

COMMENTS OF LANCE TRAVES – LABYRINTH MANAGEMENT GROUP, INC.

BEFORE THE PUBLIC UTILITIES COMMISSION OF OHIO

Submitted Electronically November 19, 2012

In the matter of the Application of the)
Commission’s Review of Chapter 4901:1-22,)
Ohio Administrative Code, Regarding) **Case No. 12-2051-EL-ORD**
Interconnection Services)

In response to the Public Utilities Commission of Ohio’s (“the PUCO’s”) request for comments on proposed changes to existing Ohio electric interconnection rules in the Ohio Administrative Code (OAC) Chapter 4901:1-22 Labyrinth Management Group, Inc. (LMG) is pleased to provide the following important comments. LMG is an environmental and energy consulting firm in Medina, Ohio. Mr. Lance Traves, President and Owner of LMG, is an Ohio Edison customer as the owner of 239 South Court Street and 4096 Sacramento Blvd in Medina.¹ In addition, LMG has direct experience on the interconnection of large industrial distributed energy projects in Ohio involving Midwest ISO, PJM, First Energy (“FE”), and the American Transmission Systems, Inc. (“ATSI”).

Mr. Traves with LMG is also an Advisory Board member of the Energy Ohio Network (EON). EON is a not-for-profit organization focused on bringing together Ohio’s energy “practitioners” – including citizens, businesses, and organizations – to actively help Ohio realize the full benefit of the current energy opportunities to revitalize and strengthen our economy. Required changes to the existing Ohio electric interconnection rules in the Ohio Administrative Code (OAC) Chapter 4901:1-22 will be an important first step PUCO can take to the realization of this tremendous opportunity for Ohio.

Our comments on the existing Ohio electric interconnection rules and PUCO’s proposed changes are specifically discussed below. For purposes of clarity we have organized these comments by topic and/or regulatory section.

- 1. The definition in 4901:1-22-01(D) of “Backup electricity supply” is overly general and should be further detailed by PUCO into separate components to ensure the full and proper consideration and review by PUCO of each EDU cost component and tariff that is associated with the provision of electricity for distributed energy projects.**

Onsite generation projects require a range of different electricity services including continuing electricity service for the portion of amount of usage that is not provided by the onsite generator, as well as electricity service for periods of scheduled or unscheduled outages by the onsite generator.² The provision and cost of these different electricity services will have varying adverse impacts on

¹ Account No. 110 009 782 464 assigned to Leslie Traves (wife) at 4096 Sacramento Blvd in Medina, Ohio
Account No. 110 034 321 205 assigned to Leslie Traves (wife) at 239 South Court Street in Medina, Ohio

² See USEPA’s report “Standby Rates for Customer-Sited Resources Issues Considerations and the Elements of Model Tariffs” pgs 4-5, dated December 2009

distributed electricity projects. Therefore, PUCO's definition of "Back-up electricity supply" is overly broad and does not appear to provide PUCO with the basis for specific detailed regulatory actions to reduce the adverse impacts associated with the provision of a "Back-up electricity supply."

LMG requests that PUCO implement rule changes such that the definition of "Back-up electricity supply" is modified to include the following components as defined by USEPA:

- Supplemental Service. Supplemental service provides additional electricity supply for customers whose onsite generation does not meet all of their needs.
- Backup Service. Backup or standby service supports a customer's load that would otherwise be served by the EDU during unscheduled outages of the onsite generation.
- Scheduled Maintenance Service. Scheduled maintenance service is required when the customer's onsite generator is due to be out of service for routine maintenance and repairs.³

These separate and distinct forms of "Back-up electricity supply" has distinct requirements and impacts on the EDU, including significantly reduced adverse impacts and costs depending on the amount and design of distributed energy projects. For example, because this Scheduled Maintenance Service can be scheduled for nonpeak times, provision of this Back-up electrical supply creates little or no additional or marginal costs to the EDU system, and EDU tariffs should be structured by PUCO to exempt the distributed energy projects from capacity-related costs (e.g., reservation charges or ratchets, for either generation or delivery) for Scheduled Maintenance Service.

