

## Office of the Ohio Consumers' Counsel

Your Residential Utility Consumer Advocate

Janine L. Migden-Ostrander Consumers' Counsel

January 10, 2011

Renee Jenkins Secretary Public Utilities Commission of Ohio 180 East Broad Street Columbus, Ohio 43215

Re: FirstEnergy Case Nos. 09-951-EL-EEC, 09-952-EL-EEC, and 09-953-EL-EEC

Dear Secretary Jenkins:

On January 6, 2011, the Office of the Ohio Consumers' Counsel ("OCC") and the Natural Resources Defense Council ("NRDC") filed a Second Motion for Hearing with the Public Utilities Commission of Ohio. OCC and NRDC also filed a Motion for Protective Order on that same day, seeking protection for information contained in the Second Motion for Hearing that FirstEnergy deems to be confidential. Attachments to the Second Motion for Hearing were inadvertently omitted from the filing.

The omitted attachments to the Second Motion for Hearing are being filed with this letter. Some of the attachments contain information that is the subject of protective agreements between the Applicants and Movants. Accordingly, a redacted version of the attachments is being publicly filed, and an unredacted confidential version of the attachments is being filed under seal today. A Supplemental Motion for a Protective Order with regard to the information in the attachments claimed by FirstEnergy to be confidential accompanies the filing of the attachments.

Please file the enclosed attachments, which are to be intended to be attachments to the Second Motion for Hearing.

Thanks.

Jeffrey L. Small

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cc: Parties of Record (served as described in the Motion for Protective Order)

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# ATTACHMENTS TO SECOND MOTION FOR HEARING PUBLIC VERSION

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These settings are periodically reviewed and modified as appropriate to improve capacitor utilization and voltage regulation. In addition to automatic controls, the Transmission System Operators have the ability to force these banks on or off manually via SCADA control.

e. The capacitor controls described above are designed so that the capacitors will be on during peak periods (when losses are generally higher) and off during light load periods (when losses are generally lower). However, during these lighter load periods, the capacitors may be utilized to support the system during scheduled maintenance outages of generation and transmission equipment. Therefore, based on this controlled utilization of the capacitor banks during varying load and scheduled outage periods, the previously described systemwide loss factor is utilized to determine loss savings associated with capacitor projects.

# INT-16. Referring to the projects discussed in the Exhibits C, D, and E of the Company's Application for T&D Projects:

- a. Which projects were installed to enhance transmission or distribution reliability due to load growth in specific services areas served by the Companies?
- b. Of the projects that were installed to enhance reliability due to load growth, which projects would be delayed or canceled if there is less load growth (i.e. Identify the projects)?
- c. Of the projects that were installed to enhance reliability due to load growth, which projects would be delayed or canceled if there is less energy savings (i.e. Identify the projects)?
- d. If the value of system losses were set at \$0 per kWh, what would be the evaluation of the projects accordance with the Total Resource Cost test?

#### RESPONSE:

Objection. This Request is vague, ambiguous, and seeks information that is not reasonably calculated to lead to the discovery of relevant information. Requests b through d pose

hypothetical questions and assume facts not in the record. Without waiving these objections, the Companies state:

### Distribution:

- a. All distribution projects, with the exception of the Crestwood Transformer, were installed because of anticipated load growth or current overloading of the system equipment, which resulted in energy savings.
- b. The projects listed on Exhibits C, D and E of the Companies' Application have already been completed. The Companies will not speculate on which projects would have been delayed or canceled if there were less load growth.
- c. The projects listed on Exhibits C, D and E of the Companies' Application have already been completed. The Companies will not speculate on which projects would have been delayed or canceled if there were less energy savings.
- d. The loss savings is not valued at \$0 per kWh. The Companies will not speculate on what the evaluation of the projects in accordance with the Total Resource Cost would have been if the value of system losses were set at \$0/kWh.

#### Transmission:

- a. All of the transmission projects submitted in the filing were installed to meet the planning criteria of the Companies and NERC, which details thermal and voltage limits that must be met at forecasted peak load under normal and contingency conditions. The installation of these transmission projects resulted in energy savings. Some of the factors that can impact the need for a project include system load growth, generation dispatch and anticipated system-wide transfers
- b. The projects listed on Exhibits C, D and E of the Companies' Application have already been completed. The Companies will not speculate on which projects would have been delayed or canceled if there were less energy savings.
- c. The projects listed on Exhibits C, D and E of the Companies' Application have already been completed. The Companies will not speculate on which projects would have been delayed or canceled if there were less energy savings.
- d. The loss savings is not valued at \$0 per kWh. The Companies will not speculate on what the evaluation of the projects in accordance with the Total Resource Cost would have been if the value of system losses were set at \$0/kWh.

