt hours of electricity, according to PSEG Power. In 2016, Mercer produced a mere 1,867 megawatt hours. Last year, it operated only two days in January, when the regional power-grid operator, PJM Interconnection, called on it to meet high winter demand. The generation station has been inactive for 17 months.

Today, Mercer is a silent industrial castle along the Delaware, its giant blue turbines idle and its 325-foot stacks, ghostly sentries. All the dials on its control-room wall, except for the clock, are pointed at zero.

Jim Pfennigwerth (left) Mercer's plant manager, shakes hands with Lester Doll, who had just cleaned out his locker after 19 years at the plant. CLEM MURRAY / Staff Photographer

Three oversized front-end loaders were busy last week reducing a mountain of coal that piled up last year when the plant was on standby — barges kept delivering fuel from a Baltimore terminal under contract. Now, the coal is being loaded back onto barges and resold into the market. Since March, the plant has shipped out 180,000 tons of it.

PSEG said most of the 200 remaining employees at the two plants — more than twice that number worked there during their peaks — have accepted other jobs in the company, which includes the state's largest utility, Public Service Electric and Gas Co. Some employees elected to take buyout packages and retire. Fewer than 10 employees are still awaiting placement within the company, said Jim Pfennigwerth, 62, the plant manager, who is among those who plan to retire.

Power-generation people are typically not overtly sentimental. Many of those who have worked at Mercer for decades are stoic about the end of an era.

"I actually started here at the lowest levels," said George LaFalce, 61, a 29-year veteran. "Back in the days, I was a plant operator. I ran around and made sure the coal kept moving." He will retire, along with the plant, as its last operations chief.

Mark Schwartzkopf, 66, Mercer's environmental manager, is retiring with 47 years of service at the plant. He takes pride at providing power to the company's customers, especially in the dead of winter. "When it's cold out, you're doing some good," said Schwartzkopf, who commutes to the plant from his home in Haddonfield.

The Mercer and Hudson stations' retirements leave New Jersey with two remaining coal-fired plants, both in South Jersey. The Logan Generating Plant, a 225-megawatt plant on the Delaware near Swedesboro, was built in 1994 and is equipped with modern emission controls. Chambers Cogeneration LP operates a 261-MW plant in Carneys Point, Salem County.

PSEG Power still operates the Bridgeport Harbor plant in Connecticut, which is scheduled to be retired in 2021 and replaced by a gas plant. It also has ownership stakes in the Keystone and Connemaugh coal plants in Western Pennsylvania, which are built near mines and operate with high efficiency. But it sees no growth in coal.

"We won't be investing in new coal," Izzo said.

At Mercer, PSEG's environmental investments are the main features of the tour. It added precipitators in 1995 to reduce soot emissions, and the first of three units to reduce nitrogen oxides, which contribute to ground-level ozone, or smog. In 2004, it added a $100 million selective catalytic reduction unit to cut nitrogen oxides, and in 2007 a $10 million carbon-injection unit to reduce mercury. In 2010, it spent $500 million to build a baghouse and scrubber to control sulfur, mercury and particulates.

"They're very clean plants and not because they don't run," Izzo said. The emissions-control features now occupy two times more land on Mercer's 114-acre site than the original power plant.

Izzo and some plant employees expressed concern that the closures of the coal plants will reduce the diversity of fuel sources that power the region, making the electric grid less resilient as natural gas becomes more dominant. It's a theme that is being pounded in Congress and state capitals in the region, particularly by the nuclear industry, which is lobbying for some type of price support for nuclear power plants to reward their clean emissions.

Along with Mercer and Hudson, PSEG has retired other power plants recently without raising alarms, Izzo said, but the potential shutdown of its nuclear plants could have much deeper economic and environmental consequences. "We retired 3,000 MW and didn't say anything," he said. "If we make a fuss, it's because we mean it and it matters."

As for the Mercer and Hudson sites, it is likely they will remain in industrial use. Hudson will be used to store equipment to support other plant operations in the area, Izzo said. Until a long-term plan for Mercer emerges, he said, the company has begun explorations with New Jersey environmental officials about installing solar panels, since the site already has transmission lines connected to the grid.