2. The interconnection of generating equipment that qualifies for Level 1 simplified review should not be reduced to 10 kilowatts but maintained at a minimum of 30 kilowatts to allow these micro distributed energy projects to use the "short form" application.

The PUCO's proposed reduction in the size of the interconnection of generating equipment that qualifies for Level 1 simplified review to 10 kilowatts will have a significant adverse impact on distributed micro residential and commercial energy projects. The increased costs associated with interconnection using the Level 2 procedures would corresponding reduce the installation of these projects. LMG estimated that more than 50% of the commercial, non-profit, and governmental solar electric projects have exceeded the 10 kilowatts size in the past 4 years. However, the majority of these projects were less than 30 kilowatts in size.

The actual additional fees for Level 2 review will be based on uncertain EDU costs and these uncertainties will create additional barriers to construction of these micro distributed energy projects. Based on LMG's experience, EDU interconnection study costs are not restrained by private sector competition and, therefore, are often not reasonable and justified. However, the current PUCO

³ See USEPA's report "Standby Rates for Customer-Sited Resources Issues Considerations and the Elements of Model Tariffs" pgs 4-5, dated December 2009

regulations allow these unreasonable and unjustified to be passed onto the customer generation project without customer recourse. For a fair and unbiased interconnection process, PUCO must provide clear and reasonable justification for reducing the size of projects eligible for Level 1 review from 50 kilowatt to 10 kilowatt.

3. **All EDU interconnection costs generated by Level 1, Level 2, or Level 3 interconnection review process must include providing the details of those costs to the customer to ensure transparency and the provision of reasonable and fair interconnection costs to customers.**

PUCO's existing regulations do not currently require EDUs to provide to customers a detailed itemization of estimated interconnection costs. These detailed items would include capital equipment costs, equipment installation costs, and the EDU's design and engineering costs.

Based on LMG's experience, EDUs fail to provide sufficient detail on the basis of these interconnection costs for the customer or PUCO to be able to determine if those costs are fair and reasonable. As a result, EDUs have limited incentive to provide the interconnection services at a fair and reasonable cost to the customer. Furthermore, customers are limited in the ability to obtain private quotes for interconnection services that include new equipment and construction because of the limited information provided by the EDUs.

4. **Area Network Impact Study fees specified for Level 1 interconnection must include a maximum fee of \$1,000 to be fair and reasonable. All EDU interconnection costs generated by Level 1, Level 2, or Level 3 interconnection review process must include providing the details of those costs to the customer to ensure transparency and the provision of reasonable and fair interconnection costs to customers.**

PUCO's revision of the Level 1 application provides that any "area network study shall be conducted at the customer's expense" without specifying a potential maximum fee. This proposed change will result in uncertainties to micro distributed energy projects and is not fair and reasonable to customers. MISO procedures for interconnection of generators into the regional transmission and local distribution grid only require a maximum fee of \$5000 for a regional transmission Feasibility Study. Therefore, PUCO should work with EDUs to formulate a maximum cost of this area network impact study to customers. LMG believes that EDUs should provide PUCO with a detailed cost justification for potential maximum study fees for Level 1 applications that would exceed a cost of \$1,000.

5. **The interconnection of generating equipment that qualifies for Level 2 review should be increased to 6 megawatts to allow for a potential large number of single site combined heat and power (CHP) energy projects to use the streamlined expedited procedure.**

PUCO's proposed changes have not increased the maximum size of the interconnection of generating equipment that qualifies for Level 2 review from the existing 2 megawatts or less. However, this low threshold of 2 megawatts is not a fair or reasonable standard for the significantly less complex interconnection process associated with a potential single site combined heat and power (CHP)

projects that will likely exceed the 2 megawatt threshold but still have a relatively standard interconnection footprint. In addition, these projects do not typically have interconnection on a transmission line so would otherwise be eligible for the Level 2 process. Therefore, PUCO should increase the Level 2 simplified interconnection process to projects that have a nameplate capacity of 6 megawatts or less. The 6 megawatt capacity threshold also corresponds to natural gas turbine sizes that are readily available and cost-effective for the smaller CHP projects.

