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**BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO**

In the Matter of the Complaint of Gerald	)	Case No. 07-498-EL-CSS
Giesler, Complainant v. Toledo Edison	)	
Company, Respondent.	)	
	)	
In the Matter of the Complaint of Lester	)	Case No. 07-514-EL-CSS
L. Lemke, Complainant v. Toledo Edison	)	
Company, Respondent.	)	
	)	
In the Matter of the Complaint of Brian A.	)	
and Christy G. Malott, Complainant v.	)	Case No. 07-525-EL-CSS
Ohio Edison Company, Respondent.	)	

**DIRECT TESTIMONY
of
DANIEL J. SAWMILLER**

**ON BEHALF OF THE
OFFICE OF THE OHIO CONSUMERS' COUNSEL**
10 West Broad St., Suite 1800
Columbus, OH 43215

October 7, 2009

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TABLE OF CONTENTS

	<u>Page</u>
I. INTRODUCTION	1
II. PURPOSE OF TESTIMONY	4
III. THE NATURE OF THE COMPLAINTS	5
IV. CONCLUSION	19

1 **I. INTRODUCTION**

2 ***Q1. PLEASE STATE YOUR NAME, BUSINESS ADDRESS AND POSITION.***

3 ***A1.*** My name is Daniel J. Sawmiller. My business address is 10 West Broad Street,
4 Suite 1800, Columbus, Ohio, 43215. I am employed by the Office of the Ohio
5 Consumers' Counsel ("OCC" or "Consumers' Counsel") as a Regulatory Analyst.

6
7 ***Q2. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND***
8 ***PROFESSIONAL EXPERIENCE.***

9 ***A2.*** While attending college, I served as a 21B, combat engineer, in the 612th
10 Engineering Battalion and the 37th Infantry Brigade of the Ohio Army National
11 Guard from December 2000 through December 2006, including a tour in
12 Baghdad, Iraq in support of Operation Iraqi Freedom phase III from October
13 2004-February 2006 where I operated a .50 caliber machine gun for an
14 Improvised Explosive Device disposal team under Task Force Iron Claw. In
15 December 2006, I received a Bachelor's of Science degree from Bowling Green
16 State University in Finance. I have been employed by the OCC since July of
17 2007 working on issues related to energy efficiency and renewable energy
18 following the passage of Senate Bill 221.

19
20 Since being hired at OCC as a Regulatory Analyst, a member of the Analytical
21 Services department, I have been a member of the Resource Planning Team, the
22 Electric Industry Team, and the Gas Industry Team. While participating on these
23 teams, I have been involved in a number of gas and electric cases before the Public
24 Utilities Commission of Ohio ("PUCO" or "Commission") in a research and team

1 support and/or lead capacity. I provided assistance in preparing testimony presented
2 by the Ohio Consumers' Counsel, Ms. Janine L. Migden-Ostrander, before the Ohio
3 Legislature regarding Energy Efficiency ("EE") and Renewable Energy components
4 of House Bill 357, House Bill 487, and Amended Substitute Senate Bill No. 221
5 ("SB 221"). I participated in the PUCO's rulemaking process following the passage
6 of SB 221 by reviewing and drafting comments on the proposed rules. I represent
7 OCC on numerous Demand Side Management ("DSM") collaborative groups
8 including:

- 9 • Columbia Gas of Ohio ("COH") (Case No. 08-72-GA-AIR): This
10 collaborative helped design and evaluate potential demand side
11 management programs;
12
- 13 • American Electric Power ("AEP"): This collaborative is providing input
14 to AEP on proposed programs that will be used to meet benchmarks
15 established by SB 221 for energy efficiency and peak load reduction;
16
- 17 • The Duke Energy Community Partnership Collaborative ("DECP"): In
18 2008 this group evaluated DSM programs contained in Duke Energy-
19 Ohio's filing in Case No. 08-1227-EL-UNC and will continue to monitor
20 and provide feedback on programs used to meet SB 221 benchmarks;
21

- 1 • Dominion East Ohio (“DEO”) (Case No. 07-829-GA-AIR): This
2 collaborative is discussing how to spend Demand Side Management
3 dollars to offer conservation programs for Dominion customers.
4
- 5 • Vectren Energy Delivery of Ohio (“VEDO”): In February 2009, the
6 VEDO collaborative began meeting to discuss DSM programs offered by
7 VEDO.
8
- 9 • FirstEnergy (“FE”): Following FirstEnergy’s electric security plan, a
10 collaborative group was formed to discuss and provide comments on
11 energy efficiency and peak demand reduction programs as well as other
12 issues. A sub-group was also formed for residential customers of which I
13 am also a regular participant.
14
- 15 • Dayton Power and Light (“DP&L”): DP&L also began a collaborative
16 working group to discuss and comment on the energy efficiency, peak
17 demand reduction, and renewable energy programs to be offered by
18 DP&L in an effort to meet the benchmarks required in SB 221.
19

20 In August 2008, I attended the American Council for an Energy Efficient Economy
21 (“ACEEE”) summer study on Energy Efficiency in Buildings where leaders in the
22 Energy Efficiency and Demand Side Management areas presented white papers on

1 current and exemplary programs and technologies. I also represent the OCC by
2 attending quarterly meetings of the Ohio Wind Working Group as time permits.

3

4 ***Q3. HAVE YOU PREVIOUSLY SUBMITTED TESTIMONY BEFORE THE***
5 ***PUBLIC UTILITIES COMMISSION OF OHIO?***

6 ***A3.*** Yes, I submitted testimony in the Dayton Power and Light electric security plan,
7 Case No. 08-1094-EL-SSO.

8

9 ***Q4. WHAT DOCUMENTS HAVE YOU REVIEWED IN THE PREPARATION OF***
10 ***YOUR TESTIMONY?***

11 ***A4.*** I have reviewed the complaints, emails between complainants and the FirstEnergy
12 Companies, depositions, and discovery questions and responses. I have also
13 reviewed the interconnection and net metering rules and tariffs in place at the time
14 of the complaints and the current versions of each. I have reviewed customer
15 bills and other miscellaneous information as appropriate.

16

17 ***II. PURPOSE OF TESTIMONY***

18 ***Q5. WHAT IS THE PURPOSE OF YOUR TESTIMONY?***

19 ***A5.*** The purpose of my testimony is to (A) discuss the nature of the complaints; (B)
20 explain how FirstEnergy takes an ad hoc approach to servicing their
21 interconnection and net metering customers; (C) show how FirstEnergy's actions
22 are creating barriers for customers who are interested in doing their part to protect
23 the environment and attempting to lower their bills through generating their own

1 electricity; (D) discuss FirstEnergy's meter replacement policy; and (E) provide
2 recommendations to resolve these complaints.

3
4 **III. THE NATURE OF THE COMPLAINTS**

5 ***Q6. CAN YOU BRIEFLY DESCRIBE EACH COMPLAINT?***

6 ***A6.*** In June of 2005, Gerald Giesler installed a 17.5KW Wind Turbine with a Jacobs
7 mastermind inverter after a greater than 20 year desire to generate his own energy
8 using wind as the resource.¹ Mr. Giesler and FirstEnergy signed an
9 interconnection agreement and a net energy metering rider agreement. That
10 agreement was later revoked by FirstEnergy. Mr. Giesler believes his turbine is
11 operating safely and that the technical requirements for interconnection and net
12 metering should be waived or grandfathered in order to have his turbine
13 considered as complying with state regulations. Mr. Giesler would like an
14 approved interconnection agreement signed by FirstEnergy as well as a signed net
15 energy metering rider agreement to net meter the production from his turbine.
16 Mr. Giesler also has concerns about the need for a "bi-directional" meter that has
17 been installed at his residence and also questions the accuracy of that meter.

18
19 Lester Lemke purchased the same 17.5KW turbine and inverter as Mr. Giesler
20 from the same vendor. Mr. Lemke had talked with Mr. Giesler about the turbine
21 and since Mr. Giesler had not experienced issues at the time in regard to
22 interconnection and net metering, and was satisfied with the production from the

¹ October 2, 2009 deposition of Gerald Giesler pages 9-10 attached as Exhibit DJS-1.

1 turbine, Mr. Lemke decided to make the purchase. Mr. Lemke and FirstEnergy
2 also signed an interconnection agreement and a net energy metering rider
3 agreement. That agreement was also later revoked by FirstEnergy. He does not
4 like the "bi-directional" meter that was installed by FirstEnergy and does not want
5 it. He also feels as if the credit for his net metering of the production is not a
6 decent amount and would like to be paid a fair price for the energy he is
7 producing. Finally, Mr. Lemke has been removed from an "all- electric" tariff
8 rate that was given to him when he made a decision to invest in an expensive
9 electric heating system for his home. This makes two times that Mr. Lemke has
10 relied on FirstEnergy to make significant investments related to his energy use
11 that have proven to him disadvantageous. Mr. Lemke believes the all-electric rate
12 should be reinstated or a credit should be given to him since he made the decision
13 to invest in the equipment based on that rate and that he should be able to obtain a
14 signed interconnection agreement with FirstEnergy as well as a signed net energy
15 metering rider agreement with FirstEnergy so that he is able to receive credits for
16 his excess generation.²

17
18 Brian and Christy Malott purchased the same style wind turbine and mastermind
19 inverter as the other two complainants. Given that other FirstEnergy customers
20 had purchased the same generator and mastermind inverter and had been
21 interconnected and allowed to net meter, the Malotts followed this same path.
22 Furthermore, the Malotts had done a significant amount of research to determine

² October 02, 2009 deposition of Lester Lemke pages 6-8 attached as Exhibit DJS-2.

1 that the Jacobs model was indeed safe, sturdy and reliable.³ The Malotts
2 contacted FirstEnergy Senior Engineer, Paul Gerber, to inquire about the
3 application process and they were told to get their system up and running and to
4 worry about the paperwork at that time.⁴ Subsequently, when the Malott's
5 contacted FirstEnergy to begin the application process but they were unable to
6 find anyone who could assist them in interconnecting or net metering. Several
7 FirstEnergy call center employees had no idea what the Malott's were talking
8 about, or even who to contact within the company that would be able to help. The
9 Malott's would like to see certain FirstEnergy interconnection and net metering
10 standards' technical requirements, Institute of Electric and Electronics Engineers
11 ("IEEE") 1547 standard, and Underwriter Laboratory ("UL") 1741 standard for
12 inverters, converters and controllers, waived or grandfathered so that they can
13 sign an interconnection agreement and a net energy metering rider agreement with
14 FirstEnergy and start receiving credits for their net production.

15
16 ***Q7. HAVE THE NET ENERGY METERING RIDER AND INTERCONNECTION***
17 ***APPLICATION REQUESTS AND SUBSEQUENT COMPLAINTS BEEN***
18 ***HANDLED IN A TIMELY MANNER?***

19 ***A7.*** No, according to multiple FirstEnergy employee responses to deposition questions
20 on the amount of time that it normally takes to approve an interconnection
21 agreement, these customers have not been dealt with in a timely manner at all.

³ October 2, 2009 deposition of Brian and Christy Malott pages 6-19 attached as Exhibit DJS-3.

⁴ October 2, 2009 deposition of Brian and Christy Malott pages 27-28 attached as Exhibit DJS-3.

1 Toledo Edison employee, Richard Reineck, responded that a normal application
2 might take a month or so.⁵ Another FirstEnergy employee, Paul Gerber,
3 confirmed this estimated length of time being between one or two months on
4 average.⁶ The issues involved in these complaint cases are currently in the range
5 of 2-5 years, not yet having found a near acceptable solution.

6
7 The interconnection and net metering rules and tariffs in place at the time of
8 construction, and in place today, have application timetables that were designed to
9 assure that applications are handled expeditiously. The tariffs, rules, and
10 applications are attached to my testimony as Exhibit DJS-6(A-F). The
11 FirstEnergy companies' actions in these complaint cases have resulted in grossly
12 neglecting the intent to have timely approval of these agreements.

13
14 **Q8. CAN YOU PROVIDE A BASIC TIMELINE OF EVENTS NARRATING WHY**
15 **IT HAS TAKEN SO LONG TO REACH A RESOLUTION?**

16 **A8.** Yes. Attached to my testimony as Exhibit DJS-7 is a timeline of correspondence
17 between FirstEnergy and the Malotts with a brief description of each
18 correspondence.⁷ This lengthy timeline of discussions between FirstEnergy and
19 the Malotts shows the poor customer service that FirstEnergy offers to its

⁵ Deposition of Richard Reineck on September 28, 2009 page 15 line 21 through page 16 line 8 attached as Exhibit DJS-4.

⁶ Deposition of Paul Gerber on September 28, 2009, pages 14-15 attached as Exhibit DJS-5.

⁷ Correspondence descriptions are summarized from emails between Brian and Christy Malott and FirstEnergy employees up to July of 2007.

1 residential distributed generation customers looking to interconnect and net meter
2 their systems.

3
4 ***Q9. DO YOU HAVE ANY CONCERNS ABOUT THE CUSTOMER SERVICE***
5 ***THAT FIRSTENERGY HAS PROVIDED FOR INTERCONNECTION AND***
6 ***NET METERING CUSTOMERS?***

7 ***A9.*** Yes. First, the customer service representatives were unable to contact a company
8 representative who was able to provide any assistance at all for months for the
9 Malotts. The Malotts had to make numerous phone calls and send multiple emails
10 to company representatives, eventually including Tony Alexander, President and
11 Chief Executive Officer of the FirstEnergy Companies, before any resolution
12 discussions started in earnest. This is unacceptable and clearly makes it difficult
13 if not impossible for customers to pursue the development of distributed
14 generation alternatives.

15
16 In addition to this, the proper company representatives were not at all timely in
17 returning the calls or providing the assistance that they had promised to the
18 Malotts multiple times.

19
20 ***Q10. DO YOU HAVE ANY CONFIDENCE THAT FIRSTENERGY WILL***
21 ***IMPROVE ITS CUSTOMER SERVICE TO ITS INTERCONNECTION AND***
22 ***NET METERING CUSTOMERS?***

23 ***A10.*** No. Given company responses to OCC discovery concerning “process
24 improvement,” it does not appear that FirstEnergy is collecting and therefore not

1 analyzing its net metering customer service data in an effort to improve their net
2 metering application process. For example, in FirstEnergy's response to OCC
3 interrogatory 22 asking how many customers have had their net metering
4 applications rejected since January of 2000, FirstEnergy states that they do not
5 track this information.

6
7 Tracking this information could highlight areas in the FirstEnergy companies' net
8 metering process that could be improved if many applications are being denied or
9 being submitted as incomplete applications. Responses to interrogatory questions
10 23 and 24, also regarding "process improvement," further show FirstEnergy's
11 lack of interest in improving customer service for net metering customers. These
12 interrogatories are attached as Exhibit DJS-8.

13
14 Furthermore, during depositions, each complainant stated that they believe
15 FirstEnergy is attempting to keep residential customers from being approved to
16 generate their own electricity. These characterizations were shared by each
17 complainant stating things such as; customer service representatives having no
18 idea what interconnection even was or who to contact, being unable to make
19 second contact with company representatives that were supposed to be assisting
20 them, and in the case of the Malott's, they were told their application was
21 incomplete as it was missing a net metering application. After multiple attempts,
22 the Malott's were never able to obtain an application for net metering in order to
23 complete the application process. The Malott's stated in their deposition that they
24 have gone so far as to tell other interested customers who had questioned them

1 about their system that they were “having problems, don’t go there yet, because
2 [they] didn’t want other people to have the same problems....”⁸

3
4 Finally, FirstEnergy’s current Net Energy Metering Rider application for Service,
5 attached as Exhibit DJS-6(E) states that “excessive generation by the Customer’s
6 generation facility, as determined solely by the Company, is cause for
7 disqualification for service under the Net Energy Metering Rider.” I have been
8 unable to find any law, rule, or otherwise that grants FirstEnergy this discretion
9 and this language is in opposition to state policy regarding net metering. The
10 rules regarding net metering simply state that a qualifying customer generator for
11 net metering is “one whose generating facilities are intended primarily to offset
12 part or all of the customer generator’s electricity requirements.”⁹

13
14 ***Q11. WHAT IS THE POLICY OF THE STATE WITH REGARDS TO***
15 ***DISTRIBUTED GENERATION AND RENEWABLE ENERGY?***

16 ***Ans.*** R.C. 4928.11(A) states that “...The rules regarding interconnection shall seek to
17 prevent barriers to new technology and shall not make compliance unduly
18 burdensome or expensive.” The same section further states that “Additionally,
19 rules under this division shall include nondiscriminatory metering standards.”
20 Finally, R.C. 4928.02(K) identifies the state policy to “encourage implementation
21 of distributed generation across customer classes through regular review and
22 updating of administrative rules governing critical issues such as, but not limited

⁸ October 2, 2009 deposition of Brian and Christy Malott pages 59 attached in Exhibit DJS-3.

⁹ See Exhibit DJS-6(F) Section (A)(1)(a)(iv.).

1 to, interconnection standards, standby charges and net metering.” These sections
2 of the Revised Code are attached as Exhibit DJS-9(A-B).

3
4 ***Q12. IN EARLY 2007, DIFFERENT FORMS OF TESTING WERE CONDUCTED***
5 ***AT THE RESIDENCES OF THE COMPLAINANTS. WHAT IS YOUR***
6 ***UNDERSTANDING OF THE RESULTS OF THESE TESTS?***

7 ***A12.*** In April 2007, FirstEnergy sent a number of employees to each of the
8 complainants’ residences to test their turbines for backflow onto the FirstEnergy
9 distribution lines in the event of a power outage. Multiple FirstEnergy employees
10 described the events that took place during these tests along with the results.

11
12 FirstEnergy employee Don Oleksa was responsible for testing the back feed at the
13 Malott’s residence and reported in deposition that the system did not back feed
14 based on the results of the Eagle 330 meter provided by Power Monitors, Inc.¹⁰

15
16 As Mr. Oleksa explains in his deposition and further shown in Exhibit DJS-11,
17 the Eagle 330 meter is capable of recording voltage, current, flicker, harmonics,
18 power, and other things. Although Bruce Rimmel answered much of OCC’s
19 discovery in this area by saying that the meter was incapable of recording any
20 data at all, and that none of that data can be provided, Mr. Oleksa mentioned that
21 the meter does in fact record a significant amount of data and indicated that all of
22 this data is then immediately transferred to a computer and generates a report that

¹⁰ September 28, 2009 deposition of Don Oleksa pages 8-12 attached as Exhibit DJS-10.