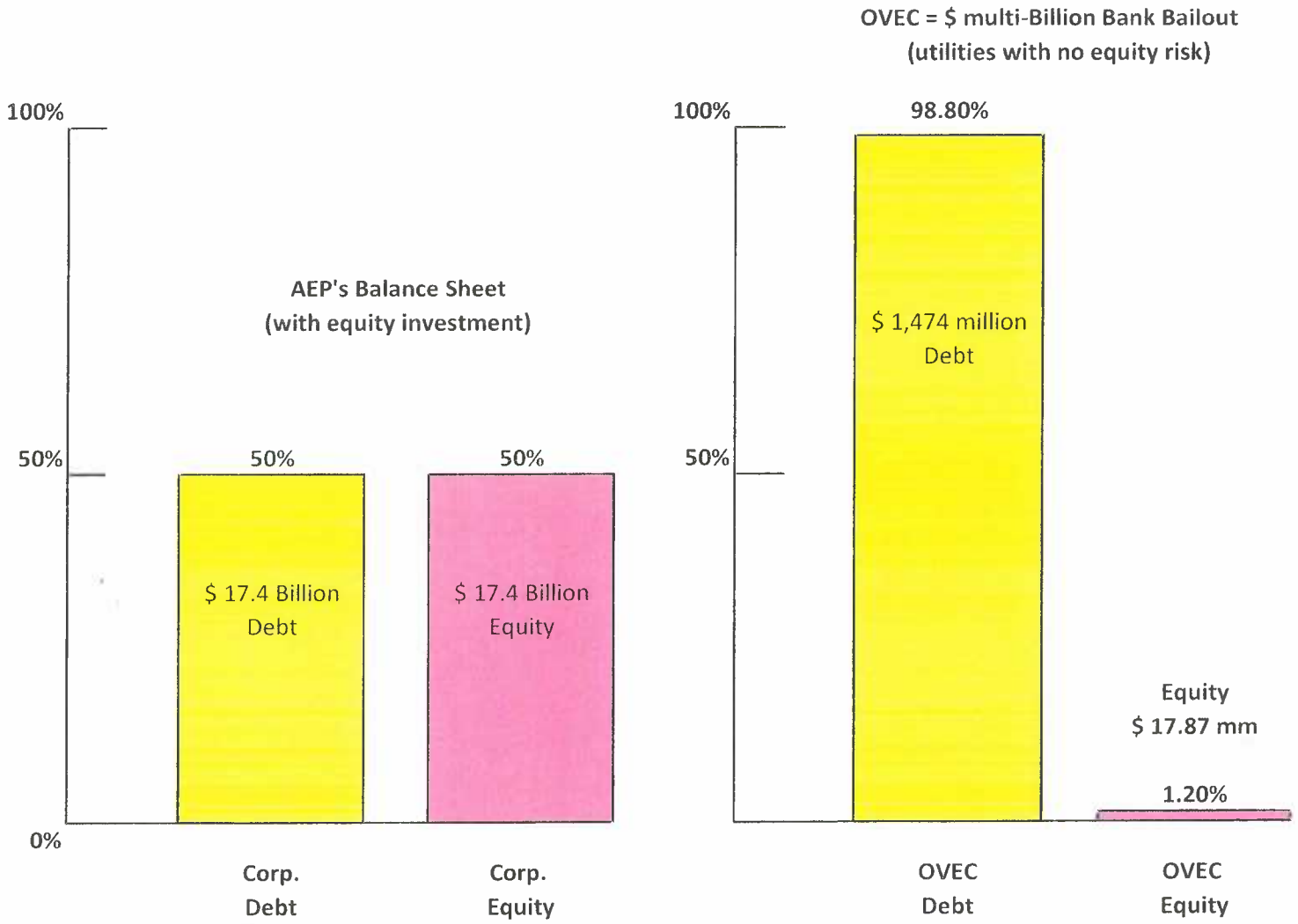
"We really want to preserve those sites for future power generation," Izzo said. "It's not easy to site power plants."

Sent from my Verizon, Samsung Galaxy smartphone

Exhibit E

Utility Capital Structure Ratio

Exhibit E


OVEC = $ multi-Billion Bank Bailout
(utilities with no equity risk)
100%
50%
0%
AEP's Balance Sheet
(with equity investment)
50%
50%
$ 17.4 Billion
Debt
$ 17.4 Billion
Equity
Corp.
Debt
Corp.
Equity
100%
50%
98.80%
$ 1,474 million
Debt
Equity
$ 17.87 mm
1.20%
OVEC
Debt
OVEC
Equity

American Electric Power Company Inc (AEP :)