In approving this increase, PUCO will be recognizing the level of increased electrical equipment standardization and interconnection expertise that has occurred during the past 4 to 5 years. Furthermore, this change will allow smaller CHP projects at hospitals, universities, and other building campuses to take advantage of the Level 2 procedures. Finally, under the Level 2 process, EDUs still have the ability to require additional interconnection studies, if required for the larger projects not to exceed 6 megawatts. As a result, EDUs are not adversely impacted by this proposed increase.

6. Level 2 interconnection study fees should include a maximum fee of \$40,000 to be fair and reasonable.

PUCO's proposed revisions should include a maximum limit for Level 2 application processing fees in the amount of \$40,000. To allow EDUs to bill customers blanket "actual costs as incurred" will result in EDU inefficiencies, lack of accountability and significant adverse cost impacts to smaller energy projects that the Level 2 process is designed to assist. A maximum interconnection cost also reduces uncertainty in project financial planning which can only have a positive impact on increasing the construction of distributed energy projects.

Again, MISO procedures for interconnection of 6 MW and smaller generators into the regional transmission and local distribution grid only require a maximum fee of \$40,000 to fund "Definitive Planning." This planning would include evaluation of system impacts and preparation of a Facility Study detailing required interconnection equipment. LMG believes that EDUs should provide PUCO with a detailed cost justification for potential maximum study fees for Level 2 applications that would exceed a maximum cost of \$40,000. In no case should PUCO allow EDUs to charge interconnection customers fees that are not based on detailed itemized labor and equipment charges. In addition, all interconnection fees should be reasonable, appropriate, and in accordance with general industry practices and costs.

As discussed above, existing interconnection regulations do not currently require EDUs to provide to customers a detailed itemization of estimated interconnection costs. These detailed items would include capital equipment costs, equipment installation costs, and the EDU's design and engineering costs. A PUCO requirement for EDUs to provide this additional information to customers would not result in an additional burden to the EDUs. This information must already be generated by the EDUs to produce the EDUs estimated interconnection cost.

7. Level 3 interconnection study fees should include a maximum fee of \$55,000 to be fair and reasonable.

PUCO's proposed revisions should include a maximum limit for Level 3 application processing fees in the amount of \$55,000. As discussed above, to allow EDUs to bill customers blanket "actual costs as incurred" will result in EDU inefficiencies, lack of accountability and significant adverse cost impacts to smaller energy projects that the Level 3 process is designed to assist. A maximum interconnection cost also reduces uncertainty in project financial planning which can only have a positive impact on increasing the construction of distributed energy projects.

Again, MISO procedures for interconnection of 6 MW and smaller generators into the regional transmission and local distribution grid only require a maximum fee of \$55,000 to fund all generator interconnection studies from the Feasibility Study through "Definitive Planning." This planning would include evaluation of system impacts and preparation of the Facility Study detailing required interconnection equipment. LMG also believes that EDUs should provide PUCO with a detailed cost justification for potential maximum study fees for Level 2 applications that would exceed a maximum cost of \$40,000. In no case should PUCO allow EDUs to charge interconnection customers fees that are not based on detailed itemized labor and equipment charges. In addition, all interconnection fees should be reasonable, appropriate, and in accordance with general industry practices and costs.

As discussed above, existing interconnection regulations do not currently require EDUs to provide to customers a detailed itemization of estimated interconnection costs. These detailed items would include capital equipment costs, equipment installation costs, and the EDU's design and engineering costs. A PUCO requirement for EDUs to provide this additional information to customers would not result in an additional burden to the EDUs. This information must already be generated by the EDUs to produce the EDUs estimated interconnection cost.

The electricity market and Ohio's electricity generation interconnection conditions have standardized significantly in the past year and is expected to continue standardizing in the upcoming 2 to 3 years. This results from ongoing technology developments, Ohio legislative changes, and Federal Energy Regulatory Commission (FERC) rulings. Increasing standardization should work to keep EDU costs down as long as PUCO requires transparency and customer review.

8. PUCO has not addressed required changes to EDUs provision of Back-up electricity supply to distributed energy project interconnection customers that will result in fair, reasonable, and technically justified EDU charges for Back-up electricity.