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INT-17. What planning studies or criteria were used to determine the economic conductor size, based on construction costs and line losses, for both transmission and distribution projects (i.e. Identify the study and the origin of criteria used)?

#### RESPONSE:

Objection. This Request is vague, ambiguous, and seeks information that is not reasonably calculated to lead to the discovery of relevant information. Without waiving these objections, the Companies state that, with respect to distribution projects, a study was performed that considered the cost of losses, anticipated contingencies, impact on inventories of conductors, splices, clamps and fittings, and availability of tools and dies. With respect to transmission, the Companies determine the minimum size of the conductor that is required for a project based on studies looking five to ten years into the future. Given the high cost of mobilization and the difficult logistics associated with any new line or reconductor project, and given that the incremental cost of larger wire is minimal compared to the overall cost of the project, the Companies will generally install the largest conductor that can be accommodated without having to significantly increase the cost associated with the larger/stronger structures needed to support the conductor.

### **INT-18.** Regarding the evaluation of life cycle loss of transformers:

- a. What is the methodology and criteria used in the procurement of substation power transformers to evaluate the life cycle loss?
- b. What are the load factor, loss factor, and line losses (valued in present dollars) used in the analysis?
- c. How does the life-cycle loss evaluation methodology or criteria used in the purchase of substation power transformers differ from the methodology described in Exhibit B of the Application for T&D Projects?

#### RESPONSE:

Objection. This Request is vague, ambiguous, unduly burdensome, and seeks information that is not reasonably calculated to lead to the discovery of relevant information. Without waiving these objections, the Companies state:

- a. The Companies generally purchase substation power transformers based first on cost. However, if quotes are similar from several vendors, life cycle loss cost may be used in making the final determination of which transformer to purchase. Total life cycle loss costs are determined by multiplying the loss factors (see response below) against the loss values provided by the vendor.
- b. The life time loss costs used in transformer evaluation are:
   No Load Losses = \$2,900/KW
   Load Losses = \$1,400/KW
   Auxiliary Load Losses (Fans, etc.) = \$700/KW
- c. The method for determining loss savings associated with transmission projects as described in Exhibit B uses loss reduction values determined using power flow modeling and transformer nameplate to determine loss reductions across the system as a result of a transformer installation or upgrade. The method described in a. above is used in evaluation of transformer procurement and may be used as a factor in the selection process. The two methods are used for entirely different purposes and are not related.
- INT-19. Referring to Exhibit E, page 3 of 3, of the Application for T&D Projects, where the Companies have cited the replacement of the failed 138kV to 13.8 kV 30 MVA as an energy efficiency project:
  - a. What are the substation transformers, larger than 10 MVA base rating, that were replaced for any reason between 2006 and 2009?
  - b. What are the values for impedance, no loads, and full load losses of the units for each transformer that was replaced?
  - c. What are the values for the impedance, no loads, and full load losses of the units for each replacement transformer?
  - d. What were the year of replacement and the peak electrical load on the transformer in the year that each transformer was replaced?

#### RESPONSE:

Objection. This Request seeks information that is not reasonably calculated to lead to the discovery of relevant information. This Request is also unduly burdensome.

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INT-20:

What is the Loss Factor and Load Factor used for each project referenced in

Exhibits C-F of the Application for T&D Projects?

#### RESPONSE:

**Transmission** 

Loss Factor = .423

Load Factor = .642

**Distribution** 

Loss Factor = .312

Load Factor = .511

INT-21:

Referring to Exhibit C of the Application for T&D Projects, how was the loss

factor for the transmission projects determined?

**RESPONSE:** 

See Response to INT-12.

INT-22: Referring to the OE-Southington Exit Reconductor project on page 1 of Exhibit E of the Application for T&D Projects (which called for the replacement of a 3/0ACSR conductor with 336 ACSR conductor), what are the standard wire sizes and types (e.g. 4/0 ACSR, 336 ACSR, 477 ACSR, etc.) used by Ohio Edison for new or rebuilt distribution lines, operating at the same voltage, for the service area in and around Southington Substation?

#### RESPONSE:

Objection. This Request is vague, ambiguous, and seeks information that is not reasonably calculated to lead to the discovery of relevant information. Without waiving these objections, the Companies state that the standard wire sizes and types used by Ohio Edison Company are: 636 AAC, 556.5 AAC, 477 ASCR, 336.4 AAC, 1/0 ACSR, #4 ACSR,795 AAC.