+ WATCHLIST

BALANCE SHEET QUARTERLY ANNUAL

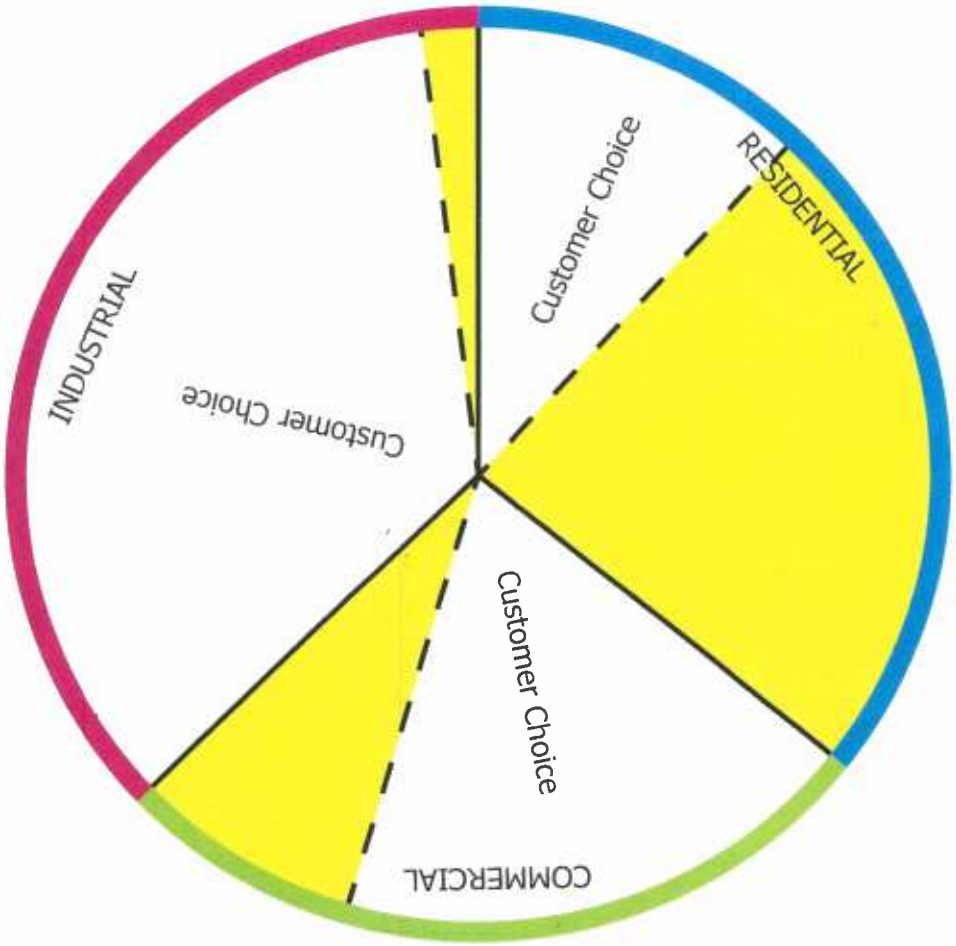
	2016 12/31/16	2015 12/31/15	2014 12/31/14	2013 12/31/13
Cash	290	284	258	188
Short Term Investments	332	387	386	353
ASSETS				
Cash & Short Term Investments	622	670	643	541
Receivables - Net	1,917	1,640	1,835	1,860
Raw Materials	967	1,339	1,317	1,423
Inventories - Total	967	1,339	1,317	1,423
Prepaid Expenses	--	--	--	--
Other Current Assets	2,528	422	683	486
CURRENT ASSETS - TOTAL	6,034	4,072	4,478	4,310
Other Property, Plant & Equipment	58,853	61,577	60,391	57,814
Property, Plant and Equipment - Gross	62,037	65,481	63,606	60,285
Accumulated Depreciation	(16,397)	(19,348)	(19,971)	(19,288)
Property, Plant and Equipment - Net	45,639	46,133	43,635	40,997
Other Investments	2,256	2,106	2,096	1,932
Deferred Charges	2,085	2,107	2,131	2,038
Other Tangible Assets	7,401	7,212	7,152	7,046
Total Intangible Other Assets - Net	53	53	53	91
Other Assets - Total	9,538	9,371	9,336	9,175
TOTAL ASSETS	63,468	61,683	59,545	56,414
LIABILITIES				
Accounts Payable	1,688	1,418	1,258	1,266
Short Term Debt & Current Portion of Long Term Debt	4,591	2,632	3,846	2,306
Income Taxes Payable	1,048	979	864	822
Other Current Liabilities	2,171	2,080	1,998	1,718
CURRENT LIABILITIES - TOTAL	9,498	7,108	7,967	6,112
Long Term Debt	17,378	17,741	16,012	16,828
Provision for Risks and Charges	2,445	2,390	2,580	2,250
Deferred Taxes - Credit	11,884	11,733	10,892	10,300
DEFERRED TAXES	11,884	11,733	10,892	10,300
Other Liabilities	4,842	4,806	5,269	4,838
TOTAL LIABILITIES	46,048	43,778	42,720	40,328
EQUITY				
Non-Equity Reserves	0	0	0	0
Minority Interest	23	13	4	1
Preferred Stock	0	0	0	0
Common Stock	3,328	3,324	3,313	3,303
Capital Surplus	6,333	6,297	6,203	6,131
Other Appropriated Reserves	(126)	(112)	(93)	(99)
Retained Earnings	7,892	8,398	7,407	6,766
Unrealized Foreign Exchange Gain/Loss	(39)	(22)	(18)	(23)
Unrealized Gain/Loss on Marketable Securities	8	7	8	7
COMMON EQUITY	17,397	17,892	16,820	16,085
TOTAL LIABILITIES & SHAREHOLDERS' EQUITY	63,468	61,683	59,545	56,414
SHARE INFORMATION				
Common Shares Outstanding	492	491	489	488