PUCO proposed changes have failed to address EDU "Back-up electricity" that include the three components identified above and represent tremendous cost barriers to new distributed electrical generation by cleaner renewable waste heat co-generation and Advanced Energy Combined Heat and Power ("CHP"). These two distributed generation technologies have been recognized by Ohio Governor Kasich and Ohio legislators by the passage of Senate Bill 315 as important components of Ohio's energy future.

PUCO's own website provides a dramatic map of the large number of potential electrical co-generation and CHP projects in Ohio.⁴ Based on changes enacted under SB 315 and future actions by PUCO on FE's and other IOUs Demand/Capacity/Standby Charges, these distributed electricity generation projects could result in more than 1,000 to 2,000 MWs of new onsite electricity generation in the next 3 years. This amount of electricity would not require PJM interconnection but still replace the balance of projected FE coal-fired power plant shutdowns. More importantly, the new generation would most likely reduce peak loads further benefiting Ohio consumers.

During a PUCO CHP workshop on March 9, 2012, Kim Wissman, PUCO's Director of Energy and Environment stated that PUCO has not studied or even compiled a summary of the Ohio IOU's Demand/Capacity/Standby Charges in their tariffs that would act as significant barriers to new electrical generation projects and true marketplace competition.⁵ As shown in Exhibit 1, the most recent Ohio Edison tariff that I could identify would result in a 25 MW industrial co-generation or commercial building CHP project paying a monthly demand charge of \$75,500 for total annual standby costs of \$906,000 for not even using any electricity.

Furthermore, industrial co-generation and larger CHP projects typically have uptimes ranging from 90% to 96%. So outage events are rare and mostly scheduled for these types of electrical generation units. Therefore, the Back-up charges currently approved by PUCO in Ohio simply act as windfall profits for EDUs.

9. PUCO should generate a library of the EDU "Back-up electricity supply" rates and charges for the public and elected officials to have transparency regarding these significant costs and distributed energy project developers to use in project financial planning.

According to PUCO, a summary of EDU rates and charges for "Back-up electricity supply" in Ohio is not available. Division (A) of section 4928.15 of the revised code requires EDUs to publish a service schedule of distribution service rates that are consistent with the state policy specified in section 4928.02 of the revised code. In addition, Division (K) of section 4928.02 of the revised code specifies the state policy is to "Encourage implementation of distributed generation across customer classes through regular review and updating of administrative rules governing critical issues such as, but not limited to interconnection standards, standby charges, and net metering." Based on these findings, LMG believes a PUCO's creation of a library of the EDU "Back-up electricity supply" rates and charges for public and elected officials to have transparency regarding these significant costs would clearly be in the "public interest." In addition, this information would reduce the time, level of effort, and cost for distributed energy project developers to evaluate project financials.

⁴ http://www.puco.ohio.gov/puco/assets/File/CHP_Technical_Potential.pdf

⁵ <http://www.puco.ohio.gov/apps/Webcast/viewer.cfm?recordID=131>

10. Current PUCO regulations on “Back-up electricity supply” that remain unchanged do not encourage implementation of distributed generation even when this approach is a significantly lower cost to Ohio consumers than the construction of new transmission and distribution systems to support centralized generation.

A number of recent studies and evaluation have identified existing PUCO regulations or more specifically the lack of regulation on Back-up electricity supply to be a major barrier to the implementation and construction of distributed energy projects in Ohio. A recent study conducted by Cleveland State University (CSU) for the Ohio Manufacturer Association (OMA) found that “Excessive Standby Rates Threaten Combined Heat and Power Generation.”⁶ Furthermore, the same CSU study found that Ohio does not currently have a state-wide policy on Back-up electricity supply including provision of supplemental, back-up, and schedule maintenance service.

Ohio’s current A review of the published distribution tariffs of AEP Columbus Southern, Duke Ohio, and First Energy Ohio Edison also clearly show that in several cases the existing standby service tariffs do not encourage implementation of distributed generation. According to a study of the Duke Ohio Tariffs conducted by Fosdick & Hilmer, Inc. (FHI) and included in FHI comments provided for this case, EDU distribution rates increase when a customer reduces its utilization of the distribution system by installing distributed generation.⁷

This same scenario is also present at the FDS Coke Plant 135 Megawatt cogeneration electrical power plant proposed in Toledo, Ohio. Under existing PUCO regulations, the estimated EDU costs associated with the provision of back-up electrical supply and demand charges for approximately 12 to 15 MWs of onsite electricity needed for the non-recovery coke plant eliminates any savings provided by using FDS generated power. Luckily for the FDS Project, the cogeneration power plant’s power not used onsite will simply result in incrementally more power sold to the regional grid.