1 is kept for reference and interpretation. Although this report could be accessed at
2 any time, Mr. Oleksa was the only FirstEnergy employee to access it after the data
3 transfer; once to interpret the data following the initial visit, and not again until
4 approximately a month ago simply to provide information to Bruce Remmel.¹¹
5

6 Mr. Oleksa stated that these test results were provided to Rich Adelman in a Word
7 document, but never made it to the customer either orally or written.¹² Mr.
8 Adelman contradicted this statement saying that this was not a normal test;
9 therefore there was no "typical requirement" to provide these results, although he
10 acknowledged to have orally told the Malott's that their system did shut down
11 when it was tested.¹³ When Mr. Reineck was asked about relaying the results to
12 the customer, he stated that no formal results were given, however he relies on the
13 fact that everyone was "naturally standing around the testing" as having provided
14 the complainants with the information.¹⁴
15

16 Each complainant responded in their deposition that they recalled being told
17 orally by company representatives that their systems were "good."¹⁵ This oral
18 exchange led to the confusion of the customers believing that each of them had
19 passed an inspection for interconnection approval.

¹¹ See FirstEnergy response to OCC discovery question number 3 included in Exhibit DJS-12, and the September 28, 2009 deposition of Don Oleksa pages 8-12 included in Exhibit DJS-10.

¹² September 28, 2009 deposition of Don Oleksa page 13 included in exhibit DJS-10.

¹³ September 28, 2009 deposition of Rich Adelman page 9 attached as Exhibit DJS-13.

¹⁴ September 28, 2009 deposition of Richard Reineck page 9 included in Exhibit DJS-4.

¹⁵ See DJS-1 pages 54-56, DJS-2 pages 49-50, and DJS-3 pages 60-61.

1 Although these complaints, and the issues involved related to interconnection,
2 began in 2007, until the information was provided in deposition on September 28,
3 2009, FirstEnergy was not able to provide any information at all about what had
4 happened during the tests those days or whether the tests determined whether the
5 systems were in compliance with the applicable IEEE and UL standards.

6
7 ***Q13. WERE ANY RECOMMENDATIONS GIVEN TO THE CUSTOMERS ON***
8 ***HOW TO HANDLE THE ISSUES IN A MANNER THAT WOULD RESOLVE***
9 ***EACH OF THEIR ISSUES?***

10 ***A13.*** No. The companies relied on the vendor for solutions to the IEEE and UL
11 standards in question, but the vendor did not provide any suggestions leading to a
12 resolution. FirstEnergy Senior Engineer, Bruce Remmel, agreed to make some
13 phone calls and follow up with the Malotts on a reasonable solution to their
14 complaint. However, Mr. Remmel did not follow up with the Malotts in a timely
15 manner at all as illustrated in the attached timeline and in the Malott's responses
16 to deposition questions regarding their interactions with Mr. Remmel, and was
17 unable to offer any reasonable solutions.¹⁶

¹⁶ See Exhibit DJS-3 pages 65-67 and pages 82-85.

1 ***Q14. DOES THE FIRSTENERGY INTERCONNECTION TARIFF ALLOW FOR***
2 ***ANY AMMENDMENT OF THE STANDARDS IN QUESTION?***

3 ***A14.*** Yes. According to FirstEnergy's interconnection tariff effective September 6,
4 2002, and furthermore by FirstEnergy's interconnection tariff effective January 1,
5 2009; FirstEnergy can amend certain technical requirements. The tariff states:

6 Regarding any IEEE minimum standard, or any guideline that
7 the IEEE may promulgate, the Company may amend the
8 Technical Requirements to the minimum extent required to
9 address unique local conditions, and shall provide such
10 amendments to the Staff and make such amendments available
11 to the Interconnection Service Customers.

12 These tariffs are included in Exhibit DJS-6(A-B) attached. Given that
13 FirstEnergy employees, as well as the complainants, are unable to find any
14 organization within Ohio or the United States able to test compliance with the
15 IEEE standards, a local condition exists that makes it impossible for the Company
16 to test for compliance with this standard. This condition would allow the
17 Company the ability to amend the requirement to a point where FirstEnergy
18 would indeed have the ability to test the equipment for compliance with the newly
19 amended technical requirements. FirstEnergy has made no attempt to amend
20 these requirements in any way to allow a valid interconnection agreement with the
21 complainants.

**Q15. CAN YOU PLEASE EXPLAIN THE DIFFERENT TYPES OF METERS
THAT CAN BE USED ON A RESIDENTIAL HOME TO MONITOR
ELECTRICITY USE OR PRODUCTION?**

A15. Yes. According to deposition responses of Toledo Edison employee Robert Vallejo,¹⁷ it is my understanding that there are three different types of meters that can be used to monitor electricity use and/or production. The first type of meter is a detent meter. This meter has a lever inside that will restrict the meter from running backwards and will only monitor usage within the home.

The second type of meter is a regular house meter which is capable of flowing in both directions and will run backwards if you put a distributed generation load on the meter. This second type of meter will provide a net reading resulting from moving forward when power is being used in the home and moving backwards when generating power.

Finally, there is a "bi-directional" meter that can register the customer-side generation and the usage inside the residence. It will measure the voltage being used inside the home and any distributed generation being added will then feed back into that meter and create the difference. This meter does not run backwards. Each of the complainants have had a "bi-directional" meter installed at their residence without having provided a written request or giving written consent to FirstEnergy.

¹⁷ September 28, 2009 deposition of Robert Vallejo, pages 11-18 attached as Exhibit DJS-14.

1 ***Q16. ARE THERE ANY POLICIES, RULES, OR TARIFFS THAT DISCUSS***
2 ***WHICH METER NEEDS TO BE USED FOR INTERCONNECTION OR***
3 ***NET METERING PURPOSES?***

4 ***A16.*** Yes. FirstEnergy's Net Energy Metering Rider states that "In order to receive
5 service under this Rider, Net Metering must be accomplished using a single meter
6 capable of registering the flow of electricity in each direction. If the existing
7 electrical meter in service at the customers' facility is not capable of measuring
8 the flow of electricity in each direction, the Company will, upon written request
9 by the customer-generator, acquire, install, maintain, and read an approved meter
10 that is capable of measuring electricity in each direction."¹⁸ According to the
11 Ohio Administrative Code Section 4901:1-10-28(A)(4) on net metering; "Net
12 metering shall be accomplished using a single meter capable of registering the
13 flow of electricity in each direction. A customer's existing single-register meter
14 that is capable of registering the flow of electricity in both directions satisfies this
15 requirement."

16
17 Ohio Administrative Code Section 4901:1-10-28(A)(5) furthermore states that;
18 "The electric utility, at its own expense *and with the written consent of the*
19 *customer generator*, may install one more *additional* meters to monitor the flow
20 of electricity in each direction. No electric utility shall impose, without
21 commission approval, any additional requirement or additional charges on
22 customer generators refusing to give such consent." (*emphasis added*) These

¹⁸ FirstEnergy's Net Energy Metering Rider Effective April 1, 2003 included in Exhibit DJS-6(D).

1 sections of the Administrative Code are attached as Exhibit DJS-6(F). During the
2 deposition of Mr. Reineck, he stated that every customer who has applied for
3 interconnection with Toledo Edison has been charged \$295.00 for the installation
4 of a bidirectional meter except for Les Lemke.¹⁹ Even Les Lemke paid at one time
5 eventually receiving a credit for the total amount paid. This \$295.00 charge is
6 clearly against the net metering rules cited above as no written requests or
7 consents were provided to FirstEnergy by the Complainants.

8
9 ***Q17. DID THE TESTING AT ANY OF THE COMPLAINANTS' RESIDENCE***
10 ***INCLUDE A CHANGE OF METER?***

11 ***A17.*** Yes. Even though Mr. Adelman states that it was predetermined to install a
12 meter during the testing at the Malott's home,²⁰ they did not inform the Malott's
13 in advance of this change and there was no written request or written consent to
14 have FirstEnergy provide a meter by the Malotts. During depositions some
15 company employees on the testing sites those days say there were no meter
16 changes at all while others present for the tests say it was necessary for billing
17 purposes. This confusion further exemplifies FirstEnergy's lack of attention to
18 details for net metering customers. Even though there were no written requests or
19 consent from the customers, FirstEnergy still installed the "bi-directional" meter
20 at each of the complainants' residences.

¹⁹ September 28, 2009 deposition of Richard Reineck page 13 included in Exhibit DJS-4.

²⁰ September 28, 2009 deposition of Rich Adelman pages 7-9 included in attachment DJS-13.

1 ***Q18. DO YOU HAVE ANY RECOMMENDATIONS REGARDING THE***
2 ***RESOLUTION OF THESE COMPLAINTS?***

3 ***A18.*** I do. I recommend that FirstEnergy promptly sign interconnection agreements
4 with these customers as well as net energy metering rider agreements so the
5 customers are all receiving credits for their net production. I also recommend that
6 FirstEnergy be required to improve the process of application for interconnection
7 and net metering so that customers have better access to the necessary information
8 needed to apply and ultimately to get approval. FirstEnergy should be more
9 flexible with customers in unique situations such as these complainants and more
10 willing to amend technical requirements or request waivers to ease the process of
11 interconnection and net metering for distributed generation customers. Finally, I
12 recommend that the Commission ensure that each of these customers is receiving
13 the proper credits for any excess generation.

14
15 **IV. CONCLUSION**

16 ***Q19. DOES THIS CONCLUDE YOUR TESTIMONY?***

17 ***A19.*** Yes. However, I reserve the right to incorporate new information that may
18 subsequently become available. I also reserve the right to supplement my
19 testimony in response to positions taken by the PUCO Staff.

BEFORE THE PUBLIC UTILITIES COMMISSION OF OHIO

IN THE MATTER OF THE COMPLAINT
OF GERALD GIESLER,

Complainant,

vs.

Case No.: 07-498-EL-CSS

TOLEDO EDISON COMPANY,

Respondent.

IN THE MATTER OF THE COMPLAINT
OF FESTER L. LEMKE,

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vs.

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Respondent.

IN THE MATTER OF THE COMPLAINT
OF BRIAN A. AND CHRISTY G. MALOTT,

Complainant,

vs.

Case No.: 07-525-EL-CSS

OHIO EDISON COMPANY

Respondent.

Deposition of GERALD GIESLER, held on October 2,
2009, at 2600 West U.S. Route 20, Lindsey, Ohio,
commencing at 4:48 p.m., before Robert Scheid, Jr.,
Court Reporter and Notary Public in and for the State of
Ohio.

G. GIESLER

1 some blueprints for the foundation and so
2 forth. And so I basically spent the summer
3 of 2005 putting it together, getting the
4 foundation put in. I had to hire someone to
5 come in and bore the holes and brought the
6 concrete in. I made the rebar cables up and
7 so forth at work. And when the time came
8 -- I did all my own wiring. And when the
9 time came to tip it up, I hired a crane.
10 We tipped it up, had it all set to go.

11 And I did not fire it up until --
12 Bob told me he'd come out when I was ready.
13 And he'd come out, it was middle of November
14 of 2005 when we actually turned it on and
15 started making electricity.

16 Q. And the Bob you referred to is
17 Niehauser?

18 A. Yes. He was there three hours,
19 tops.

20 Checked over all my work and said
21 everything looked good. I did not have the
22 main control board -- when I say, "control
23 board," the circuit board. He installed that
24 when he came out and checked all the
25

G. GIESLER

1 spent the summer, the year of, 2008
2 rebuilding it. Instead of just replacing the
3 shaft, I just went through the whole thing,
4 because I didn't really want to do this more
5 than once. So I went through the whole
6 thing top to bottom and got it back up last
7 winter.
8

9 Q. So it was basically down for a year?

10 A. It was down about a year, yeah. It
11 may not have been down on the ground for a
12 year, but it was not making juice for about
13 a year.

14 Q. Okay. When you decided to put --
15 why did you decide to put up a windmill?

16 A. It's something that I've been wanting
17 to do for over 20 years. It's just
18 something -- I'm very intrigued with
19 mechanical things and all that. But I never
20 had the right piece of property to do it.
21 And we bought this property about ten years
22 ago, nine or ten years ago. We built a
23 house on the place, moved in in '04. And
24 shortly after we got moved in and everything,
25 I started looking around and ended up buying

G. GIESLER

a machine the following spring.

Q. So when you started looking around, what all units did you look at?

A. I looked at the Bergey and Jacobs machines. And those were about the only two that I really gave a second look. Because I wanted something that was fairly substantial as far as, you know, what it could produce. I wanted something that was going to meet the bulk of my needs. And by the time I bought this, I knew about what my usage was out there. And of the two, I felt that the Jacobs was a better choice.

They'd been around a lot longer. It was built heavier. I mean, hundreds of them have been put on wind farms and have been running for a number of years, and I thought that was a pretty good way to test them to know what their strength is. So that's why I chose the Jacobs machine.

Q. Now, when you say hundreds have been on the wind farms, the same type of unit?

A. Yes.

Q. 17.5?

1 everything.

2
3 Q. Okay. But they're not affiliated
4 with Wind Turbines?

5 A. No. He was a dealer for them, I
6 think, at one time. I don't know. I think
7 there's been some bad blood between them two
8 over the years, and I don't know if they get
9 along or not now. I mean, they've known
10 each other for probably 30 years.

11 Q. In your response to one of your
12 interrogatories, you mentioned a conversation
13 with Rich Reineck. And you got the
14 impression he was uncomfortable with this
15 whole situation. Do you remember that
16 response?

17 A. Yeah.

18 Q. Can you tell me about that
19 conversation?

20 A. I'll tell you what I remember. It
21 happened over two years ago. I don't
22 particularly -- I feel like -- I don't work
23 for FirstEnergy or Toledo Edison or whoever,
24 so I might just not say too much here,
25 because I don't particularly want to get

1 anybody in trouble.

2
3 And I like Rich as a person, but I
4 feel like he -- I got the impression that he
5 was not happy with the way things were being
6 handled by decisions that were made over his
7 head. And he tried to be very delicate in
8 the way he said it. Just like earlier this
9 week, I noticed in his deposition earlier
10 this week that he sympathized with us. And
11 he does. He's an easy fellow to like.
12 But, more or less, he says, "I've got a job
13 to do." And when they came out, they were
14 very satisfied that we had not created any
15 kind of safety issue or any threat to the
16 grid whatsoever. And everybody left, no big
17 deal. And here he is a few weeks later,
18 we're being told -- I remember the day he
19 called me up and told me to shut down. I
20 think he was half afraid to make the phone
21 call, but he had a job to do. So if that
22 puts light on it, I don't know how else to
23 say it.

24 Q. You say when they came out, I assume
25 that means when they came out to run the

1 tests?

2
3 A. Yeah. Rich and this Vellejo fellow.
4 And all of them were -- I mean, Rich is the
5 one I dealt with, but they're all -- I never
6 had an issue with any of the Toledo Edison
7 employees, other than the one person I talked
8 to about the rate issue over the phone,
9 which had nothing to do with this
10 interconnection issue. But I can't even tell
11 you his name anymore. That was before all
12 this went down. And I would not have
13 pursued this whole credit issue had it not
14 been for the others. I thought if I want
15 to make a formal complaint about one, I
16 might as well get it all out there.

17 Q. I understand. In Interrogatory 12-A
18 -- well, in Interrogatory 12, I asked you if
19 you were aware of any other utilities that
20 have permitted interconnection of a windmill
21 that's identical to yours, and you said yes.
22 And you listed AEP; Toledo Edison; CEI,
23 Cleveland Electric; and Ohio Edison.

24 A. Right.

25 Q. Toledo Edison, I believe you gave me

BEFORE THE PUBLIC UTILITIES COMMISSION OF OHIO

IN THE MATTER OF THE COMPLAINT
OF GERALD GIESLER,

Complainant,

vs.

Case No.: 07-498-EL-CSS

TOLEDO EDISON COMPANY,

Respondent.

IN THE MATTER OF THE COMPLAINT
OF FESTER L. LEMKE,

Complainant,

vs.

Case No.: 07-514-EL-CSS

TOLEDO EDISON COMPANY,

Respondent.

IN THE MATTER OF THE COMPLAINT
OF BRIAN A. AND CHRISTY G. MALOTT,

Complainant,

vs.

Case No.: 07-525-EL-CSS

OHIO EDISON COMPANY

Respondent.

Deposition of LESTER LEMKE, held on October 2,
2009, at 2600 West U.S. Route 20, Lindsey, Ohio,
commencing at 12:05 p.m., before Robert Scheid, Jr.,
Court Reporter and Notary Public in and for the State of
Ohio.

1 a break. And I'll try to make this as
2 painless as possible. And generally we try
3 to keep it as informal as possible and
4 pretty much just try to have a conversation
5 here. All I'm trying to do is get down
6 some facts and have a better understanding of
7 what your issues are. So with that, why
8 don't you tell me briefly, what is the
9 complaint you have against Toledo Edison?
10

11 A. Well, when we put the windmill up,
12 we wanted a decent rate, and we haven't
13 gotten it yet. What Rick Reineck told me
14 was three-tenths of one cent per kilowatt.
15 And I said that's nothing. And he said
16 that's about right. And that's the one
17 thing. The other thing is 12 years ago, I
18 think it was Bob Williams -- he's retired
19 now from Edison -- but he came out to my
20 place and talked me into a total electric
21 home. He said \$10,000 geothermal furnace and
22 we'll give you a special rate. Well, they
23 did. 4.2 until February of this year,
24 March. Then they jumped it. Now it's 7.25.

25 Q. Okay.

L. LEMKE

1
2 A. And I come down and asked Rich about
3 it. And he said, "Well, we don't do that
4 anymore." Well, do I care if they don't do
5 it anymore? I mean, ten years ago when they
6 talked me into this \$10,000 geothermal
7 furnace, why didn't they tell me then, "Well,
8 ten years from now, we're going to jack it
9 up"? I'd have said, "Well, you know what
10 you can do with that furnace." But, yeah, I
11 went to Bowling Green and had Hanna & Hanna,
12 one of the best lawyers in northwestern Ohio.
13 And we went over the case, and he said,
14 "Unless you got a written statement saying a
15 special rate," he said, "you don't have a
16 leg to stand on." Well, Edison probably
17 knows that and that's why they do what they
18 do.

