

**BEFORE  
THE PUBLIC UTILITIES COMMISSION OF OHIO**

<b>In the Matter of the Application of the Ohio</b>	)	
<b>Edison Company, the Cleveland Electric</b>	)	
<b>Illuminating Company and the Toledo Edison</b>	)	<b>Case No. 14-1297-EL-SSO</b>
<b>Company for Authority to Provide for a Standard</b>	)	
<b>Service Offer Pursuant to R.C. 4928.143</b>	)	
<b>In the Form of an Electric Security Plan</b>	)	

**Supplemental Testimony of Peter J. Lanzalotta**

*Redacted Version*

**On Behalf of  
Sierra Club**

**May 11, 2015**

1   **Q.    Mr. Lanzalotta, please state your name, position, and business address.**

2   A.    My name is Peter J. Lanzalotta. I am a Principal with Lanzalotta & Associates LLC,  
3        ("Lanzalotta"), 67 Royal Point Drive, Hilton Head Island, SC 29926.

4   **Q.    On whose behalf are you testifying in this case?**

5   A.    I am testifying on behalf of the Sierra Club.

6   **Q.    Mr. Lanzalotta, please summarize your educational background and recent work**  
7        **experience.**

8   A.    I am a graduate of Rensselaer Polytechnic Institute, where I received a Bachelor of  
9        Science degree in Electric Power Engineering. In addition, I hold a Masters degree in  
10       Business Administration with a concentration in Finance from Loyola College in  
11       Baltimore.

12       I am currently a Principal of Lanzalotta & Associates LLC, which was formed in January  
13       2001. Prior to that, I was a partner of Whitfield Russell Associates, with which I had  
14       been associated since March 1982. My areas of expertise include electric system  
15       planning and operation. I am a registered professional engineer in the states of Maryland  
16       and Connecticut.

17       In particular, I have been involved with the planning and operation of electric utility  
18       systems as an employee of and as a consultant to a number of privately- and publicly-  
19       owned electric utilities over a period exceeding thirty years.

1 I have presented expert testimony before the Federal Energy Regulatory Commission  
2 (“FERC”) and before regulatory commissions and other judicial and legislative bodies in  
3 25 states, the District of Columbia, and the Provinces of Alberta and Ontario. I have  
4 testified in several proceedings before the Public Utilities Commission of Ohio  
5 (“Commission”), including Case Nos. 83-33-EL-EFC, 06-222-EL-SLF, and 10-503-EL-  
6 FOR. My clients have included utilities, state regulatory agencies, state ratepayer  
7 advocates, independent power producers, industrial consumers, the United States  
8 Government, environmental interest groups, and various city and state government  
9 agencies.

10 A copy of my current resume is included as Exhibit PJL-1 and a list of my testimonies is  
11 included as Exhibit PJL-2.<sup>1</sup>

12 **Q. What is the purpose of your testimony?**

13 A. My testimony addresses several points raised in the Supplemental Testimony of Rodney  
14 Phillips, which was filed one week ago on May 4, 2015. Mr. Phillips characterizes his  
15 testimony as “address[ing] the necessity of Sammis and Davis-Besse, in light of future  
16 reliability concerns, as well as the impact that a closure of the Plants would have on  
17 electric prices.”<sup>2</sup> Mr. Phillips also adopted, with some revisions, the previous direct  
18 testimony of Gavin Cunningham, who is retiring.

19 **Q. What points in Mr. Phillips’s testimony are you commenting on?**

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<sup>1</sup> Exhibit PLJ-1 and Exhibit PJL-2, as well as all other Exhibits referenced herein, are attached to and incorporated by reference in this testimony.

<sup>2</sup> Phillips Supplemental Testimony at 5:2-4.