() = Negative Values
In U.S. Dollars
Values are displayed in Millions except for earnings per share and where noted

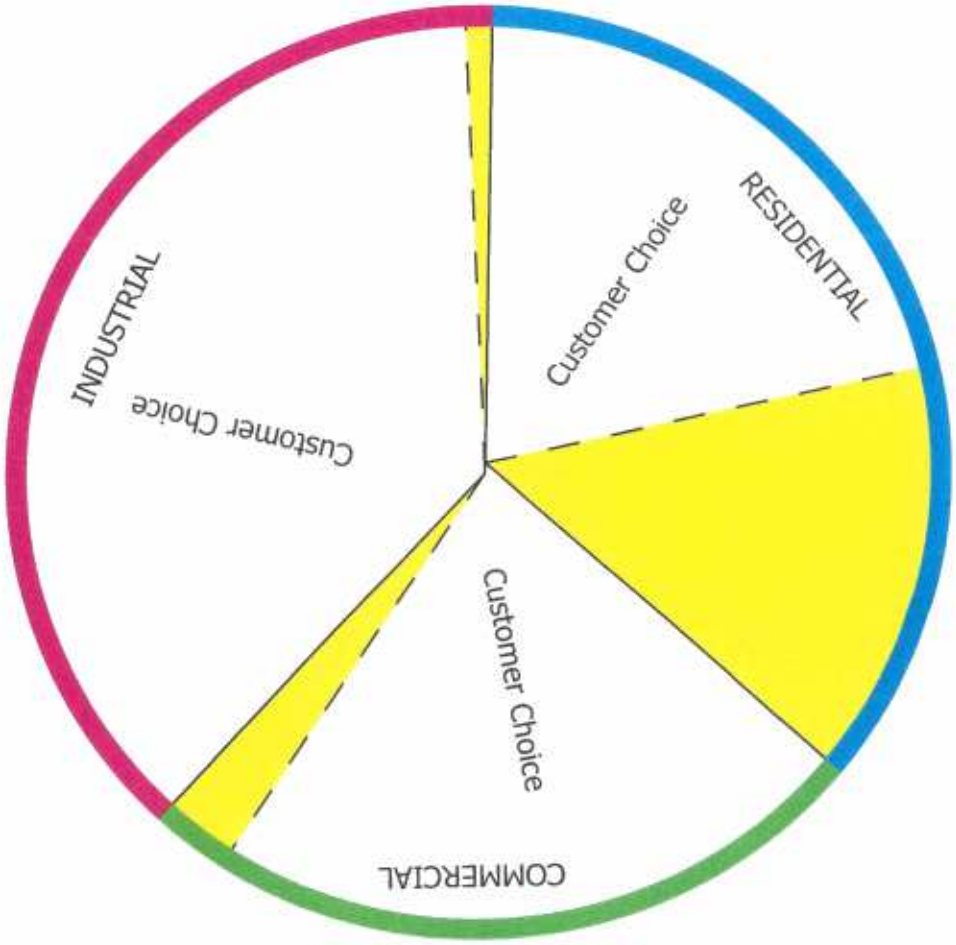
Exhibit F

Downward Economic Death Spiral

Downward Economic Death Spiral



2017 : Pre-OVEC Bailout



1 Year after Bailout in Effect

Those saddled with
OVEC Bailout Costs

Exhibit G

Cash Dividends Paid vs. OVEC Bailout Amount

Exhibit G
Cash Dividends Distributed Yearly
by
AEP, First Energy and DP&L