19 Q. Okay. Anything else?

20 A. That's about all I got.

21 Q. Okay. Just so I understand, then.
22 One thing is your total electric rate has
23 been taken away. That's one issue. The
24 second issue is the credit you're receiving
25 for the excess power that your windmill is

1
2 generating, you don't believe is sufficient?

3 A. Right.

4 Q. That would be your second issue.
5 And then the third issue, obviously, which we
6 really didn't touch on, is the question of
7 how do we get your windmill in compliance so
8 that you can continue to operate it. So
9 that's kind of the three issues you have
10 with Toledo Edison.

11 A. Uh-huh.

12 Q. One thing, too, I forgot to mention,
13 if you could use a "yes" or "no," just so
14 when the court reporter reports it, he can
15 get it down properly. So did I properly
16 summarize your issues?

17 A. Yeah.

18 Q. All right. Let's take the windmill
19 issue first. Before we get into the
20 details, what is your background, educational
21 background?

22 A. I graduated from four years of high
23 school and a couple years of college from
24 Brush Wellman when I was a machinist.
25 That's it.

1 the answer to that would be --

2 A. Should be no. I'm not familiar with
3 1547.

4 Q. So you don't know yes or no.

5 A. Correct.

6 Q. Got it. Okay. In your complaint,
7 you refer to three employees that came out
8 to your premises, one of whom, in your
9 response to my Interrogatory 16, was Rich
10 Reinhart, but, again, it's Rich Reineck?

11 A. Reineck, yes.

12 Q. That visit was where they pulled the
13 meter, correct?

14 A. Correct.

15 Q. And in your complaint when you said
16 they pulled the meter, they just pulled it
17 out -- why don't you explain to me what they
18 did.

19 A. They can pull it right out of --
20 it's got, like, fingers. And they pulled it
21 away from the house for 10 or 15 minutes and
22 then run some tests with their meters and
23 then just plugged it back in.

24 Q. Okay. And you indicated that, in
25

1
2 your complaint, they said everything was
3 good.

4 A. Correct.

5 Q. Do you know what they meant by that?

6 A. Yes. They meant that there was no
7 feedback going out on the line. So I was
8 glad, because I didn't want anybody to get
9 hurt. Now, I've got a box right next to
10 the meter that I can throw the switch, too.
11 And that was mandatory. Bob Niehauser said
12 you've got to have that.

13 Q. Okay. So basically everything was
14 good as far as it didn't back-feed onto the
15 system.

16 A. Correct.

17 Q. Now, I asked in Interrogatory 20,
18 "Do you believe that the amounts on the
19 bills that you've received from the company
20 are in error," and you said yes. And we've
21 kind of covered that. The reasons I took
22 from your answers are you think they're in
23 error because you don't believe the meter is
24 operating properly?

25 A. It's my opinion.

BEFORE THE PUBLIC UTILITIES COMMISSION OF OHIO

IN THE MATTER OF THE COMPLAINT
OF GERALD GIESLER,

Complainant,

vs.

Case No.: 07-498-EL-CSS

TOLEDO EDISON COMPANY,

Respondent.

IN THE MATTER OF THE COMPLAINT
OF FESTER L. LEMKE,

Complainant,

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Case No.: 07-514-EL-CSS

TOLEDO EDISON COMPANY,

Respondent.

IN THE MATTER OF THE COMPLAINT
OF BRIAN A. AND CHRISTY G. MALOTT,

Complainant,

vs.

Case No.: 07-525-EL-CSS

OHIO EDISON COMPANY

Respondent.

Deposition of **BRIAN A. MALOTT AND CHRISTY G.**

MALOTT, held on October 2, 2009, at 2600 West U.S. Route 20,
Lindsey, Ohio, commencing at 2:17 p.m., before Robert Scheid,
Jr., Court Reporter and Notary Public in and for the State of
Ohio.

B. MALOTT AND C. MALOTT

radiologic technology and I'm completing courses right now to pursue an associate's and bachelor's degree in that same field.

Q. Do you have any electrical engineering or electrical experience?

A. (By Mrs. Malott) As a student in x-ray, I've taken electronic physics. So I do have a little bit of very basic knowledge of electricity.

Q. But you're not trained to install windmills.

A. (By Mrs. Malott) No.

Q. Okay. Can you describe, in your words, what your complaint entails against the company, Ohio Edison Company?

A. (By Mrs. Malott) Our biggest complaint is that we haven't been -- our application was not approved and we are unable to interconnect with FirstEnergy to receive credits for our power that we produce above and beyond our consumption of electricity.

Q. So through the net energy metering program?

B. MALOTT AND C. MALOTT

A. (By Mrs. Malott) Correct.

Q. Okay. Before we get to the application process, I'm going to follow a very similar line of questioning that I followed with Mr. Lemke.

A. (By Mrs. Malott) That's fine.

Q. So what is the make and model of your unit?

A. (By Mrs. Malott) It's a Jacobs 26. It's a 17.5-kilowatt generator.

Q. And do you know what year you installed it?

A. (By Mrs. Malott) We had it completed, and the first day it ran was October 13th, 2005. 2006, excuse me.

Q. Was it installed new?

A. (By Mrs. Malott) No.

Q. Do you know the history of this unit?

A. (By Mrs. Malott) The generator was on a farm in Palm Springs, California. And Robert Niehauser from Windpower Technologies purchased some 208 windmills and reconditioned them and sold them to various buyers around

B. MALOTT AND C. MALOTT

the country.

Q. So they were originally shipped to Wisconsin, I believe?

A. (By Mrs. Malott) Correct.

Q. Now, when -- we'll get to that in a second. Do you know if your unit is certified by Underwriters Lab?

A. (By Mrs. Malott) It is not.

Q. Do you know if it's certified by any established certification agency?

A. (By Mrs. Malott) No.

Q. You're not aware or it is not?

A. (By Mrs. Malott) I don't think it is. I think it's comparable to but not specific.

Q. Got it. When your windmill was installed, can you kind of walk me through how that was done?

A. (By Mrs. Malott) My husband, Brian, worked all summer long to construct the frame and the electrical components. He built a little powerhouse, so the transformer and inverter and choke are all in a little building next to the generator. And on the

B. MALOTT AND C. MALOTT

1
2 13th of October, 2006, is when we had the
3 trucks in to raise the tower up and turn on
4 the power to the generator.

5 Q. Now, when you say, "the trucks,"
6 what trucks?

7 A. (By Mrs. Malott) Oh, we had to
8 have a large crane to come in and erect the
9 tower. You can't just put it up by hand.
10 There's several tonnage needed in order to
11 get the tower. It's a 120-foot tower.

12 Q. It'd be hard to put up by hand.

13 A. (By Mrs. Malott) Yeah.

14 Q. Now, did the vendor help you install
15 it at all?

16 A. (By Mrs. Malott) Yes, he did.

17 Q. What parts did the vendor do as far
18 as the installation?

19 A. (By Mrs. Malott) He was there when
20 the tower went up, which he required.
21 Because if it's not -- if the oil isn't
22 proper -- because it's warranted for a year,
23 so he wanted to make sure everything went
24 right before it was turned on. Plus he was
25 there several times throughout the project to

B. MALOTT AND C. MALOTT

make sure it was being constructed properly.

Q. And when you say, "constructed properly," what did he do?

A. (By Mrs. Malott) Brian had to put the tower together like you would a Lincoln Log set. There's blueprints -- or not blueprints, but at least step by step, Part A into Part B, Part B to C --

Q. Assembly instructions?

A. (By Mrs. Malott) Yes. And so he came and checked that and made sure that the concrete was level, the tower would go up properly and run properly after the windmill was turned on.

Q. Did Mr. Niehauser or anybody from his company perform any tests --

A. (By Mrs. Malott) No.

Q. -- on the windmill?

A. (By Mrs. Malott) No.

Q. Have you had any mechanical issues with the windmill since October 13th, 2006?

A. (By Mrs. Malott) Yes, we have.

Q. Why don't you tell me about those.

A. (By Mrs. Malott) The first day the

B. MALOTT AND C. MALOTT

1 tower was started up, it ran for five hours.
2 There was a problem with the bearings, and
3 we had to shut down in order for -- because
4 it wasn't producing power. It just -- it
5 wasn't working properly. So we shut it
6 down.
7

8 And they worked on -- Robert
9 Niehauser worked on what needed to be fixed.
10 And it was turned on again on November 9th.
11 Or November 10th.

12 Q. So it was inoperable for
13 approximately a month?

14 A. (By Mrs. Malott) Correct.

15 Q. Was that the only mechanical problem
16 you've had with it since October of '06?

17 A. (By Mrs. Malott) Then again in
18 January of 2007, it threw a blade and
19 crashed to the ground.

20 Q. When you say it threw a blade, what
21 do you mean?

22 A. (By Mrs. Malott) Threw a blade.

23 Q. One of the blades fell off?

24 A. (By Mrs. Malott) Well, a spring
25 fell or broke. It popped off, and then that

1 caused disruption. I take that back, that
2 was January 8th, 2008. High winds caused
3 some kind of malfunction. And a spring
4 popped off -- the best we can figure,
5 because we were not there, a spring fell
6 off. It was thrown out of whack, basically,
7 and then it fell to the ground from a broken
8 weld.
9

10 Q. Was that covered by warranty?

11 A. (By Mrs. Malott) No, because it had
12 been up.

13 Q. How long was your warranty?

14 A. (By Mrs. Malott) A year. It was
15 covered under insurance, though.

16 Q. So are those the only two instances
17 where it had been shut down for mechanical
18 problems?

19 A. (By Mrs. Malott) Correct.

20 Q. Okay. Whenabouts [sic] did you
21 think about installing a windmill?

22 A. (By Mrs. Malott) We've always known
23 we've lived in a high-wind energy -- or
24 wind-producing area because of the snow and
25 the way the trees grow. And we were about,

B. MALOTT AND C. MALOTT

between 7 and 10 miles off the lake, and that's good for wind-energy production. And finally, somewhere in 2004, 2005, there was actually an article published in the Sandusky Register that said that was so. And it looked at the area in the early '70s, and NASA had a program where they studied the wind-energy development.

And we then saw Gerry Giesler's windmill running from the turnpike when we were going to Toledo one day, and we came up another weekend and followed the roads to find out where he lived and I actually went up to his house and knocked on the door and asked him about his windmill.

Q. What time frame was this?

A. (By Mrs. Malott) It was actually in November of 2005, is when I talked to Gerry Giesler at his home.

Q. Okay. Why did you want to install a windmill?

A. (By Mrs. Malott) I drive a Honda Insight. I have since 2002. I am considered to be somewhat green. It just

B. MALOTT AND C. MALOTT

1 makes sense. Especially since we went to
2 several wind seminars and symposiums and
3 actually was trying to get a wind farm
4 started on my father's property. I talked
5 with several people from the area and said,
6 you know, I live here and this is my
7 father's land and we have high winds. And
8 they actually did come out, and there's a
9 wind tunnel right now on my father's
10 property, a wind meter with studies.

11 And J.D. Power is looking at renting
12 land to put up 20 to 24 generators, large
13 generators.
14

15 Q. On your father's land?

16 A. (By Mrs. Malott) Well, he'll get a
17 couple and then the surrounding farms will
18 get the rest.

19 Q. You said you went to several
20 seminars and symposiums.

21 A. (By Mrs. Malott) Yes.

22 Q. Do you remember the names of those?

23 A. (By Mrs. Malott) Yes. I can look
24 it up.

25 Q. Okay.

B. MALOTT AND C. MALOTT

A. (By Mrs. Malott) Green Energy Ohio produced, or had a couple different open houses where we checked the -- and we also went to the Dull Farms for a symposium. October 1st, 2005, there was one, Ohio Solar Tour. And they went to Kirtland Lake Farm Metro Park where they have a generator similar to ours. Or exactly like ours. We also went Wednesday, September 28th, 2005, went to Ohio Wind Development Workshop and Tour. That's when we went to the Dull Homestead and Farms.

That was put on by Green Energy Ohio. We went to another one that I don't think I have the information here, that went to several areas down around in the Amish area where they have wind generators functioning, and we were allowed to go to the different farms and ask people questions on their wind generators.

Q. Now, in any of these conferences or seminars, did they talk about procedures to interconnect with your local utility?

A. (By Mrs. Malott) No, they didn't,

B. MALOTT AND C. MALOTT

because they were general. There were people from all over the state of Ohio. It was in the center of Ohio.

Q. But they didn't mention anything about regardless of which utility, there might be some paperwork you need to fill out?

A. (By Mrs. Malott) No.

Q. Okay. So you've decided to install a windmill. What did you do in your decision making and research process?

A. (By Mrs. Malott) We looked at several websites. We called Mr. Gerber. We obtained his phone number through FirstEnergy. We went to him because that's who Gerry Giesler had contacted. We tried to find things on the web, on the internet. But it was very difficult to find anything that pertained to interconnection.

Q. So when you talked to Gerry Giesler, tell me about that conversation, when you went up to his door and talked to him.

A. (By Mrs. Malott) We asked him where he purchased it. And he took us out into

B. MALOTT AND C. MALOTT

his building and showed us his setup. He was very enthused and impressed with the system and how it was functioning. He was happy with the system. And he said he did not have any trouble interconnecting. He signed the applications and was approved.

Q. So this is where he told you about the paperwork that needed to be done with Ohio Edison?

A. (By Mrs. Malott) To contact Paul Gerber.

Q. Okay. So that would have been in '05, the November of '05 time frame?

A. (By Mrs. Malott) Correct.

Q. Okay. So what made you settle on the Jacobs system?

A. (By Mrs. Malott) Through the different seminars, the Jacobs looked as if it was a very good product. The different things we read about it, it was substantial. We looked at getting grants and such, but that looked like a lot of red tape. And buying new was twice as much as getting a refurbished one, so we basically went with

B. MALOTT AND C. MALOTT

the less expensive but better quality.

Q. Now, you say it seemed to be a very good product. What were you looking for in the windmill as far as what makes it a very good product?

A. (By Mrs. Malott) Reliability.

Q. Anything else?

A. (By Mrs. Malott) The ability to produce energy.

Q. How many other systems did you look at?

A. (By Mrs. Malott) You'd have to ask my husband.

Q. Okay. I'll ask Mr. Malott right now. How many systems did you look at?

A. (By Mr. Malott) We looked at Whisper Air. There was Bergeys and all that. One other factor about Jacobs is it's the only one made in the U.S. It's all 100 percent U.S. product. And being refurbished models, again, doing the green thing. And the reason, my wife did say. Because of the red tape applying for a grant, very limited on grants and it only applied to brand-new

B. MALOTT AND C. MALOTT

installed units. So we didn't even qualify for a grant at that time.

Q. Okay. So you decided you were going to go with the Jacobs unit. How did you decide which vendor to use?

A. (By Mrs. Malott) Since Gerry had good interaction with Robert Niehauser and he was available, he had the generators used, it sounded like a good idea.

Q. Okay. So you called Mr. Niehauser?

A. (By Mrs. Malott) Yes, we did.

Q. Tell me about your conversation with him.

A. (By Mrs. Malott) I can tell you it was December 12th, 2005, because that was the day I went back to work after a bilateral mastectomy and I was tired and we were there until midnight. But he gave all the right answers, of course, and he had a contract. And that night, we filled out -- because we had been looking at -- you know, it wasn't a whim that we just decided to buy.

We had been looking at it. And after his so-called presentation and talking,

B. MALOTT AND C. MALOTT

Aurora Pearson. I talked with a Shaina, S-h-a-i-n-a, Extension 1890. I talked with a Yvette Gilbert, Extension 1316; Crystal Richards from customer accounting, Extension 892, dash, 2181. I spoke with, I think a -- well, I called, I e-mailed a regional supervisor of operations, Dan Petitti, P-e-t-i-t-t-i. I spoke with a net metering representative, Ann File. I finally talked with a Mike Armor from Akron that was able to get me some information, the right, where to send the interconnection. And I also sent e-mails to President Anthony Alexander, EVP COO Richard R. Grigg; SVP Richard Marsh; Ellen Raines; and Kurt Teroski.

Q. Okay.

A. (By Mrs. Malott) This is before I actually talked to Yvette Gilbert trying to get the information, the application I needed.

Q. Okay. When was your first inquiry for the application?

A. (By Mrs. Malott) December 12th -- do you mean when we talked to Paul --

B. MALOTT AND C. MALOTT

Q. When did you first ask for an --
try to get an application?

A. (By Mrs. Malott) When I talked with
Paul Gilbert in 2005. And he said to wait
until we got up and running, and then we
would take care of the paperwork.

Q. You said Paul Gilbert. I assume
that's Paul Gerber?

A. (By Mrs. Malott) Gerber, I'm sorry.
Gerber.

Q. Okay. Would this be a telephone
conversation?

A. (By Mr. Malott) Right.

A. (By Mrs. Malott) With my husband,
Brian.

Q. Okay. I have an e-mail here that
you sent to me in discovery dated December
21st, '05 from Aurora Pearson.

A. (By Mrs. Malott) Yes.

Q. She sent you a copy of the tariff,
it looks like. Did she do that?

A. (By Mr. Malott) I would assume we
have a copy. We probably do have a copy
somewhere.

B. MALOTT AND C. MALOTT

Q. Do you know who owns that unit?

A. (By Mr. Malott) FirstEnergy does.

Q. And, actually, I think this is what you just answered. Interrogatory 12-A, provide the name of any utilities that have allowed units to operate, AEP being the Kin unit and FirstEnergy being the Giesler and Lemke units, correct?

A. (By Mr. Malott) And Lake Farm Park.

Q. And Lake Farm Park.

A. (By Mrs. Malott) I will say, too, that when we were having our problems, we told them to make sure they went to AEP to make sure that their system would be approved.

A. (By Mr. Malott) Yes.

A. (By Mrs. Malott) I mean, I didn't want them going out and having the same problem we did. I even had some people that questioned me about our system and I wouldn't let them -- I said we're having problems, don't go there yet, because I didn't want other people to have the same problems we're having.

B. MALOTT AND C. MALOTT

Q. Understandable. Interrogatory 19, I believe that goes to the testing that was done at your premises where you were told everything was fine.

That conversation took place where the company came out to test to see if it was going to backfeed on the system.