The PUCO backup electricity supply requirements should address this issue and require that EDUs only charge fair and reasonable back-up electricity supply fees that are proportional to the amount of burden these projects actually place on EDUs. More specifically, PUCO should undertake the necessary regulatory changes to demand and back-up electricity supply fees to ensure that avoided energy costs for Ohio distributed energy projects exceed 90% of the full service retail rate. US DOE recently identified the 90% avoided energy cost threshold as necessary to provide adequate financial savings to customers to build CHP distributed energy projects.⁸ Only then will Ohio electricity consumers reap the benefits of reduced transmission and distribution costs from EDUs when additional distributed energy projects are built in Ohio.

⁶ See the report “An Analysis of Electricity Policy and Its Economic Effects on Ohio Manufacturing” dated July 2012 prepared by Cleveland State University, Center for Economic Development for the Ohio Manufacturers Association.

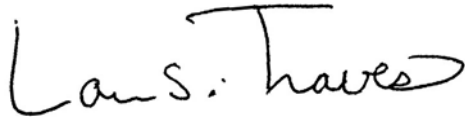
⁷ See Comment Letter from Mr. James Landers with Fosdick & Hilmer, Inc. dated November 8, 2012 filed in PUCO Case 12-2051-EL-ORD

⁸ See report on “Iowa On-Site Generation Tariff Barrier Overview” prepared by the US Department of Energy – Midwest Clean Energy Application Center and dated April 12, 2012.

CONCLUSIONS

In conclusion, I respectfully request PUCO to review and incorporate these comments on the proposed PUCO changes to existing Ohio electric interconnection rules in the OAC Chapter 4901:1-22. I also request as part of these comments that PUCO initiate a new case related to revisions to the existing Back-up electricity supply provisions contained in or related to Ohio Revised Code Section 4928.15.

Respectfully submitted,

A handwritten signature in dark ink that reads "Lance S. Traves". The signature is written in a cursive style with a large, stylized "L" and a long, sweeping underline.

Lance S. Traves
President
Labyrinth Management Group, Inc.
239 South Court Street
Medina, Ohio 44256
330-764-4825

Attachment: Exhibit 1

Cc: Energy Ohio Network

Exhibit 1: Except on Ohio Edison Demand (Standby) Charge Effective January 2, 2003.

Ohio Edison Company Original Sheet No. 24

Akron, Ohio P.U.C.O. No 11 Page 3 of 7

Filed pursuant to Order dated July 19, 2000, in Case No. 99-1212-EL-ETP before

The Public Utilities Commission of Ohio

Issued by H. Peter Burg, President Effective: January 1, 2003

Rate:

Administrative Charge

\$ 47.70 per month.

Backup Capacity Reservation Charge and Daily Backup Power:

The demand charges for Backup Capacity reserved and for Daily Backup Power taken shall be per the voltage level the customer is served as follows.

Backup Capacity Generation	Reservation Charge per Month	Voltage Level Transmission & Distribution
Secondary Voltage, per kW	\$3.02	\$1.19
Primary Voltage, per kVA	\$2.73	\$1.15
23 & 34.5 kV, per kVA	\$2.27	\$1.12
69 kV, per kVA	\$1.94	\$1.12
138 kV, per kVA	\$1.34	\$1.10

-----Daily Backup Power-----

Maximum Charge:

The maximum billing period charge under this rider shall be limited such that the customer cannot be charged more than if his entire load and energy was billed under the Otherwise Applicable Rate Schedule for that billing month plus the Administrative Charge of this rider.

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in

Case No(s). 12-2051-EL-ORD

Summary: Comments Comments of Labyrinth Management Group, Inc. and Mr. Lance Traves on PUCO Proposed Changes to OAC 4901:1-22 electronically filed by Mr. Lance S Traves on behalf of Labyrinth Management Group, Inc.