1 A. Mr. Phillips starts with Mr. Cunningham's "conservative" cost estimates of transmission  
2 upgrades that would be needed i) as a result of already-announced generating unit  
3 retirements, and ii) if all of the generating units at the Davis-Besse Nuclear Power Station  
4 ("Davis-Besse") and the W. H. Sammis Plant ("Sammis") were to be retired. He makes  
5 several adjustments to these transmission cost estimates, and then dramatically expands  
6 the range of estimated transmission costs that would be needed if Davis-Besse and  
7 Sammis were to retire. Whereas Mr. Cunningham's adjusted cost estimate was \$436.5  
8 million, Mr. Phillips estimates that such costs could reach nearly \$1.1 billion.<sup>3</sup> I  
9 comment on why these witnesses' transmission cost estimates do not reflect the full range  
10 of available transmission cost options regarding generation at Sammis. I further  
11 comment on Mr. Phillips's increased estimate of transmission costs that would be needed  
12 if Davis-Besse and Sammis were to retire. Mr. Phillips's upper range estimate is far less  
13 conservative than the cost estimate presented by Mr. Cunningham in his testimony last  
14 August, exactly nine months previously.

15 Q. **Please comment on why the transmission cost estimates in Mr. Phillips' testimony<sup>4</sup>**  
16 **do not reflect the full range of available transmission cost options regarding**  
17 **generation at Sammis.**

18 A. The cost estimates for transmission reinforcements developed by Messers. Cunningham  
19 and Phillips look at retiring all the generating units at Sammis, or none of them. There  
20 are seven generating units at Sammis, with Units 1 through 5 having a combined 1,020

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<sup>3</sup> Phillips Supplemental Testimony at 4:11-23, 8:7-15.

<sup>4</sup> And in Mr. Cunningham's Testimony.

1 MW of load following capacity and Units 6 and 7 having a combined 1,200 MW of base-  
2 load capacity.<sup>5</sup> Some of these generating units feed into local 138 kV transmission  
3 facilities, while others feed into local 345 kV transmission facilities. The evaluation  
4 presented in FirstEnergy's filings only considers scenarios in which all of the units at  
5 Sammis or Davis-Besse, or both, would retire. These evaluations discount the possibility  
6 that, if retirements were to occur, only a limited number of generating units at Sammis  
7 might be retired, and the rest would remain in service. These alternatives were not  
8 evaluated by Mr. Cunningham or Mr. Phillips. Evaluation of such alternatives would  
9 provide the Commission with some additional perspective to the Company's all or  
10 nothing evaluation of transmission cost impacts.

11 Additionally, scenarios in which only a portion of the Sammis units retired are likely to  
12 have smaller resultant transmission system overloads than would be the case if all of the  
13 Sammis were retired at once, and might avoid the need for some of the transmission  
14 reinforcements needed if all the units are retired at once. A number of the transmission  
15 facilities that overload if all the generation at Davis-Besse and Sammis are retired  
16 [REDACTED].<sup>6</sup> If Units 6 and 7 at Sammis are not retired, for  
17 example, then the total generating capacity being retired between Davis-Besse and  
18 Sammis would be reduced by 38%.<sup>7</sup> Reducing the amount of generating capacity being  
19 retired would be expected to reduce the magnitude of some or all of the overloads that

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<sup>5</sup> Direct testimony of Paul Harden, p. 5, lines 7-8.

<sup>6</sup> OCC Set 6-INT-150 Attachment 1 – confidential (attached as Confidential PJL-3).

<sup>7</sup> The total capacity of Davis-Besse is 908 MW (Harden 2:17-19). Capacity at Sammis is 2,220 MW (Harden 5:4-6). Total of these capacities is 3,128 MW. Baseload capacity at Sammis equals 1,200 MW which equals 38.4% of 3,128 MW.

1 would be caused if all the generating capacity at Davis-Besse and Sammis were retired.

2 [REDACTED]

3 [REDACTED]

4 **Q Are there other scenarios in which the extent of transmission upgrades needed to**  
5 **maintain reliability could be smaller than that described by the Companies'**  
6 **witnesses?**

7 **A** Yes. As I noted above, the transmission upgrade costs described by Messrs. Cunningham  
8 and Phillips assume that both Davis-Besse and the entire Sammis plant retired. If those  
9 plants retired, but a new generating unit came online that was connected to the grid at an  
10 appropriate location, that could reduce the need for some of the transmission upgrades  
11 cited in the testimony of Messrs. Cunningham and Phillips. I have not evaluated the  
12 reliability implications of any specific plant that is planned to come online in future  
13 years. Nevertheless, it remains the case that a new, appropriately-located plant could  
14 reduce the need for some of the cited transmission upgrades, thereby reducing the  
15 transmission-related costs that might result from retirement of Sammis and Davis-Besse.