A. (By Mrs. Malott) Yes.

Q. And do you know what they meant when they said everything was fine?

A. (By Mrs. Malott) Our harmonics were good. Our shutdown process was approvable. We were grounded. Our wiring was correct. And we should be able to proceed with an application.

Q. They said that?

A. (By Mrs. Malott) Not in so many words.

Q. Mr. Malott? Did they say that?

A. (By Mr. Malott) No.

Q. Now, were both of you present for those tests?

A. (By Mr. Malott) I was.

Q. Okay.

B. MALOTT AND C. MALOTT

A. (By Mrs. Malott) I came up after the tests were started. I was there at the very end. I did hear Robert Niehauser ask for a copy of the --

A. (By Mr. Malott) Test results.

A. (By Mrs. Malott) -- test results. And he said these are beautiful test results, but was not given a copy.

Q. But you were made aware of the results while they were on site?

A. (By Mrs. Malott) Yes.

Q. In your complaint, you make a statement -- I just want to find it for a minute. Yeah, in your Paragraph 8, your last paragraph in your complaint, you make a statement, "My complaint against FirstEnergy is a mixture of discrimination and improper reimbursement on net metering." Do you recall that statement?

A. (By Mrs. Malott) Correct.

Q. Why do you think you've been discriminated against?

A. (By Mrs. Malott) Because regulations, I believe, state that as long as

B. MALOTT AND C. MALOTT

1 in that time frame, too?

2 A. (By Mrs. Malott) I believe it was
3 a board problem with one of the boards in
4 the system that was replaced or repaired. I
5 believe that was from a board problem, but I
6 can't be 100 percent sure
7

8 Q. Okay. But there was another problem
9 in that time frame?

10 A. (By Mrs. Malott) Yes.

11 MS. KOLICH: Just for the record,
12 let the record reflect that Mr. Giesler has
13 joined us.

14 Q. In your chronology of events on Page
15 25, if you've got it, January of 2007, you
16 say e-mails, fax transactions, and phone
17 conversations with Bruce Remmel. We didn't
18 really talk about your interaction with Mr.
19 Remmel. Can you kind of explain all of
20 that?

21 A. (By Mrs. Malott) He wasn't a very
22 pleasant man. How's that? He was very hard
23 to contact or to talk with.

24 Q. Why do you say that?

25 A. (By Mrs. Malott) He was not

B. MALOTT AND C. MALOTT

1 available -- he would not make himself
2 available when I was available. And I tried
3 calling at different times of the day. We
4 even set up a time to connect on a Saturday,
5 but I was given the wrong e-mail address and
6 I couldn't catch him on the phone. And he
7 said he tried to contact me, but I was
8 trying to e-mail, or fax him. At that time,
9 I had dial-up. So when I was trying to
10 e-mail him and get him all the rejects back,
11 he just finally said -- he even states
12 somewhere in there that after so long, he
13 couldn't get hold of me, so he left. You
14 know, so I don't think that was fair on my
15 part. Like I said, he just wasn't very
16 receptive to me on the phone either.

17 Q. What did you talk about?

18 A. (By Mrs. Malott) Trying to get the
19 proper application.
20

21 Q. And what did he tell you?

22 A. (By Mrs. Malott) I only talked to
23 him once. The rest of the time, it was
24 voice mail on his cell phone. And that was
25 a big problem. I could never talk to him

B. MALOTT AND C. MALOTT

1 directly. It was always voice mail, voice
2 mail, voice mail. It was never a direct
3 call.
4

5 Q. So what did Mr. Rummel tell you?

6 A. (By Mrs. Malott) I don't remember
7 right now. I finally -- it was Michael
8 Armor who faxed me the correct information.
9 And I contacted him on his cell phone at,
10 like, 9:00 at night. And he did talk to me
11 and was very cooperative.

12 Q. Michael Armor did?

13 A. (By Mrs. Malott) Yes.

14 Q. And he sent you the correct
15 information.

16 What information would that be?

17 A. (By Mrs. Malott) The application
18 for -- he made sure that Yvette Gilbert
19 faxed to my work fax the proper application.
20 And then I faxed him and mailed him my
21 application. And he made sure that Bruce
22 Rummel got that information.

23 Q. Now, when the company came out to do
24 testing, were you aware that this was not to
25 be done to determine compliance with all IEEE

B. MALOTT AND C. MALOTT

A. (By Mr. Malott) Jacobs. And it's also half the cost of a new system to replace.

Q. So it's the inverter that doesn't comply with IEEE?

A. (By Mr. Malott) Correct.

Q. Now, you also worked with Mr. Remmel to try to find a solution. Can you explain to me kind of that process?

A. (By Mr. Malott) We were both trying to find vendors to come up with a less costly solution of making the inverters meet the IEEE standard. We both basically came up with one device that would be usable.

Q. What device would that be? I don't need the name. Was that the relay?

A. (By Mr. Malott) That was the relay, the relay device. And I sent a full set of electrical schematics to Mr. Remmel so he could review with an internal engineer from FirstEnergy, and he had never gotten back with me if there was anything else we could do rather than using that relay. My conversations to Mr. Remmel was the relay was

B. MALOTT AND C. MALOTT

1 fine, it's costly to put in, but it's not
2 just a plug-and-play type of device.
3 Somebody needs to engineer it. Somebody
4 needs to program it. And if it ever does
5 go out of tolerances, it still needs somebody
6 to come back in and reset.
7

8 It's just not a user-friendly device.
9 And beyond that, it would still need to have
10 an automatic disconnect put in, also. The
11 relay was fine. That shuts down something.
12 But on our inverters, the disconnect is a
13 manual disconnect. So it would need an
14 electronic disconnect along with the relay
15 that he suggested. So it's a lot more
16 expensive than what was anticipated. And at
17 that point, we dropped the whole -- I
18 haven't talked to him since.

19 Q. Now, you said you were both
20 investigating. Did you come up with any
21 solution?

22 A. (By Mr. Malott) No, other than I
23 looked into the relays that he was looking
24 into, also.

25 Q. Now, your interaction with Mr.

B. MALOTT AND C. MALOTT

1 Remmel, how would you characterize it?

2 A. (By Mr. Malott) I do not like to
3 interact with Mr. Remmel.

4 Q. Why is that?

5 A. (By Mr. Malott) Personality
6 differences.

7 Q. Why is that?

8 A. (By Mr. Malott) He comes across as
9 my way or no way. Without him actually
10 viewing a unit or -- I believe he wanted me
11 to supply all of the information when he is
12 the senior electrical engineer.

13 Q. When you say, "supply all the
14 information," in what respect?

15 A. (By Mr. Malott) Describe how my
16 unit works. "Are they shunt relayed? What
17 components are they?" I could send you the
18 prints. I'm not an electronics tech. I'm
19 an electrician.

20 Q. And the prints would tell you all
21 that?

22 A. (By Mr. Malott) And the prints
23 would tell you exactly what would be needed
24 with the relay to start with and whether it
25

B. MALOTT AND C. MALOTT

was actually usable.

Like I said, is it a plug-and-play or do you need more items to make it work?

Q. Do you believe he was responsive?

A. (By Mr. Malott) No.

Q. Why is that?

A. (By Mr. Malott) Basically he never did get back with the information. When we were to find out what we were going to use, that timeline took a long time.

Q. And just so I've got the right time frame in mind, this is after the scheduled hearing, which was in March?

A. (By Mr. Malott) Correct.

Q. So the period between March and today.

A. (By Mr. Malott) Today, correct.

Q. Okay. Are you aware the company asked Mr. Niehauser for information?

A. (By Mr. Malott) State the question again.

Q. Are you aware that the company asked Mr. Niehauser for information?

A. (By Mr. Malott) I'm aware that they

1 BEFORE THE PUBLIC UTILITIES COMMISSION OF OHIO

2 In the Matter of the :
Complaint of James Giesler, :
3 :
vs. : Case No. 07-498-EL-CSS
4 :
Toledo Edison Company. :

6 In the Matter of the :
Complaint of Lester L. :
Lemke, :
7 :
vs. :Case No. 07-514-EL-CSS
8 :
Toledo Edison Company. :

10 In the Matter of the :
Complaint of Brian A. and :
Christy G. Malott, :
11 :
vs. :Case No. 07-525-EL-CSS
12 :
Ohio Edison Company. :

14 DEPOSITION

15 of Richard Reineck, taken before me, Karen Sue
16 Gibson, a Notary Public in and for the State of Ohio,
17 at the offices of Janine L. Migden-Ostrander, Ohio
18 Consumers' Counsel, 10 West Broad Street, Suite 1800,
19 Columbus, Ohio, on Monday, September 28, 2009, at
20 2:35 p.m.

22 ARMSTRONG & OKEY, INC.
222 East Town Street, Second Floor
23 Columbus, Ohio 43215-5201
(614) 224-9481 - (800) 223-9481
24 FAX - (614) 224-5724

ARMSTRONG & OKEY, INC., Columbus, Ohio (614) 224-9481

1 A. Formal test results, no.

2 Q. Did you give them any type of test
3 results?

4 A. Well, we all were naturally standing
5 around the testing so I think we were all comfortable
6 that there was no back feed on the system so both Les
7 and Jerry both witnessed the test and they saw the
8 same information from Bob Vallejo's voltmeter there
9 was no back feed on the customer's side.

10 Q. And that was pretty much the sole purpose
11 for the test that day was to determine if there was
12 back feed?

13 A. Exactly.

14 Q. Okay. Do you -- if you recall, were you
15 the person that contacted Mr. Lemke and Mr. Giesler
16 and told them they had to shut their windmills down?

17 A. I was.

18 Q. And how did you do that?

19 A. That was over the telephone.

20 Q. Do you know how long that was after these
21 tests?

22 A. I can't say.

23 Q. Was it --

24 A. I don't remember the date.

25 Q. Was it -- it was within a month or so?

1 A. The all electric rate did go away,
2 although he still receives a business -- residential
3 distribution credit.

4 Q. Okay.

5 MS. KOLICH: And just for the record
6 Mr. Ledden you will depose tomorrow, and he should be
7 able to answer in more details as to those issues.

8 MR. REESE: I've got you.

9 Q. Now, outside of the rate issues are you
10 aware if either Mr. Giesler or Mr. Lemke are
11 questioning any of the meter -- metering results,
12 whether their usage or production is being measured
13 by it?

14 A. Les Lemke told me that he questioned the
15 bidirectional meter, and we reviewed that in detail
16 partially because they have a submeter that's
17 metering total output of the machine and then the
18 incoming, what we're importing and what they are
19 exporting, he always felt his export should have been
20 a little bit more.

21 Q. If I already asked you this, just please
22 correct me. Are you aware of how long it takes
23 Toledo Edison to process an application for
24 interconnection?

25 MS. KOLICH: Could you clarify what time

1 frame?

2 Q. Now, let's say in August of 2009.

3 A. Generally a month.

4 Q. About a month?

5 A. Uh-huh. It's reviewed by our engineering
6 and corporate and goes to regional engineering and
7 seems like for the ones they know about it's been
8 about a month, give or take.

9 MS. KOLICH: Just for the record since I
10 didn't get a chance to object I will for the purposes
11 of the record. I am objecting on the actions in '09
12 are not relevant to this case, but you can answer if
13 you know.

14 A. That's all I know.

15 MS. KOLICH: Just for the record, I told
16 you.

17 Q. Okay. Are you aware of other customers,
18 I am talking residential, that have attempted to
19 interconnect with FE's system that were noncompliant
20 with IEEE but were able to qualify in some other
21 manner?

22 A. Is that a two-part question?

23 Q. Yes, that would be. Let me ask it in two
24 parts. There's an existing IEEE Standard 1547.
25 Let's talk about both of them while we are at it, UL

1 for the area. Les Lemke was charged. I initiated
2 that charge. He then provided me a letter that
3 indicated he would not be charged that meter -- for
4 that meter, so his account was credited the \$295.

5 Q. Do you know who that letter was from?

6 A. From Paul Gerber.

7 Q. And Paul Gerber works for FirstEnergy?

8 A. Correct, sitting right here.

9 Q. Do you know of any other customers who
10 applied for interconnection with Toledo Edison that
11 were charged for the installation of bidirectional
12 meters?

13 A. Everyone else -- everyone since the time
14 of my involvement outside of Les was charged \$295 for
15 the bidirectional meter, those in my area I must say.

16 Q. So TE customers have been charged 295 for
17 the bidirectional?

18 A. That's correct.

19 Q. And are these specifically people that
20 were seeking interconnection or just anybody that
21 asked for it?

22 A. All of them have been for wind generators
23 where we need the bidirectional meter. And if they
24 were a photovoltaic application, they would be the
25 same thing.

1 BEFORE THE PUBLIC UTILITIES COMMISSION OF OHIO

2 In the Matter of the :
3 Complaint of James Giesler, :

4 vs. : Case No. 07-498-EL-CSS

5 Toledo Edison Company. :

6 In the Matter of the :
7 Complaint of Lester L. :
8 Lemke, :

9 vs. : Case No. 07-514-EL-CSS

10 Toledo Edison Company. :

11 In the Matter of the :
12 Complaint of Brian A. and :
13 Christy G. Malott, :

14 vs. : Case No. 07-525-EL-CSS

15 Ohio Edison Company. :

16 - - -
17 DEPOSITION

18 of Paul Gerber, taken before me, Karen Sue Gibson, a
19 Notary Public in and for the State of Ohio, at the
20 offices of Janine L. Migden-Ostrander, Ohio
21 Consumers' Counsel, 10 West Broad Street, Suite 1800,
22 Columbus, Ohio, on Monday, September 28, 2009, at
23 3:13 p.m.

24 - - -
25 ARMSTRONG & OKEY, INC.
26 222 East Town Street, Second Floor
27 Columbus, Ohio 43215-5201
28 (614) 224-9481 - (800) 223-9481
29 FAX - (614) 224-5724
30 - - -

ORIGINAL

1 rates and customer services, et cetera.

2 Q. And if you found some problems with the
3 application, was it your normal routine to give them
4 a call and tell them?

5 A. Yes.

6 Q. Okay.

7 A. In fact, that's what happened with Jerry.

8 Q. Right, okay. And Les's application was
9 somewhat later in time, do you recall?

10 A. It was later but I don't recall
11 specific -- a specific date. I am thinking it may
12 have been four or five months later, but I am not
13 sure.

14 Q. Okay. I'll take a look. So once you
15 have the application, it's been distributed, there's
16 X amount of time that you have to get feedback for
17 that. Do you know at the time you were doing this
18 how long did you wait to get feedback?

19 A. If I didn't get something back from the
20 operating company within two to three weeks, I would
21 bug them.

22 Q. Okay, okay.

23 A. And depending upon the time of the year,
24 summertime, could be vacations, people gone, work
25 loads, some of those sorts of things, but we try to

1 respond within about a month.

2 Q. Okay. Now, once the application is
3 approved, then we have to enter into the agreement
4 and that agreement is also something that's -- is
5 that sent out -- let's go back to when you were
6 overseeing it. You sent a copy of an agreement out
7 to them, got their signature, and then they sent it
8 in to you, and you signed it or someone in your
9 organization did.

10 A. After it had been approved by the
11 operating company and I had the information, yes, I
12 would send the letter to the customer indicating,
13 yes, your application has been approved and attached
14 would be the form for net energy meter rider and also
15 the interconnection agreement filled out with the
16 customer's name, et cetera, in it, and I would ask
17 them to please sign two copies, send them back, and
18 then I would get signatures from within the company
19 and send one copy back to the customer.

20 Q. And that process is there -- I mean,
21 obviously it's dependent to some aspect on how long
22 the customer takes to sign it, but once it came back
23 to you what was the normal turnaround time?

24 A. As long as it didn't get buried, probably
25 within two weeks.

Interconnection Tariff**Applicability**

Applicable in the entire territory where tariff P.U.C.O. No. 11 applies, this tariff applies to those situations where an Interconnection Service Customer seeks to physically connect such customer's electric generation facility to, and may operate it in parallel with, the Company's Distribution system. An Interconnection Service Customer who has a facility that does not qualify for Simplified Interconnection pursuant to the Technical Requirements incorporated herein by reference may negotiate a separate Interconnection Agreement with the Company and the terms and conditions of this tariff apply to such Interconnection Service Customers to the extent that the negotiated Interconnection Agreement does not conflict with this tariff.

Purpose

The purpose of this tariff is to implement Ohio Revised Code Section 4928.11, which calls for uniform interconnection standards that are not unduly burdensome or expensive and also ensure safety and reliability, to the extent governing authority is not preempted by Federal law. This Tariff states the terms and conditions that govern the Interconnection and Parallel Operation of an Interconnection Service Customer's facility with the Company's Distribution System.

Procedures

Any Interconnection Service Customer seeking to physically connect facilities to the Company's Distribution System, which facilities may be used in Parallel Operation with the Company's Distribution System, shall file an Interconnection Application (Exhibit A) and sign an Interconnection Agreement with the Company for Interconnection. For facilities for which the referenced Technical Requirements for Interconnection and Parallel Operation of Distributed Generation are applicable, the Interconnection Service Customer and Company shall execute a Simplified Interconnection Agreement (Exhibit B). For all other facilities, the Customer and the Company shall execute an Interconnection Agreement which may be different from Exhibit B but which shall conform with the provisions of this tariff, to the extent applicable.

To the extent possible, Interconnection to the Company's Distribution System shall take place within the following time frames:

1. Where no construction is required by the Company and the facility qualifies for Simplified Interconnection pursuant to the Screening process contained in the Technical Requirements, Interconnection shall be permitted within four weeks of the Company's receipt of a completed Interconnection Application (Exhibit A) in compliance with the terms and conditions of this tariff. Prior to actual Interconnection the Interconnection Service Customer must execute the Interconnection Agreement.
2. Where construction or system upgrades of the Company's Distribution System are required, the Company shall provide the Interconnection Service Customer in a timely fashion an estimate of the schedule and the Interconnection Service Customer's cost for the construction or upgrades. If the Interconnection Service Customer desires to proceed with the construction or upgrades, the Interconnection Service Customer and the Company shall enter into a contract. The contract shall contain a construction schedule listing target commencement and completion dates, and an estimate of the Interconnection Service Customer's costs for construction or upgrades. Assuming the Interconnection Service Customer is ready, the Interconnection Service shall take place no later than two weeks following the completion of such construction or upgrades. The Company shall employ best reasonable efforts to complete such system construction or upgrades in the shortest time reasonably practical.

Interconnection Tariff

3. All Interconnection Applications shall be processed by the Company in a non-discriminatory manner. The Company shall promptly provide each Interconnection Service Customer a written Notice of the company's receipt of the Application. The Company will endeavor to place such notice in the U.S. Mail within 3 business days after the Application has been received by the Company's personnel designated on the application form. The Company shall provide each Interconnection Service Customer with a copy of the screening process and a target date for processing the Application. If the Application is viewed as incomplete, the Company must provide a written Notice within 10 days of receipt of the Application by the Company's personnel designated on the application form that the Application is not complete together with a description of the information needed to complete the Application and a statement that processing of the Application cannot begin until the information is received. The Company's target date shall permit Interconnection in a timely manner pursuant to the requirements of O.A.C. 4901:1-22-04(C). Interconnection Applications will be processed in the order that they are received. It is recognized that certain Interconnection Applications may require minor modifications while they are being reviewed by the Company. Such minor modifications to a pending application shall not require that it be considered incomplete and treated as a new or separate application. Minor modifications would not include at least the following: changes in facility size or location; any change requiring a new impact study; any other substantive change.
4. If the Company determines that it cannot connect the Interconnection Service Customer's facility within the time frames required by O.A.C. § 4901:1-22-04(C), the Company will notify the Interconnection Service Customer in writing of that fact as soon as possible. The notification will identify the reason or reasons Interconnection Service could not be performed within the time frames stated in O.A.C. § 4901:1-22-04(C), and provide an estimated date for interconnection service. This section shall not limit the rights of an Interconnection Service Customer for relief under Ohio Revised Code Chapter 4905.

Technical Requirements for Interconnection and Parallel Operation of facilities owned or operated by an Interconnection Service Customer

The Company shall maintain a copy of the Technical Requirements for Interconnection at its place of business such that the Technical Requirements are readily available to the public. The Company shall provide the Commission Staff with a copy of the Technical Requirements. Standards adopted by IEEE shall supersede the applicable provisions of the Company's Technical Requirements effective the date that IEEE adopts such standards. However, any Interconnection made or initiated prior to the adoption of any national standard promulgated by IEEE shall be grandfathered. Regarding any IEEE minimum standard, or any guideline that the IEEE may promulgate, the Company may amend the Technical Requirements to the minimum extent required to address unique local conditions, and shall provide such amendments to the Staff and make such amendments available to the Interconnection Service Customers. All Technical Requirements for Interconnection, including superseding standards adopted by IEEE, are incorporated herein by reference.

Metering

Any metering installation, testing, or recalibration required by the installation of the Interconnection Service Customer's distributed generation equipment shall be provided consistent with the Electric Service and Safety Standards pursuant to Ohio Revised Code Chapter 4928, and specifically O.A.C. § 4901:1-10-05 (Metering) and, as applicable, § 4901:1-10-28 (C) (Net Metering).

Interconnection Tariff

Liability Insurance

Prior to any Interconnection with the Company, the Interconnection Service Customer must provide the Company with proof of insurance or other suitable financial instrument sufficient to meet its construction, operating and liability responsibilities pursuant to this tariff. At no time shall the Company require that the Applicant negotiate any policy or renewal of any policy covering any liability through a particular insurance company, agent, solicitor, or broker.

System Impact and Facilities Studies

For those Applications that do not qualify for the Simplified Interconnection Agreement pursuant to the Screening Process included in the Technical Requirements, the Company may require supplemental review, a service study, coordination study, facilities study or Company system impact study prior to Interconnection. In instances where such studies are required, the scope of such studies shall be based on the characteristics of the particular generation facility to be interconnected and the Company's system at the specific proposed location. By agreement between the Company and the Interconnection Service Customer, studies related to Interconnection of the generation facility may be conducted by a qualified third party. The cost of an impact facilities study performed by the Company shall be included in the costs set forth in the Interconnection Fees section of this tariff, set forth below. The Company shall provide the Applicant for Interconnection service with a target date for completion of any required system impact or facilities study. Any such study conducted by the Company shall be shared with the Interconnection Service Customer.

Interconnection Fees

The Company shall not charge any fees for Interconnection other than those authorized by this tariff.

The Company shall charge each Interconnection Service Customer that applies for Interconnection service a nonrefundable Interconnection Application fee of \$250, payable at the time the Interconnection Application is submitted.

Each Interconnection Service Customer shall deposit with the Company an amount equal to \$5 per kW of generation referenced in the Application for all generation units greater than 50kW. All units 50kW or less shall be assessed the nonrefundable Application Fee only as its deposit. The Company shall apply the deposit to the Company's actual costs associated with the Interconnection. If such costs are greater than the amount of the deposit, the customer shall pay such additional costs to the Company. If such costs are less than the amount of the deposit the Company shall refund the balance of the deposit to the customer.

Additional Fees

Construction or Upgrade Fees

If the Interconnection requires construction or an upgrade of the Company's system which, save for the generation facility would not be required, the Company will assess the Interconnection Service Customer the actual cost including applicable taxes of such construction or upgrade. Payment terms for such construction or upgrade will be agreed to and specified in the construction contract. The Company and the Interconnection Service Customer may negotiate for alternatives in order to reduce any costs or taxes applicable thereto.

Interconnection Tariff

Resolution of Disputes

The Company or the Interconnection Service Customer who is a non-mercantile, non-residential customer may seek resolution of any disputes which may arise out of this tariff, including the Interconnection and the referenced Technical Requirements in accordance with the Commission's Rules for Alternative Dispute Resolution.

Definitions

For the purpose of this Interconnection tariff, the following words shall have the meanings set forth:

- (1) **CERTIFIED TERRITORY** — This term shall have the same meaning as found in R.C. 4928.01(A)(3)
- (2) **COMPANY** — Ohio Edison Company
- (3) **FACILITY** — An electrical generating installation consisting of one or more generation units as defined in the Interconnection Application for Service.
- (4) **INTERCONNECTION** — The physical connection of the Interconnection Service Customer's Facilities to the Company's Distribution System for the purpose of electrical power service.
- (5) **INTERCONNECTION AGREEMENT** — The standard form of agreement between the Interconnection Service Customer and the Company (Exhibit B attached) or the negotiated agreement between the Interconnection Service Customer and the Company as referenced in the Procedures section above.
- (6) **INTERCONNECTION APPLICATION** — The standard form of application approved by the Commission (See Exhibit A).
- (7) **INTERCONNECTION SERVICE CUSTOMER** — This term shall have the same meaning as found in OAC §4901:1-22-02 (J).
- (8) **PARALLEL OPERATION** — This term shall have the same meaning as found in OAC §4901:1-22-02 (L).
- (9) **TECHNICAL REQUIREMENTS** — The Technical Requirements consist of the following: Part A contains the standardized Technical Requirements common to all Ohio Electric Distribution Utilities. Part A shall be amended as necessary to conform to adopted IEEE Standards. Part B contains the Screening Process applicable to all Interconnection Service Customer facilities. The Company shall provide upon request specific Technical Requirements necessary to fill in any gaps in Part A or for facilities that do not conform with the Part A Technical Requirements.

EXHIBIT A

**APPLICATION FOR INTERCONNECTION AND PARALLEL OPERATION WITH THE
COMPANY'S DISTRIBUTION SYSTEM**

Return Completed Application to:

FirstEnergy Corporation
Attention: Planning and Protection Engineering
Floor 11
76 South Main Street
Akron, Ohio 44308

Customer's Name: _____

Address: _____

Contact Person: _____

Telephone Number: _____

Service Point Address: _____

Information Prepared and Submitted By: _____
(Name and Address)

The following information shall be supplied by the Customer or Customer's designated representative. All applicable items must be accurately completed in order that the Customer's generating facilities may be effectively evaluated for interconnection with the Company's Distribution System.

GENERATOR

Number of Units: _____

Manufacturer: _____

Type (Synchronous, Induction, or Inverter): _____

Fuel Source Type (Solar, Natural Gas, Wind, etc.): _____

Kilowatt Rating (95 F at location): _____

Kilovolt-Ampere Rating (95 F at location): _____

Power Factor: _____

Voltage Rating: _____

Ampere Rating: _____

Number of Phases: _____

Frequency: _____

Do you plan to export power: ☐ Yes ☐ No

If Yes, maximum amount expected: _____

EXHIBIT A (Cont.)

Normal Operation of Interconnection: (examples: provide power to meet base load, demand management, standby, back-up, other) (please describe) _____

Application Fee \$ _____. Checks may be made payable to The Ohio Edison Company.

One-line diagram attached: _____ Yes

Have testing results been supplied to the Company documenting conformance with the Company's technical requirements: _____ Yes [Note: Requires a Yes for complete Application.]

Have all necessary government permits and approvals been obtained for the project prior to this application? _____ Yes [Note: Requires a Yes for an Application to be considered complete.]

Have the generator Manufacturer machine characteristics been supplied to the Company? _____ Yes [Note: Requires a Yes for complete Application.]

Layout sketch showing lockable, "visible" disconnect device: _____ Yes

Application fee: _____ Yes \$ _____ Checks are payable to _____ at _____

DATE: _____

[CUSTOMER NAME]

(Signature)

By: _____

Title: _____

EXHIBIT B

**SIMPLIFIED INTERCONNECTION AGREEMENT FOR INTERCONNECTION AND PARALLEL
OPERATION WITH THE COMPANY'S DISTRIBUTION SYSTEM**

INTERCONNECTION AGREEMENT

This Interconnection Agreement ("Agreement") is made and entered into this ____ day of _____, 200__, by Ohio Edison Company, ("Company"), and _____ ("Customer"), a _____ [specify whether corporation, and if so name state, municipal corporation, cooperative corporation, or other], each hereinafter sometimes referred to individually as "Party" or both referred to collectively as the "Parties". In consideration of the mutual covenants set forth herein, the Parties agree as follows:

1. **Scope of Agreement --** This Agreement is applicable to conditions under which the Company and the Customer agree that one or more generating facility or facilities of ____ kW to be interconnected at 35 kV or less ("Facility or Facilities") may be interconnected to the Company's utility system, as described in the Company's Distribution Interconnection Tariff. The facility shall be 300kW or less and may be used for exporting retail electricity only to the Company's distribution system. This Agreement is not applicable to Wholesale transactions as defined by the Federal Energy Regulatory Commission (FERC).
2. **Establishment of Point(s) of Interconnection --** Company and Customer agree to interconnect their Facility or Facilities at the locations specified in this Agreement, in accordance with Revised Code §4928.67, and the Uniform Electric Interconnection Standards (§4901:1-22-01, et seq.) of the Ohio Administrative Code (Rules) or any successor rule addressing interconnection standards, the Company's Distribution Interconnection Tariff and as described in Attachment A (the "Point(s) of Interconnection"). The Company and the Customer agree to follow those technical specifications included in the Company's Technical Specification Document, attached and referred to herein as Attachment B.
3. **Responsibilities of Company and Customer --** Each Party will, at its own cost and expense, operate, maintain, repair, and inspect, and shall be fully responsible for, Facility or Facilities which it now or hereafter may own unless otherwise specified on Attachment A. Customer shall conduct operations of its facility(s) in compliance with all aspects of the Interconnection Tariff and Rules, and Company shall conduct operations on its utility system in compliance with all aspects of the Interconnection Tariff and Rules, or as further described and mutually agreed to in the applicable Facility Schedule. The Customer shall, at its own expense, acquire and utilize the type of meter required by the Company for interconnection. The Company shall install, operate and maintain such meter. Maintenance of Facilities or interconnection facilities shall be performed in accordance with the applicable manufacturer's recommended maintenance schedule. The Parties agree to cause their Facilities or systems to be constructed in accordance with safety and performance standards established by the National Electrical Code, the Institute of Electrical and Electronics Engineers, and Underwriters Laboratories, in effect at the time of construction. The Company and the Customer shall maintain their facilities in compliance with the U.S. Environmental Protection Agency (EPA) and the Ohio EPA standards.

Each Party covenants and agrees to design, install, maintain, and operate, or cause the design, installation, maintenance, and operation of, its distribution system and related Facilities and Units so as to reasonably minimize the likelihood of a disturbance, originating in the system of one Party, affecting or impairing the system of the other Party, or other systems with which a Party is interconnected. This Agreement does not constitute the availability of Transmission service for the Customer. Such Customer has the sole responsibility to apply and arrange for the availability of Transmission service.

This Agreement shall not alter the tariff under which the Customer is or shall be taking service unless otherwise agreed to by both Parties in writing as part of this Agreement.

Filed pursuant to Order dated, August 22, 2002, in Case No. 00-1238-EL-ATA before

The Public Utilities Commission of Ohio

Issued by H. Peter Burg, President

Effective:

EXHIBIT B (Cont'd)

The Customer shall provide the Company with proof of Insurance or other suitable financial instrument sufficient to meet its construction, operating and liability responsibilities pursuant to this Agreement.

Company will notify Customer if there is evidence that the Facility operation causes disruption or deterioration of service to other customers served from the same grid or if the Facility operation causes damage to Company's system. Notwithstanding Paragraph four (4) of this Agreement, the Customer shall reimburse the Company for any regulatory penalties assessed against the Company due to the negligence of the Customer or the failure of facilities for which the Customer has control and responsibility.

Customer will notify Company of any emergency or hazardous condition or occurrence with the Customer's Unit(s) which could affect safe operation of the system.

4. Limitation of Liability and Indemnification

- a. Neither Company nor Customer shall be liable to the other for damages for any act that is beyond such party's control, including any event that is a result of an act of God, labor disturbance, act of the public enemy, war, insurrection, riot, fire, storm or flood, explosion, breakage or accident to machinery or equipment, a curtailment, order, or regulation or restriction imposed by governmental, military, or lawfully established civilian authorities, or by the making of necessary repairs upon the property or equipment of either party.
- b. Notwithstanding Paragraph 4.a of this Agreement, Company shall assume all liability for and shall indemnify Customer for any claims, losses, costs, and expenses of any kind or character to the extent that they result from Company's negligence in connection with the design, construction, or operation of its facilities as described on Attachment A; provided, however, that Company shall have no obligation to indemnify Customer for claims brought by claimants who cannot recover directly from Company. Such indemnity shall include, but is not limited to, financial responsibility for: (a) Customer's monetary losses; (b) reasonable costs and expenses of defending an action or claim made by a third person; (c) damages related to the death or injury of a third person; (d) damages to the property of Customer; (e) damages to the property of a third person; (f) damages for the disruption of the business of a third person. In no event shall Company be liable for consequential, special, incidental or punitive damages, including, without limitation, loss of profits, loss of revenue, or loss of production. The Company does not assume liability for any costs for damages arising from the disruption of the business of the Customer or for the Customer's costs and expenses of prosecuting or defending an action or claim against the Company. This paragraph does not create a liability on the part of the Company to the Customer or a third person, but requires indemnification where such liability exists. The limitations of liability provided in this paragraph do not apply in cases of gross negligence or intentional wrongdoing.
- c. Notwithstanding Paragraph 4.a of this Agreement, Customer shall assume all liability for and shall indemnify Company for any claims, losses, costs, and expenses of any kind or character to the extent that they result from Customer's negligence in connection with the design, construction or operation of its facilities as described on Attachment A; provided, however, that Customer shall have no obligation to indemnify Company for claims brought by claimants who cannot recover directly from Customer. Such indemnity shall include, but is not limited to, financial responsibility for: (a) Company's monetary losses; (b) reasonable costs and expenses of defending an action or claim made by a third person; (c) damages related to the death or injury of a third person; (d) damages to the property of Company; (e) damages to the property of a third person; (f) damages for the disruption of the business of a third person. In no event shall Customer be liable for consequential, special, incidental or punitive damages, including, without limitation, loss of profits, loss of revenue, or loss of production. The Customer does not assume liability for any costs for damages arising from the disruption of the business of the Company or for the Company's costs and expenses of prosecuting or defending an action or claim against the Customer.

EXHIBIT B (Cont'd)

This paragraph does not create a liability on the part of the Customer to the Company or a third person, but requires indemnification where such liability exists. The limitations of liability provided in this paragraph do not apply in cases of gross negligence or intentional wrongdoing.

- d. Company and Customer shall each be responsible for the safe installation, maintenance, repair and condition of their respective lines and appurtenances on their respective sides of the point of delivery. The Company does not assume any duty of inspecting the Customer's lines, wires, switches, or other equipment and will not be responsible therefor. Customer assumes all responsibility for the electric service supplied hereunder and the facilities used in connection therewith at or beyond the point of delivery, the point of delivery being the point where the electric energy first leaves the wire or facilities provided and owned by Company and enters the wire or facilities provided by Customer.
- e. For the mutual protection of the Customer and the Company, only with Company prior authorization are the connections between the Company's service wires and the Customer's service entrance conductors to be energized.
5. **Right of Access, Equipment Installation, Removal & Inspection** - The Parties shall provide each other such easements and/or access rights as may be necessary for either Party's performance of their respective operational obligations under this Agreement; provided that, notwithstanding anything stated herein, a Party performing operational work within the boundaries of the other Party's facilities must abide by the rules applicable to that site.
6. **Disconnection of Unit** - Customer retains the option to disconnect from Company's utility system. Customer will notify the Company of its intent to disconnect by giving the Company at least thirty days' prior written notice. Such disconnection shall not be a termination of the agreement unless Customer exercises rights under Section 7.

Customer shall disconnect Facility from Company's system upon the effective date of any termination under Section 7.

Subject to Commission Rule, for routine maintenance and repairs on Company's utility system, Company shall provide Customer with seven business days' notice of service interruption.

Company shall have the right to suspend service in cases where continuance of service to Customer will endanger persons or property. During the forced outage of the Company's utility system serving customer, Company shall have the right to suspend service to effect immediate repairs on Company's utility system, but the Company shall use its best efforts to provide the Customer with reasonable prior notice.

7. **Effective Term and Termination Rights** - This Agreement becomes effective when executed by both parties and shall continue in effect until terminated. The agreement may be terminated for the following reasons: (a) Customer may terminate this Agreement at any time, by giving the Company sixty days' written notice; (b) Company may terminate upon failure by the Customer to generate energy from the Facility in parallel with the Company's system within twelve months after completion of the interconnection; (c) either party may terminate by giving the other party at least sixty days prior written notice that the other Party is in default of any of the material terms and conditions of the Agreement, so long as the notice specifies the basis for termination and there is reasonable opportunity to cure the default; or (d) Company may terminate by giving Customer at least sixty days notice in the event that there is a material change in an applicable rule or statute.