16 **Q Please comment on Mr. Phillips's increase in transmission cost estimates, from**  
17 **\$436.5 million to \$1.1 billion, for transmission projects that could be needed in the**  
18 **event that both Davis-Besse and Sammis were to retire.**

19 **A** Mr. Phillips expands the range of transmission reinforcement costs from the conservative  
20 estimate of \$436.5 million, which is based on estimated costs to reconductor all  
21 overloaded transmission lines, to include an upper limit of \$1.1 billion which is based on

1 estimated costs to rebuild all overloaded transmission lines. Mr. Phillips justifies this by  
2 saying that it is likely that certain lines would need to be rebuilt rather than just be  
3 reconductored.<sup>8</sup> While it may be the case that some of the overloaded transmission lines  
4 would need to be rebuilt because of the age or condition of the transmission line  
5 structures, it is highly unlikely that all of these overloaded lines would need to be rebuilt.

6 Additionally, while the advanced age of the existing transmission line towers may  
7 increase the need to rebuild these towers in the process of reconductoring the line to  
8 increase its capacity, this advanced age also hastens the day when such transmission  
9 towers would have to be rebuilt regardless of whether or not Davis-Besse and Sammis  
10 were retired simply because the advanced age of such transmission lines makes them  
11 increasingly unreliable. In other words, some older transmission towers may need to be  
12 rebuilt regardless of whether these generating units retire. Typical transmission  
13 structures have service lives of 40-50 years or longer. Depending on the age of the  
14 transmission lines which FirstEnergy has identified as needing reinforcement in the event  
15 of plant retirements, some of those lines would likely need to be replaced anyways and,  
16 therefore, not all the costs of rebuilding such lines should or would be attributable to the  
17 retirement of the Davis-Besse and Sammis generating units. Mr. Cunningham and Mr.  
18 Phillips's analyses do not appear to address this issue.

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<sup>8</sup> Phillips Supplemental Testimony 8:3-6.

1 **Q. Is there any indication that any of the transmission lines that require reinforcement**  
2 **in Mr. Cunningham and Mr. Phillips' estimates may already be slated for**  
3 **reinforcement by PJM?**

4 A. [REDACTED] PJM maintains transmission construction status databases for projects throughout  
5 the region.<sup>9</sup> The "baseline upgrades" database includes projects that "resolve a system  
6 reliability criteria violation."<sup>10</sup> The "network upgrades" database includes projects that  
7 are "new or upgraded facilities required primarily to eliminate reliability criteria  
8 violations caused by proposed generation, merchant transmission or long term firm  
9 transmission service requests, but can also include certain direct connection facilities  
10 required to interconnect proposed generation projects."<sup>11</sup>

11 [REDACTED]

12 [REDACTED]

13 [REDACTED]

14 [REDACTED]

15 [REDACTED] While there could be different types of  
16 reinforcements being performed at different times or on different portions of each of  
17 these 138 kV circuits, [REDACTED]

18 [REDACTED].

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<sup>9</sup> <http://www.pjm.com/planning/rtep-upgrades-status/construct-status.aspx>

<sup>10</sup> *Id.*

<sup>11</sup> *Id.*

<sup>12</sup> See Phillips Confidential Workpapers.



1 **Q Do we have a reliable estimate of how much of the transmission reliability costs**  
2 **would be borne by the Companies' ratepayers?**

3 **A** No. Mr. Phillips concludes that:

4 It is difficult to predict how the costs of projects necessitated by the  
5 retirements of Sammis and Davis-Besse would be allocated among  
6 customers. This is because the ultimate combination of new facilities and  
7 re-conducted or rebuilt existing facilities that will be determined by PJM  
8 and transmission owners is unknown. What we do know, however, is that  
9 customers of the Companies, as well as other Ohio customers, will bear  
10 some of the costs.<sup>13</sup>

11 He states that 82% of the costs from a previous set of upgrades were allocated to the  
12 Companies' ratepayers. In her second supplemental testimony, Ms. Mikkelsen carries  
13 this forward, assuming that 82% of any future upgrades would be paid by the Companies'  
14 ratepayers.<sup>14</sup> However, no basis is provided for whether or why FirstEnergy ratepayers  
15 would be responsible for this proportion of future upgrade-related costs.