EXHIBIT B (Cont'd)

8. **Governing Law and Regulatory Authority** -- This Agreement was executed in the State of Ohio and must in all respects be governed by, interpreted, construed, and enforced in accordance with the laws thereof. This Agreement is subject to, and the parties' obligations hereunder include, operating in full compliance with all valid, applicable federal, state, and local laws or ordinances, and all applicable rules, regulations, orders of, and tariffs approved by, duly constituted regulatory authorities having jurisdiction.
9. **Amendment** -- This Agreement may be amended only upon mutual agreement of the Parties, which amendment will not be effective until reduced to writing and executed by the Parties.
10. **Entirety of Agreement and Prior Agreements Superseded** -- This Agreement, including Attachment A, which is expressly made a part hereof for all purposes, constitutes the entire agreement and understanding between the Parties with regard to the interconnection of the facilities of the Parties at the Points of Interconnection expressly provided for in this Agreement. The Parties are not bound by or liable for any statement, representation, promise, inducement, understanding, or undertaking of any kind or nature (whether written or oral) with regard to the subject matter hereof not set forth or provided for herein. This Agreement replaces all prior agreements and undertakings, oral or written, between the Parties with regard to the subject matter hereof, including without limitation _____ [specify any prior agreements being superseded], and all such agreement and undertakings are agreed by the Parties to no longer be of any force or effect. It is expressly acknowledged that the Parties may have other agreements covering other services not expressly provided for herein, which agreements are unaffected by this Agreement.
11. **Notices** -- Notices given under this Agreement are deemed to have been duly delivered if hand delivered or sent by United States certified mail, return receipt requested, postage prepaid, to:
 - (a) If to Company:
 - (b) If to Customer:

The above-listed names, titles, and addresses of either Party may be changed by written notification to the other, notwithstanding Section 10.

12. Invoicing and Payment --

- i) **General.** Within a reasonable time after the first day of each month, each Party shall prepare and deliver to the other Party an invoice for those reimbursable services provided to the other Party under this Agreement during the preceding month.
- ii) **Invoice.** Each invoice shall delineate the month in which the services were provided, shall fully describe the services rendered, and shall be itemized to reflect the services performed or provided.
- iii) **Payment.** The invoice shall be paid within twenty (20) calendar days of receipt. All payments shall be made in immediately available funds payable to the other Party, or by wire transfer to a bank named and account designated by the invoicing Party.

EXHIBIT B (Cont'd)

- iv) Disputes. Disputed amounts shall be paid on or before the invoice payment due date. In the event the dispute is resolved in favor of the Party disputing payment, the Party required to pay back disputed amounts shall, within thirty (30) days of resolution of the dispute, make payment with interest as calculated in accordance with Section 12.6.
- v) Waiver. Payment of an invoice shall not relieve the paying Party from any other responsibilities or obligations it has under this Agreement, nor shall such payment constitute a waiver of any claims arising hereunder.
- vi) Interest. Interest on any unpaid amounts shall be calculated in accordance with the methodology specified for interest on refunds by the Company's Rules and Regulations, filed and approved by the Public Utilities Commission of Ohio (PUCO). Interest on delinquent amounts shall be calculated from the due date of the bill to the date of payment.
- vii) Payment During Dispute. In the event of a billing dispute between the Company and the Customer, each Party shall continue to provide services and pay all invoices.
- viii) Collection Expenses. Neither Party shall be responsible for the other Party's costs of collecting amounts due under this Agreement, including attorney fees and expenses and the expenses of arbitration.
- 13. Assignment. Each Party may assign this Agreement to any affiliated corporation, person, partnership, or other entity under the control of or having controlling interest in the assigning Party with the written consent of the other Party. Such consent shall not be withheld without good cause shown and noticed to the assigning party in writing within thirty (30) days after the request for assignment.
- 14. Confidentiality. Each Party recognizes and agrees that this Agreement, all attachments thereto, and all information relating to this Agreement marked by the other Party as confidential, constitutes proprietary confidential information. Each Party shall distribute such information only to those employees, or other persons under the control of the Party, on a need to know basis. Release of any confidential information shall constitute a material breach of this Agreement and the offended party may immediately terminate this Agreement. If a Court or Regulatory Agency of competent jurisdiction requires the release of any confidential information by either Party then such Party shall provide three (3) days written notice to the other party before making such release to allow the offended party to appear and challenge the release. If such release is required by a Court or Regulatory Agency within a period which does not permit three (3) days notice, the Party will provide such notice as is reasonable in the circumstances. A release pursuant to Court or Regulatory Agency order shall not constitute material breach except in the absence of the required notice.
- 15. No Third-Party Beneficiaries - This Agreement is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the Parties, and the obligations herein assumed are solely for the use and benefit of the Parties, their successors in interest and, where permitted, their assigns.
- 16. No Waiver - The failure of a Party to this Agreement to insist, on any occasion, upon strict performance of any provision of this Agreement will not be considered to waive the obligations, rights, or duties imposed upon the Parties.
- 17. Headings - The descriptive headings of the various articles and sections of this Agreement have been inserted for convenience of reference only and are to be afforded no significance in the interpretation or construction of this Agreement.

18. **Multiple Counterparts** -- This Agreement may be executed in two or more counterparts, each of which is deemed an original but all constitute one and the same instrument.

IN WITNESS WHEREOF, the Parties have caused this Agreement to be signed by their respective duly authorized representatives.

OHIO EDISON COMPANY

[CUSTOMER NAME]

BY: _____

BY: _____

TITLE: _____

TITLE: _____

DATE: _____

DATE: _____

ATTACHMENT A

Page 1 of 2

LIST OF FACILITY SCHEDULES AND POINTS OF INTERCONNECTION

Facility Schedule No.

Name of Point of Interconnection

(Insert Facility Schedule number and name for each Point of Interconnection)

ATTACHMENT A

Page 2 of 2

FACILITY SCHEDULE NO.

[The following information is to be specified for each Point of Interconnection, if applicable.]

1. Name:
2. Facility location:
3. Delivery voltage:
4. Metering (voltage, location, losses adjustment due to metering location, and other:
5. Normal Operation of Interconnection:
6. One line diagram attached (check one): ☐ Yes/ ☐ No
7. Facilities to be furnished by Company:
8. Facilities to be furnished by Customer:
9. Cost Responsibility:
10. Control area interchange point (check one): ☐ Yes/ ☐ No
11. Supplemental terms and conditions attached (check one): ☐ Yes/ ☐ No

OHIO EDISON COMPANY

[CUSTOMER NAME]

BY: _____

BY: _____

TITLE: _____

TITLE: _____

DATE: _____

DATE: _____

Interconnection Tariff**Applicability**

This tariff applies to those situations where an Interconnection Service Customer seeks to physically connect such customer's electric generation facility to, and may operate it in parallel with, the Company's Distribution system, if said customer qualifies for either the Simplified, Expedited or Standard Interconnection Procedure as defined in the Ohio Administrative Code.

Purpose

The purpose of this tariff is to implement Ohio Revised Code Section 4928.11, which calls for uniform interconnection standards that are not unduly burdensome or expensive and also ensure safety and reliability, to the extent governing authority is not preempted by Federal law. This Tariff states the terms and conditions that govern the Interconnection and Parallel Operation of an Interconnection Service Customer's facility with the Company's Distribution System.

Technical Requirements for Interconnection and Parallel Operation of facilities owned or operated by an Interconnection Service Customer.

Technical Requirements consist of the following: Part A contains the standardized Technical Requirements common to all Ohio Electric Distribution Utilities. Part A shall be amended as necessary to conform to adopted IEEE Standards. Part B contains the Screening Process applicable to all Interconnection Service Customer facilities. The Company shall provide upon request specific Technical Requirements necessary to fill in any gaps in Part A or for facilities that do not conform with the Part A Technical Requirements.

The Company shall maintain a copy of the Technical Requirements for Interconnection at its place of business such that the Technical Requirements are readily available to the public. The Company shall provide the Commission Staff with a copy of the Technical Requirements. Standards adopted by IEEE shall supersede the applicable provisions of the Company's Technical Requirements effective as of the date on which IEEE adopts such standards. However, any Interconnection made or initiated prior to the adoption of any national standard promulgated by IEEE shall be grandfathered. Regarding any IEEE minimum standard, or any guideline that the IEEE may promulgate, the Company may amend the Technical Requirements to the minimum extent required to address unique local conditions, and shall provide such amendments to the Staff and make such amendments available to the Interconnection Service Customers. All Technical Requirements for Interconnection, including superseding standards adopted by IEEE, are incorporated herein by reference.

Application Processing Fees

Applications qualifying for Level 1, Level 1.1, or Level 1.2 simplified review procedure pursuant to 4901:1-22-06 of the Ohio Administrative Code shall be charged a fee based on the sum of all actual costs of the Company per one-tenth of an hour of time spent on the simplified review.

4901:1-22

Page 4

Effective: 10/22/07

R.C. 119.032 review date: 9/30/12

Promulgated under: R.C. 111.15

Statutory authority: R.C. 4928.06

Rule amplifies: R.C. 4928.11

Prior effective dates: 9/18/00

4901:1-22-03 Industry standards.

The safety and performance standards established by the institute of electrical and electronics engineers, the underwriters laboratory, and the National Electric Code, as included in this chapter by reference, and as required consistent with division (B)(4) of section 4928.67 of the Revised Code, shall be the versions adopted in final form and effective as of July 31, 2008.

Effective: 6/29/09

R.C. 119.032 review date: 9/30/12

Promulgated under: R.C. 111.15

Statutory authority: R.C. 4928.06

Rule amplifies: R.C. 4928.11

Prior effective date: 10/22/07

4901:1-22-04 General provisions.**(A) Prohibitions**

- (1) In accordance with the electric distribution utility's (EDU) code of conduct adopted pursuant to section 4928.17 of the Revised Code, an EDU or its affiliates shall not use, without the customer's consent, such knowledge of proposed interconnection service to prepare competing proposals to the interconnection service that offer either discounted rates in return for not providing the interconnection service or competing generation.
- (2) No EDU shall reject, penalize, or discourage the use or development of new technology for interconnection service in accordance with division (A) of section 4928.11 of the Revised Code.

(B) Application processing

- (1) EDUs shall process all applications for interconnection service and parallel operation with the EDU's system in a nondiscriminatory manner and in the order in which they are received.
- (2) Where minor modifications to a pending application are required during the EDU's review of the application, such minor modifications shall not require a new or separate application to be filed by the applicant.
- (3) The EDU shall automatically provide each applicant with a written notice of the EDU's receipt of an application within three business days after the application has been received. The notice of receipt shall include the following:
 - (a) A copy of the applicable review process.
 - (b) A target date for processing the application.
- (4) If the EDU determines that the application is incomplete, the EDU personnel identified as being responsible for reviewing the application must provide the following:

Applications qualifying for Level 2 expedited review process pursuant to 4901:1-22-07 of the Ohio Administrative Code shall be charged in accordance with subsections (a), (b) and (c) inclusive, that immediately follow:

- (a) An application fee of fifty dollars, plus one dollar per kilowatt of the applicants' system nameplate capacity rating.
- (b) The cost of engineering work done as part of any impact or facilities study, equal to the sum of all actual costs incurred by the Company.
- (c) The actual cost to the Company for any minor modification of the Company's system that would otherwise not be done but for the applicant's interconnection request.

Applications qualifying for Level 3 standard review procedure pursuant to 4901:1-22-08 of the Ohio Administrative Code shall be charged in accordance with subsections (a), (b) and (c) inclusive, that immediately follow:

- (a) An application fee of one hundred dollars, plus two dollars per kilowatt of the applicants' system nameplate capacity rating.
- (b) The cost of engineering work done as part of any feasibility, system impact or facilities study, equal to the sum of all actual costs incurred by the Company.
- (c) The actual cost to the Company of any modifications of the Company's system that would otherwise not be done but for the applicant's interconnection request.

Construction or System Upgrades

If the Interconnection requires construction or an upgrade of the Company's system which, save for the generation facility would not be required, the Company will assess the Interconnection Service Customer the actual cost including applicable taxes of such construction or upgrade. Payment terms for such construction or upgrade will be agreed to and specified in the construction contract. The Company and the Interconnection Service Customer may negotiate for alternatives in order to reduce any costs or taxes applicable thereto.

Other Terms and Conditions

The customer and the Company shall be subject to the interconnection-related rules set forth in Sections 4901:1-22-01 et seq. of the Ohio Administrative Code, as amended from time to time. Said rules are incorporated herein by reference. In the event that there is any conflict between the terms and conditions set forth in this Tariff and those set forth in said rules, the latter shall control.

- (a) A written notice within ten business days after the application has been received indicating that the application is not complete.
 - (b) A checklist or description of the information needed to complete the application.
 - (c) A statement that processing the application cannot begin until the needed information is received.
- (5) If an EDU determines that it cannot connect the applicant's facility within the time frames stated in this chapter, it will notify the applicant in writing of that fact within ten business days after the application has been received. The notification must include the following:
- (a) The reason or reasons interconnection service could not be performed within the time frames stated in this rule.
 - (b) An alternative date for interconnection service.

(C) Compliance with national industry standards

An EDU shall file tariffs for uniform interconnection service with the commission that are consistent with the following:

- (1) The institute of electric and electronics engineers 1547 standard, effective as set forth in rule 4901:1-22-03 of the Administrative Code.
- (2) Underwriters laboratory 1741 standard for inverters, converters, and controllers for use in independent power systems, effective as set forth in rule 4901:1-22-03 of the Administrative Code.
- (3) The appropriate criteria and interconnection parameters for the customer's technology, so as not to impose technical and economic barriers to new technology or the development, installation, and interconnection of an applicant's facilities, pursuant to division (A) of section 4928.11 of the Revised Code.

(D) Metering

Any metering installation, testing, or recalibration performed by the EDU at the request of the applicant for installation of the applicant's distributed generation facility shall be provided consistent with the electric service and safety standards pursuant to Chapter 4928. of the Revised Code, and rule 4901:1-10-05 and, as applicable, paragraph (C) of rule 4901:1-10-28 of the Administrative Code. Interconnection requested by the applicant for the purposes of net metering must follow the commission's net metering rules promulgated pursuant to division (A)(31) of section 4928.01 of the Revised Code. Any exception to the net metering rules shall be implemented in accordance with any special metering or communication infrastructure ordered by the commission.

(E) Disposal of excess energy produced by the applicant's distributed generation

- (1) An applicant proposing to install a self-generator as defined in division (A)(32) of section 4928.01 of the Revised Code for the purposes of selling excess electricity to retail electric service providers as a competitive service to the extent not preempted by federal law must first seek certification of managerial, technical and financial capability consistent with section 4928.08 of the Revised Code.
- (2) An applicant requesting interconnection for the purpose of selling energy to any party as a sale for resale or as a wholesale transaction may be subject to applicable rules for regional interstate sales at wholesale prices in markets operated by independent transmission system operators or

Ohio Edison Company
Akron, Ohio

P.U.C.O. No. 11

Original Sheet No. 94
1st Revised Page 1 of 2

Net Energy Metering Rider

Availability

Pursuant to Section 4928.01(A)(30)-(32) of the Revised Code (Net Metering), a customer-generator is a customer of the Company that is a user of a net metering system. To qualify for a net metering system, the customer-generator facility must use as its fuel either solar, wind, biomass, landfill gas, or hydropower, or use a microturbine (a combustion turbine with a peak capacity of 100 kW or less) or a fuel cell which is located on the customer-generator's premises and operates in parallel with the Company's transmission and distribution systems and is intended primarily to offset part or all of the customer's requirements for electricity. A net metering system used by a customer-generator shall meet all applicable safety and performance standards established by the National Electrical Code, the Institute of Electrical and Electronic Engineers, and Underwriters Laboratories.

Pursuant to Section 4928.67 of the Revised Code, service under this Rider is available upon request to customer-generators on a first come, first served basis so long as the total rated generating capacity used by customer-generator facilities is less than one percent of the Company's aggregate customer peak demand in this state.

Metering

In order to receive service under this Rider, Net Metering must be accomplished using a single meter capable of registering the flow of electricity in each direction. If the existing electrical meter in service at the customer's facility is not capable of measuring the flow of electricity in each direction, the Company will, upon written request by the customer-generator, acquire, install, maintain, and read an approved meter that is capable of measuring electricity in each direction. The customer-generator will pay the Company all expenses involved in either modifying the existing meter or providing a new meter capable of registering the flow of electricity in each direction. Maintenance of the meter will be the responsibility of the Company, which will own the meter. The Company, at its own expense and with written consent of the customer-generator, may install additional meters to monitor the flow of electricity. Maintenance of the additional meter(s) will be the responsibility of the Company, which will own the meter(s).

Billing

The provisions of this rider will be applied to the rate schedule to which the customer would be assigned if that customer were not a customer-generator. The customer-generator will be billed or credited charges and applicable riders as measured by the meter. Measured demand specified in the appropriate tariff shall be based on the peak demand measured as supplied by the Company only, flowing from the Company's system to the customer-generator's facility. If the Company supplies more kilowatt-hours of electricity than the customer-generator facility feeds back to the Company's system during the billing period, all energy charges of the appropriate rate schedule shall be applied to the net kilowatt-hours of electricity that the Company supplied. If the customer-generator facility feeds more kilowatt-hours of electricity back to the system than the Company supplies to the customer-generator facility during the billing period, energy charges of the unbundled generation component of the appropriate rate schedule shall be applied to the net kilowatt-hours of electricity that the customer-generator facility supplied, which shall be allowed to accumulate as a bill credit until netted against the customer generator's bill. A refund in an amount of the accumulated bill credit will be paid to the customer-generator after three consecutive billing periods of such accumulation upon written request by the customer-generator.

Filed pursuant to Order dated March 25, 2003, in Case No. 02-2020-EL-ATA before
The Public Utilities Commission of Ohio

Issued by H. Peter Burg, President

Effective: April 1, 2003

Rider No. 17 Net Energy Metering Rider

Application

Customer-generators seeking to receive service under the provisions of this rider must submit a written application to the Company demonstrating compliance with the Net Energy Metering Rider provisions and quantifying the total rated generating capacity of the customer-generator facility.

Interconnection

The Company's Distribution Interconnection Tariff shall apply to service under this rider.

FirstEnergy

Net Energy Metering Rider – Application for Service¹

Customer's Name: _____

Service Point Address: _____

City: _____ State: _____ Zip: _____

Account Number: _____

Contact Person: _____

Telephone Number: _____

Address: _____

City: _____ State: _____ Zip: _____

Email Address: _____

This application is for electric service under the Select Operating Company Company's Net Energy Metering Rider for the above customer ("Customer"). The Customer qualifies for the Net Energy Metering Rider since its generator of electricity uses as its fuel approved under the Alternative Energy Portfolio Standards Act No. 2004-213 ("Act"), solar photovoltaic, solar thermal, wind power, hydropower, geothermal, biologically derived methane gas, biomass energy, coal mine methane, waste coal, demand-side management, municipal solid waste, by-products of the pulping process and wood manufacturing process, integrated combined coal gasification technology or a fuel cell/distributed generation that is located on the Customer's premises and operates in parallel with the Company's transmission and distribution systems and is intended primarily to offset part or all of the Customer's requirements for electricity.

The Customer-generator facility qualifies for the Rider as it is a Select Type type generator, which is one of those qualifying facilities identified in the Rider and restated above. Total rated generating capacity of the Customer-generator to be used and billed under the Net Energy Metering Rider, is _____ kW (Not to exceed 50 kW residential, 3 MW non-residential and up to 5 MW under certain conditions as specified in the Act).²

The Customer acknowledges that it has read the Net Energy Metering Rider and agrees to all terms and conditions contained therein including without limitation those specified in the

¹ When finished completing form, save with a new name. Place cursor on a spot other than a dropdown list to print.

² In the event this host account intends to make excess energy available to other qualifying accounts under the "Virtual Net-Metering" provisions of the Rider, the account information required on the Addendum must be supplied for each additional account.

Company's interconnection tariff and the Company's interconnection requirements. The customer agrees not to operate its generator in parallel with the Company's electrical system without specific approval in accordance with the Company's interconnection requirements.

The Customer understands and agrees that a meter, which is capable of registering the flow of electricity in each direction, must be in service at the facility. If a meter is not in service with this capability, the Customer must submit a written request to the Company, and provide reasonable time for installation and the EDC will not charge the Customer generator a fee or other type of charge unless the fee or charges would apply to other customers. (The customer-generator is responsible for the customer charge, demand charge and other applicable charges under the applicable Rate Schedule.)

The Customer acknowledges and agrees that operation of Customer's generation facility is intended primarily to offset part or all of Customer's electricity requirements in accordance with the Net Energy Metering Rider. Customer further acknowledges and agrees that excessive generation by the Customer's generation facility, as determined solely by the Company, is cause for disqualification for service under the Net Energy Metering Rider.

Requested By:

Customer Name

Authorized Signature

Date

Approved By:

Company Signature

Name (Typed or Printed)

Date

Rejected:

Company Signature

Name (Typed or Printed)

Reason for Rejection

Date

Select Company
Net Energy Metering Rider – Application for Service
Virtual Net Metering – Additional Account Information ¹

Host Account Customer's Name: _____

Host Account Number: _____

Dependent Account Customer's Name: _____

Service Point Address: _____

City: _____ State: _____ Zip: _____

Account Number: _____

Distance from Host Account Property: _____

Dependent Account Customer's Name: _____

Service Point Address: _____

City: _____ State: _____ Zip: _____

Account Number: _____

Distance from Host Account Property: _____

Dependent Account Customer's Name: _____

Service Point Address: _____

City: _____ State: _____ Zip: _____

Account Number: _____

Distance from Host Account Property: _____

Dependent Account Customer's Name: _____

Service Point Address: _____

City: _____ State: _____ Zip: _____

Account Number: _____

Distance from Host Account Property: _____

¹ Account information must be supplied for each account eligible for "Virtual Net Metering" under the Rider.
Attach additional pages if necessary.

4901:1-10-28 Net metering.

(A) Standard net metering.

(A)(1) Each EDU electric utility shall develop a tariff for net metering. Such tariff shall be made available to qualifying customer generators upon request.

(a) A qualifying customer generator is one whose generating facilities are:

(i) Fueled by solar, wind, biomass, landfill gas, or hydropower, or use a microturbine or a fuel cell.

(ii) Located on a customer generator's premises.

(iii) Operated in parallel with the electric utility's transmission and distribution facilities.

(iv) Intended primarily to offset part or all of the customer generator's electricity requirements.

(b) Net-metering arrangements shall be made available regardless of the date the customer's generating facility was installed.

(2) The electric utility's tariff for net metering shall be identical in rate structure, all retail rate components, and any monthly charges, to the tariff to which the same customer would be assigned if that customer were not a customer generator. Such terms shall not change simply because a customer becomes a customer generator.

(3) No electric utility's tariff for net metering shall require customer generators to:

(a) Comply with any additional safety or performance standards beyond those established by rules in Chapter 4901:1-22 of the Administrative Code, and the "National Electrical Code," the "Institute of Electrical and Electronics Engineers," and "Underwriters Laboratories," in effect as set forth in rule 4901:1-22-03 of the Administrative Code.

(b) Perform or pay for additional tests beyond those required by paragraph (A)(3)(a) of this rule.

(c) Purchase additional liability insurance beyond that required by paragraph (A)(3)(a) of this rule.

(4) Net metering shall be accomplished using a single meter capable of registering the flow of electricity in each direction. A customer's existing single-register meter that is capable of registering the flow of electricity in both directions satisfies this requirement. If the customer's existing electrical meter is not capable of measuring the flow of

electricity in two directions, the electric utility, upon written request from the customer, shall install at the customer's expense a meter that is capable of measuring electricity flow in two directions.

(5) The electric utility, at its own expense and with the written consent of the customer generator, may install one or more additional meters to monitor the flow of electricity in each direction. No electric utility shall impose, without commission approval, any additional interconnection requirement or additional charges on customer generators refusing to give such consent.

(6) The measurement of net electricity supplied or generated shall be calculated in the following manner:

(a) The electric utility shall measure the net electricity produced or consumed during the billing period, in accordance with normal metering practices.

(b) If the electric utility supplies more electricity than the customer generator feeds back to the system in a given billing period, the customer generator shall be billed for the net electricity that the electric utility supplied, as measured in accordance with normal metering practices.

(c) If the customer generator feeds more electricity back to the system than the electric utility supplies to the customer generator, only the excess generation component shall be allowed to accumulate as a credit until netted against the customer generator's bill, or until the customer generator requests in writing a refund that amounts to, but is no greater than, an annual true-up of accumulated credits over a twelve-month period.

(7) In no event shall the electric utility impose on the customer generator any charges that relate to the electricity the customer generator feeds back to the system.

(B) Hospital net metering.

(1) Each electric utility shall develop a separate tariff providing for net metering for hospitals. Such tariff shall be made available to qualifying hospital customers upon request.

(a) As defined in section 3701.01 of the Revised Code, "hospital" includes public health centers and general, mental, chronic disease, and other types of hospitals, and related facilities, such as laboratories, outpatient departments, nurses' home facilities, extended care facilities, self-care units, and central service facilities operated in connection with hospitals, and also includes education and training facilities for health professions personnel operated as an integral part of a hospital, but does not include any hospital furnishing primarily domiciliary care.

(b) A qualifying hospital customer generator is one whose generating facilities are:

(i) Located on a customer generator's premises.

(ii) Operated in parallel with the electric utility's transmission and distribution facilities.

(2) Net-metering arrangements shall be made available regardless of the date the hospital's generating facility was installed.

(3) The tariff shall be based both upon the rate structure, rate components, and any charges to which the hospital would otherwise be assigned if the hospital were not taking service under this rule and upon the market value of the customer-generated electricity at the time it is generated. For purposes of this rule, market value means the locational marginal price of energy determined by a regional transmission organization's operational market at the time the customer-generated electricity is generated.

(4) For hospital customer generators, net metering shall be accomplished using either two meters or a single meter with two registers that are capable of separately measuring the flow of electricity in both directions. One meter or register shall be capable of measuring the electricity generated by the hospital at the time it is generated. If the hospital's existing electrical meter is not capable of separately measuring electricity the hospital generates at the time it is generated, the electric utility, upon written request from the hospital, shall install at the hospital's expense a meter that is capable of such measurement.

(5) The tariff shall allow the hospital customer-generator to operate its electric generating facilities individually or collectively without any wattage limitation on size.

(6) The hospital customer generator's net metering service shall be calculated as follows:

(a) All electricity flowing from the electric utility to the hospital shall be charged as it would have been if the hospital were not taking service under this rule.

(b) All electricity generated by the hospital shall be credited at the market value as of the time the hospital generated the electricity.

(c) Each monthly bill shall reflect the net of paragraphs (B)(6)(a) and (B)(6)(b) of this rule. If the resulting bill indicates a net credit dollar amount, the credit shall be netted against the hospital customer generator's bill until the hospital requests in writing a refund that amounts to, but is no greater than, an annual true-up of accumulated credits over a twelve-month period.

(7) No electric utility's tariff for net metering shall require hospital customer generators to:

(a) Comply with any additional safety or performance standards beyond those established by rules in Chapter 4901:1-22 of the Administrative Code, and the National Electrical Code, the institute of electrical and electronics engineers, and underwriters laboratories, in effect as set forth in rule 4901:1-22-03 of the Administrative Code.

(b) Perform or pay for additional tests beyond those required by paragraph (B)(7)(a) of this rule.

(c) Purchase additional liability insurance beyond that required by paragraph (B)(7)(a) of this rule.

(8) In no event shall the electric utility impose on the hospital customer generator any charges that relate to the electricity the customer generator feeds back to the system.

Effective: 06/29/2009

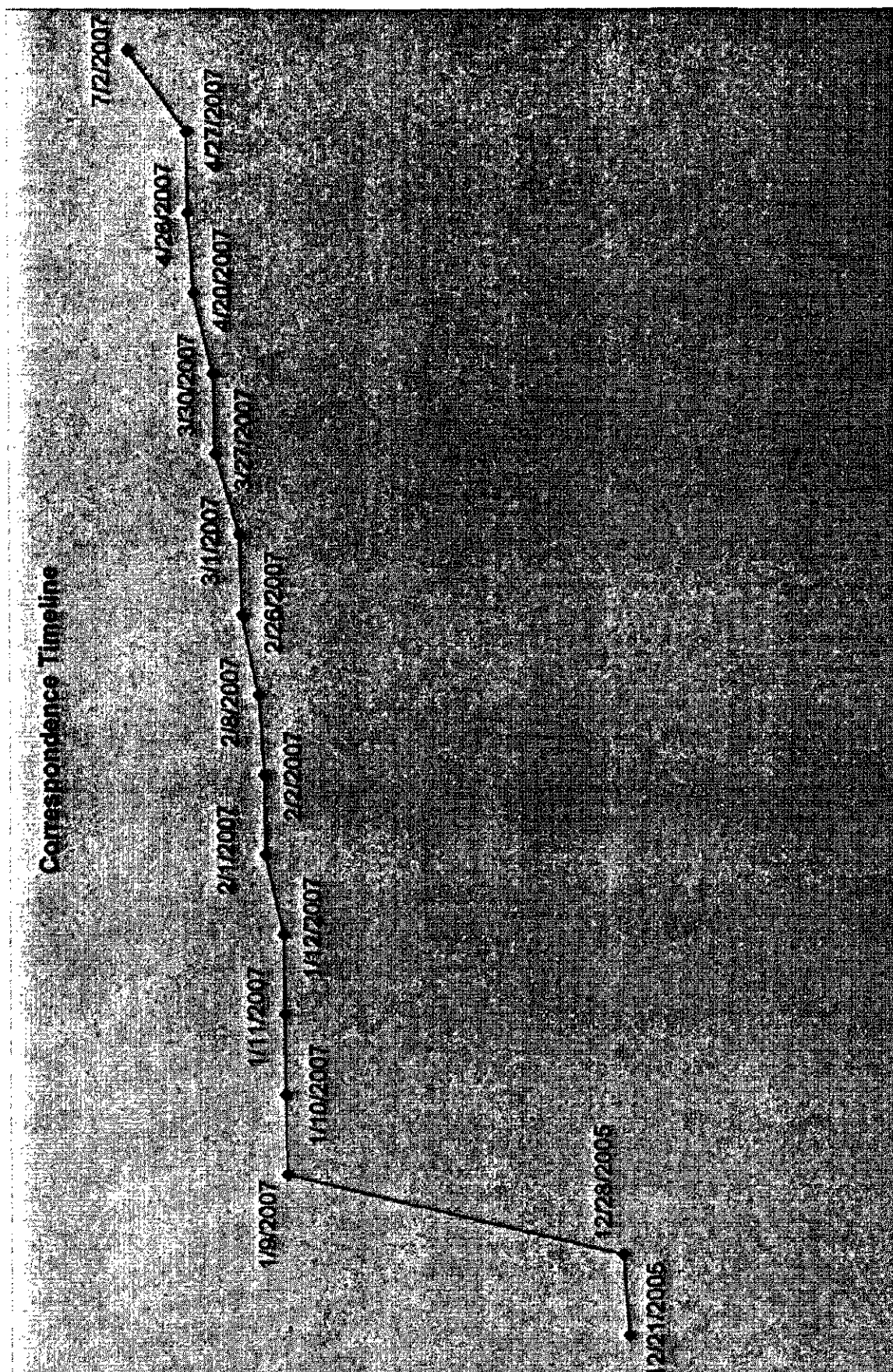
R.C. 119.032 review dates: 11/26/2008 and 09/30/2012

Promulgated Under: 111.15

Statutory Authority: 4928.06, 4928.11, 4905.28, 4928.67

Rule Amplifies: 4928.67, 4928.11, 4905.28

Prior Effective Dates: 9/18/00, 1/1/04, 10/22/07



Correspondence Timeline Detail

12/21/2006

Customer Service acknowledges receipt of inquiry
Brian Receives email from Aurora Pearson in response to inquiry
yes, Ohio Edison will purchase excess power produced by wind turbines
provides attachment of related tariff
further questions directed to Paul Gerber, advanced Engineer

12/28/2006

Email sent between First Energy employees stating
that Brian must complete an interconnection agreement and make
application for a bidirectional meter
Chrystal Richards and Yvette Gilbert

1/9/2007

Another inquiry sent to First Energy OE-010907-052400 Meter Reading

1/10/2007

Email sent to Aalexander@firstenergycorp.com
asking for assistance in getting a new bi-directional meter
notes paying \$250.00 fee, filing application, sending diagrams, and provided
contacts for people with similar turbines
makes note of a \$280.00 bill
notes dissatisfaction with the actions of Bruce Rammel and does not want to deal with him any longer
emailed Bruce Rammel noting his dissatisfaction
received email from Tiffany Douglass
says that billing won't change until the application is received
received email back from Bruce Rammel cc: msamir@firstenergycorp.com
States there is little information to be found regarding this type inverter
states that "you folks seem to be difficult to reach" after multiple avenues of contact were given

1/11/2007

Previous email to aalexander was forwarded to the Rates department, ryjimenez@firstenergycorp.com

1/12/2007

Received email from Rey Y. Jimenez stating that the issues are being addressed by the Customer Support Group

2/1/2007

Received email from Rich Adelman, Sr. Account Manager
states that its been 2 weeks since meeting at Rich's Office
notifies brian he is waiting on further specs on the inverter to finish application
provides vague interpretation of how the Net Energy Metering Rider works
Asks for Brian to provide the inverter schematic

2/2/2007

Brian email Clarence Walsh and Robert Steele to notify them of his need for specifications
This email states that he will be meeting with Rich Adelman this day after lunch

2/8/2007

Brian received an email from Rich Adelman saying he received the specs and has made electronic versions of them
forwarded to Bruce Rammel
Says its not sufficient info to proceed with the Interconnection Approval
States an interest in contacting the manufacturer of the Wind generators to smooth out any future problems

2/26/2007

Brian receives email from Rich Adelman
Says Bruce received add'l inverter information from Jacob's Wind Energy
Inverter application still not approved
Asks for further contact information for Robert Steele and Clarence Walsh

3/1/2007

Brian sends requested contact information to Rich Adelman
Rich asks Brian for information regarding two other wind generators like his. Who and Where?

3/27/2007

Brian receives email from Rich stating he was unsuccessful in obtaining test data from manuf. Of inverter
also trying to determine who can test the system and who would be responsible for having it tested

3/30/2007

Brian receives email from Rich
wants to arrange time when people can visit site to verify no back-flow when system loses utility source power
says that Brian can leave system on if this is verified
Asks for Brian to be present during testing process for various reasons
aks to have this completed in less than one week

Office of the Ohio Consumers' Counsel

4/20/2007

Emails exchanged between Bruce Remmel and Clarence Walsh
Clarence asks questions regarding the lawfulness of the actions being pursued by First Energy

4/26/2007

Brian sent to Rich - "I have not heard from you or anyone else at First energy of what is going on with the inverter, and how long this might take to get us online. Please Reply."

4/27/2007

Brian receives reply from Rich stating Bruce left several messages with wind-gen vendor, Bob Niehueser to provide an inverter for testing, no return call
States there is a possibility that the systems might not meet Simplified Interconnection Application Requirements

7/2/2007

Letter from Chns Maiotti to Rick Reese, Ohio Consumers' Counsel
encloses documentation relating to contact with First Energy

12/21/2006

12/28/2006

1/9/2007

1/10/2007

1/11/2007

1/12/2007

2/1/2007

2/2/2007

2/8/2007

2/26/2007

3/1/2007

3/27/2007

3/30/2007

4/20/2007

4/26/2007

4/27/2007

7/2/2007

INT-19. Regarding FE's response to INT-18, what steps were taken to approve these applications?

RESPONSE: In each instance the projects involved wind turbines. Some were inverter based however without UL certification. Most of the manufactures on the non-pre-certified equipment had recognized the need for additional relaying to meet the IEEE standard. Their applications were proposed with the additional protective relaying which would be set and tested during start up and commissioning of the equipment. Where this was not the case, the vendors added the necessary relaying to their scheme in order to meet the requirements of the Companies' interconnection rate schedules. In some instances this process took several iterations. In all cases, the eventual outcome was to incorporate additional relaying to comply with IEEE 1547. All but three of the 10 which have been approved have utilized the same relay that the Company suggested to Mr. Malott. [Rommel]

INT-20. How many customers currently have net metering agreements with FE?