16 **Q If the Sammis units or Davis-Besse retired, would reliability problems arise?**

17 **A** Not necessarily. For one thing, PJM has a well-established generation deactivation  
18 process that is designed to ensure that transmission reliability issues that could arise if a  
19 generating unit is proposed for retirement are addressed before any such retirement  
20 occurs. This process was described in a 2012 order issued by the Federal Energy  
21 Regulatory Commission ("FERC"). As FERC explained:

22 The deactivation of generating units in the PJM region is governed by Part V of  
23 the PJM Open Access Transmission Tariff (PJM Tariff).[] According to these  
24 provisions, a generation owner must provide PJM with notice of its intent to  
25 deactivate a unit at least 90 days prior to the unit's proposed deactivation date.  
26 PJM will then study the transmission system to determine if the proposed  
27 deactivation could adversely affect system reliability and will then notify the

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<sup>13</sup> Supplemental Testimony of Rodney Phillips, p.10, lines 6-11.

<sup>14</sup> See Second Supplemental Testimony of Eileen Mikkelsen, Attachments EMM-1, EMM-2; *id.* at pp. 7:1 to 8:16.

1 generation owner within 30 days of the specific reliability concerns and provide  
2 an estimate of the period of time needed to construct needed transmission  
3 upgrades.[]

4 The generation owner has a right to deactivate a generating unit, following timely  
5 notification to PJM, even if PJM determines that there are reliability concerns.  
6 However, the generation owner may elect to continue to operate the unit past its  
7 planned deactivation date to maintain system reliability pending the completion of  
8 necessary transmission system upgrades. If the generation owner chooses to  
9 continue to operate the unit, it is entitled to file a cost-of-service recovery rate  
10 with the [Federal Energy Regulatory] Commission in order to recover the entire  
11 cost of operating the unit beyond its proposed deactivation date.[]<sup>15</sup>

12  
13 If a generation owner agrees to keep the unit operating, the owner will typically enter into  
14 a Reliability Must Run (“RMR”) contract with PJM that subsidizes the continued  
15 operation of the unit until the necessary transmission projects are finished. Generating  
16 units within PJM, including some FirstEnergy units, have availed themselves of this  
17 process and, presumably, FirstEnergy Solutions would do so here if the company decided  
18 at some future time to retire any of the Sammis or Davis-Besse units.<sup>16</sup>

19 **Q Does this conclude your testimony?**

20 **A** Yes, it does. However, I reserve the right to update or supplement my testimony based on  
21 new information that may become available.

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<sup>15</sup> *Order Accepting and Suspending Tariff Filing, Subject to Refund and Establishing Hearing and Settlement Procedures*, Docket No. ER12-1901-000, 140 FERC ¶ 61080, ¶¶ 2-3 (July 31, 2012) (citing PJM Tariff, Part V, *Generator Deactivation* §§ 113, 113.2, 119), available at <http://www.ferc.gov/CalendarFiles/20120730174209-ER12-1901-000.pdf>.

<sup>16</sup> Updated lists of plants that have deactivated, proposed deactivation, or withdrawn deactivation requests, the status of those proposals, and a summary of PJM’s reliability determinations for such requests, can be found at <http://www.pjm.com/planning/generation-deactivation/gd-summaries.aspx> (last visited May 11, 2015). Ashtabula 5, Eastlake 1-3, and Lake Shore 18 – all FirstEnergy units – were the subject of an RMR arrangement. *See Generator Deactivations*, available at <http://www.pjm.com/~media/planning/gen-retire/generator-deactivations.ashx> (April 16, 2015) (last visited May 11, 2015); *see also* SC Set 7-RPD-122 Attachment 1 (excerpt attached as Exhibit PJL-4).

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