Please provide a response with the number of customers broken down by class.

RESPONSE: The Company does not maintain such information in the format requested. There are 85 bi-directional meters installed in the Ohio FE Operating Companies' service territory. There are an additional ten without a bi-directional meter who are also taking service under the net metering agreements of the respective companies. [Rommel]

INT-21. From January 2000 through May 2009, how many customers have applied for net metering with FE in Ohio?

RESPONSE: Objection. The allegations set forth in the complaint gave rise to activities after 2000 and, therefore, any requested information prior to the period referenced in the Complaint is irrelevant to these proceedings. Without waiving the objection, see response to INT-20. [Kolich (Obj.)/Rommel (Answer)]

INT-22. Regarding FE's response to INT- 21, from January 2000 through May 2009, how many customers have been rejected?

RESPONSE: Objection. See response to INT-21. Further, the request is vague, overly broad and irrelevant to this proceeding. Without waiving this objection, the Companies do not track the information being requested. [Kolic (Obj.)/ Remmel (Answer)].

- a. Please list all the reasons the Companies have recorded for rejecting net metering applications.

RESPONSE:

Failure to meet the prerequisites set forth in the respective company's net energy metering rider, including a valid interconnection agreement and/or design. [Ludden]

- b. Please provide a frequency table for all the reasons listed in response to a. above.

RESPONSE: See response to INT-20. [Kolic]

INT-23. For all customers that have executed a net metering contract from 2000 through the date of the PUCO's new net metering and interconnection rules and the Companies' new interconnection tariff filing of December 21, 2007:

- a. On average, how many days (from the time the Company received the customer application to the time it was executed) has it taken to execute a net metering agreement?

RESPONSE: Objection. The allegations set forth in the complaint gave rise to activities after 2000 and, therefore, any requested information prior to the period referenced in the Complaint is irrelevant to these proceedings. Further, The requested information is overly broad, goes beyond the scope of the allegations set forth in the complaint and is therefore irrelevant to the resolution of this matter and not designed to lead to the discovery of admissible evidence. Without waiving the objection, the number of days for execution of a net metering agreement is a function of the specific circumstances surrounding the application. [Kolic (Obj.)/ Remmel (Answer)]

- b. What is the range of days that it has taken to execute a net metering agreement?

RESPONSE: See Response to Interrogatory 23 (a) above. Further the request is unduly burdensome. [Kulich]

- c. How many customers have had their executed net metering agreements later altered or rescinded by the Companies? Please list the reasons given to the customers.

RESPONSE: 0 [Ledden]

INT-24. For all customers that have executed a net metering contract from the date of the PUCO's new net metering and interconnection rules until the present:

- a. On average, how many days elapsed from the time the Company received a customer application to execution of a net metering agreement?

RESPONSE: See Response in Interrogatory 23(a) [Kulich]

- b. Please provide the range of days that it has taken to execute a net metering agreement?

RESPONSE: See Response in Interrogatory 23(a). [Kulich]

INT-25. According to the Companies' tariff (Interconnection Tariff, PUCO No. 11, page 3), for those Applications that do not qualify for a Simplified Interconnection Agreement pursuant to the Screening Process included in the Technical Requirements, the Company may require a supplemental

4928.11 Minimum service requirements for noncompetitive services.

(A) For the protection of consumers in this state, the public utilities commission shall adopt rules under division (A) of section 4928.06 of the Revised Code that specify minimum service quality, safety, and reliability requirements for noncompetitive retail electric services supplied by an electric utility in this state, to the extent such authority is not preempted by federal law. The rules shall include prescriptive standards for inspection, maintenance, repair, and replacement of the transmission and distribution systems of electric utilities; shall apply to each substantial type of transmission or distribution equipment or facility; shall establish uniform interconnection standards to ensure transmission and distribution system safety and reliability and shall otherwise provide for high quality, safe, and reliable electric service; shall include standards for operation, reliability, and safety during periods of emergency and disaster; and shall include voltage standards for efficient operation of single-phase motors. The rules regarding interconnection shall seek to prevent barriers to new technology and shall not make compliance unduly burdensome or expensive. When questions arise about specific equipment to meet interconnection standards, the commission shall initiate proceedings open to the public to solicit comments from all interested parties. Additionally, rules under this division shall include nondiscriminatory metering standards.

(B) The commission shall require each electric utility to report annually to the commission on and after the starting date of competitive retail electric service, regarding its compliance with the rules required under division (A) of this section. The commission shall make the filed reports available to the public. Periodically as determined by commission rule under division (A) of section 4928.06 of the Revised Code and in a proceeding initiated under division (B) of section 4928.16 of the Revised Code, the commission shall review a utility's report to determine the utility's compliance and may act pursuant to division (B) of section 4928.16 of the Revised Code to enforce compliance.

Effective Date: 10-05-1999

4928.02 State policy.

It is the policy of this state to do the following throughout this state :

- (A) Ensure the availability to consumers of adequate, reliable, safe, efficient, nondiscriminatory, and reasonably priced retail electric service;
- (B) Ensure the availability of unbundled and comparable retail electric service that provides consumers with the supplier, price, terms, conditions, and quality options they elect to meet their respective needs;
- (C) Ensure diversity of electricity supplies and suppliers, by giving consumers effective choices over the selection of those supplies and suppliers and by encouraging the development of distributed and small generation facilities;
- (D) Encourage innovation and market access for cost-effective supply- and demand-side retail electric service including, but not limited to, demand-side management, time-differentiated pricing, and implementation of advanced metering infrastructure;
- (E) Encourage cost-effective and efficient access to information regarding the operation of the transmission and distribution systems of electric utilities in order to promote both effective customer choice of retail electric service and the development of performance standards and targets for service quality for all consumers, including annual achievement reports written in plain language;
- (F) Ensure that an electric utility's transmission and distribution systems are available to a customer-generator or owner of distributed generation, so that the customer-generator or owner can market and deliver the electricity it produces;
- (G) Recognize the continuing emergence of competitive electricity markets through the development and implementation of flexible regulatory treatment;
- (H) Ensure effective competition in the provision of retail electric service by avoiding anticompetitive subsidies flowing from a noncompetitive retail electric service to a competitive retail electric service or to a product or service other than retail electric service, and vice versa, including by prohibiting the recovery of any generation-related costs through distribution or transmission rates;
- (I) Ensure retail electric service consumers protection against unreasonable sales practices, market deficiencies, and market power;
- (J) Provide coherent, transparent means of giving appropriate incentives to technologies that can adapt successfully to potential environmental mandates;

(K) 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;

(L) Protect at-risk populations, including, but not limited to, when considering the implementation of any new advanced energy or renewable energy resource;

(M) Encourage the education of small business owners in this state regarding the use of, and encourage the use of, energy efficiency programs and alternative energy resources in their businesses;

(N) Facilitate the state's effectiveness in the global economy.

In carrying out this policy, the commission shall consider rules as they apply to the costs of electric distribution infrastructure, including, but not limited to, line extensions, for the purpose of development in this state.

Effective Date: 10-05-1999; 2008 SB221 07-31-2008

1 BEFORE THE PUBLIC UTILITIES COMMISSION OF OHIO

- - -

2 In the Matter of the :
 Complaint of James Giesler, :
 :
 vs. :Case No. 07-498-EL-CSS
 :
 Toledo Edison Company. :

- - -

5 In the Matter of the :
 Complaint of Lester L. :
 Lemke, :
 :
 vs. :Case No. 07-514-EL-CSS
 :
 Toledo Edison Company. :

- - -

9 In the Matter of the :
 Complaint of Brian A. and :
 Christy G. Malott, :
 :
 vs. :Case No. 07-525-EL-CSS
 :
 Ohio Edison Company. :

- - -

14 DEPOSITION

15 of Don Oleksa, taken before me, Karen Sue Gibson, a
 16 Notary Public in and for the State of Ohio, at the
 17 offices of Janine L. Migden-Ostrander, Ohio
 18 Consumers' Counsel, 10 West Broad Street, Suite 1800,
 19 Columbus, Ohio, on Monday, September 28, 2009, at 1
 20 p.m.

- - -

22 ARMSTRONG & OKEY, INC.
 222 East Town Street, Second Floor
 Columbus, Ohio 43215-5201
 (614) 224-9481 - (800) 223-9481
 FAX - (614) 224-5724

- - -

25

ARMSTRONG & OKEY, INC., Columbus, Ohio (614) 224-9481

1 Q. Glad I asked. Do you know who
2 Mr. Zonneville reports to?

3 A. Tom Prytel, P-R-Y-T-E-L.

4 Q. How many people work for you?

5 A. Zero.

6 Q. Do you like it that way?

7 MS. KOLICH: Objection, irrelevant.

8 Q. Can you give me briefly your educational
9 background.

10 A. Attended high school in Lorain, attended
11 Lorain Community College in Elyria, went there for
12 four years, have two Associate's degrees, one in
13 computer-aided design, one in robotics, and attended
14 Cleveland State University, Bachelor's degree in
15 electrical engineering.

16 Q. Okay. Now, as I understand it, based on
17 reviewing some discovery responses we received from
18 the company, you were involved with testing of some
19 sort regarding a windmill. I guess this took place
20 in April, 2007, at the home of the Malotts?

21 A. Yes.

22 Q. Does that sound familiar? What portion
23 of the test or tests did you deal with that day?

24 A. The test to determine whether if there
25 was a power outage, would the windmill back feed onto

1 our system.

2 Q. And what did you discover from running
3 that test?

4 A. That it did not.

5 Q. How -- did you have to use some sort of
6 device to conduct this test?

7 A. Yes.

8 Q. Can you tell me what the device is?

9 A. It's an -- it's called an Eagle 330.
10 It's made by Power Monitors, Incorporated. It
11 records voltage and current, and it records other
12 things.

13 Q. Okay. Do you know what the other things
14 are?

15 A. It records flicker. It can record
16 harmonics. It can record power.

17 Q. Now, is flicker what some of us would
18 know as a momentary outage or?

19 A. Flicker would be like if your air
20 conditioning kicks on --

21 Q. Okay.

22 A. -- the lights temporarily dim.

23 Q. Now, in terms of the Eagle 330 that
24 records certain voltage and current measurements,
25 does it keep a record of those measurements

1 internally?

2 A. Yes.

3 Q. How many records can it store, like how
4 many different tests? Let's say that you perform the
5 same test on 100 different residences that had put up
6 a windmill. Would it store all of those?

7 A. Yes.

8 Q. So do you know what the storage limit is
9 on it?

10 A. It depends on the length of time that the
11 unit is on and the time interval it records.

12 Q. So at some point the memory can become
13 full?

14 A. Yes. And it will chop off the first to
15 keep running.

16 Q. Okay. So that's what it does. It goes
17 back to the beginning in sort of like a loop?

18 A. Yes. Well, it keeps running.

19 Q. Okay.

20 A. And the last record drops off.

21 Q. Now, since you can store a number of
22 records on there, do you normally -- is there a time
23 period every so often that you download those
24 records?

25 A. Yes.

1 Q. And what do you download those records
2 to? What type of device or?

3 A. Just a computer.

4 Q. And do you know -- give me an estimation
5 how often you download that.

6 A. After every -- a recording time or
7 every -- for every customer basically.

8 Q. Now, do you know what happens to that
9 record after it's downloaded?

10 A. It's stored in the computer.

11 Q. And how about after that, after it's
12 stored on the computer? Does someone do something
13 with it?

14 A. The device is used for some other
15 customer or location, and it's reformatted.

16 Q. Okay. But the report that you've
17 downloaded on to the computer, does it generate a
18 work order? Is it forwarded somewhere else, or do
19 you know?

20 A. No.

21 Q. No, you don't know or?

22 A. It does not create a work order.

23 Q. Now, it is there though for some other FE
24 personnel to access if they need to, you or someone
25 else who is in a similar position?

1 A. It could be.

2 Q. Now, do you know if in the case of the
3 Malotts those records were accessed?

4 A. Only by me.

5 Q. Only by you. Did you ever try to access
6 them in the future after you downloaded them?

7 A. Yes, to look at the interpreted data.

8 Q. And do you know when you accessed it to
9 review it?

10 A. There was the initial time after the
11 initial recording and then back maybe a month ago
12 when we were asked to look at the data -- I was asked
13 to provide Rich -- not Rich but Bruce Remmell some
14 information, so I looked at it at that time.

15 Q. Okay.

16 A. I don't remember the date.

17 Q. So when you originally accessed it,
18 sometime in the neighborhood of the time you had
19 visited the Malotts and downloaded it, would you have
20 reported it to someone at that time or provided any
21 additional writeup if there had been some readings
22 that indicated a safety issue or what would be the
23 criteria under which you would have talked to someone
24 else?

25 A. We were able to monitor the recorder live

1 at the customer's site and we were able to see the
2 voltage go from the normal 120 down to 0 and then at
3 a certain period of time when they reenergized the
4 power, it went back up to 120, so we saw it live, and
5 then later the data was taken back to the office,
6 downloaded, and I took a couple of screen shots and
7 put them in a Word document and sent them to Rich
8 Adelman.

9 Q. Now, you didn't provide these test
10 results then to the Malotts?

11 A. No.

12 Q. Have you performed tests similar to what
13 you performed at the Malotts for other customer
14 generators?

15 A. No.

16 Q. There was a specific request for you to
17 come out to test the Malotts then? This was sort of
18 an unusual undertaking for you?

19 A. Yes.

20 Q. Now, how would you call -- I'm sorry.

21 How would you refer to the test?

22 Primarily to look at safety issues? Solely to look
23 at safety issues?

24 A. Yes.

25 Q. Solely, the second one?



Power Monitors, Inc.
The Quality in Power Quality

Power Quality Recorders with Wireless Communications

• Residential • Commercial • Industrial • Electric Utility



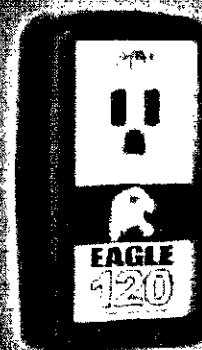
EAGLE 220



EAGLE 330



EAGLE 440



EAGLE 120

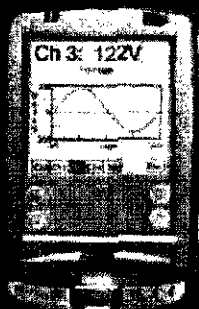
EagleClass
PQ Wireless

INTRODUCING THE WORLD'S MOST



Time and distance. Now, neither can slow the flow of critical power quality data from the field. Eagle Class PQ Wireless recorders are the first digital recorders to monitor real-time power quality data then download it to Bluetooth® enabled PC laptops, handheld PCs, and selected Palm® platform PDAs. With an Eagle Class recorder you can remotely access PQ data as it's being recorded from inside an occupied residence... behind a locked security fence... in a transformer buried underground... or from restricted areas where distribution voltages pose a safety hazard to crews.

Eagle Class PQ Wireless recorders are compact enough to fit inside a tight meter base housing, or a cramped electrical enclosure. Yet they easily outperform bigger, bulkier and more expensive recorders in a wide range of portable PQ monitoring applications.



Eagle 120

RESIDENTIAL/COMMERCIAL RECEPTACLE RECORDER

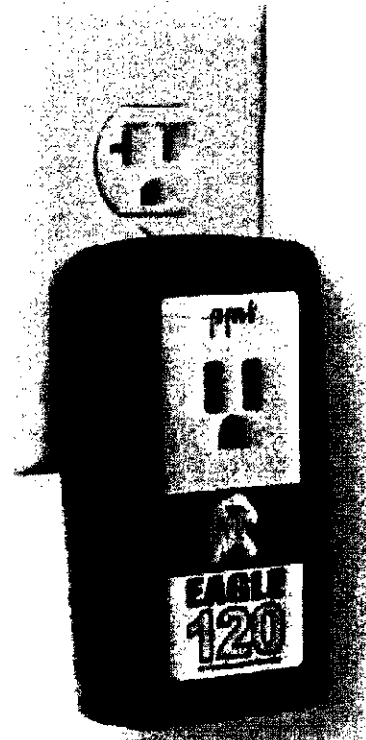
The Eagle 120 is a full-featured recorder that records two channels voltage and one channel current in single-phase residential and commercial applications. When plugged into a standard three-pronged electrical outlet, it continuously detects and records sags, swells, flicker, RMS voltage, current, power and harmonics. Additionally, the Eagle 120 captures waveforms from custom-triggered events. This recorder is remotely identified and initialized and its real-time and recorded PQ data downloaded via Bluetooth® wireless communications link, or USB cable.

FEATURES

- Lightweight (0.5 lbs.)
- Palm-size (4 7/8" L x 2 5/8" W x 1 1/4" H)
- High impact ABS plastic case
- Fast, single-cycle response
- 1 MB memory, 8 MB optional (battery-backed)
- No batteries to recharge

ADVANCED FUNCTIONALITY

- True RMS Voltage & Current recordings
- Minimum/Maximum/Average recording
- Real/Reactive/Apparent Power recording
- Custom Flicker measurement
- Harmonics to the 31st
- Waveform capture

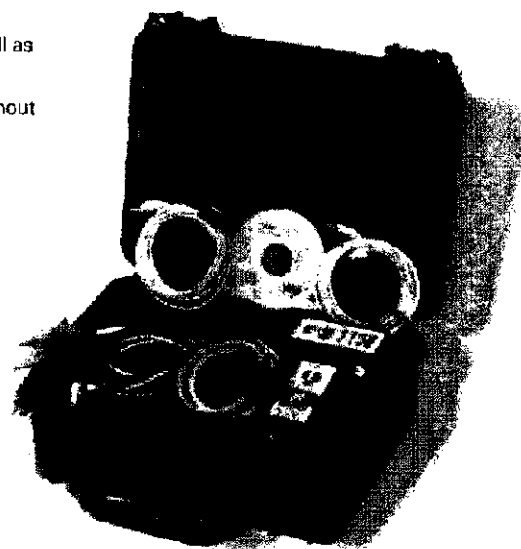


METER TECH KIT WITH EAGLE 120 OPTION

The Meter Tech Kit with an Eagle 120 option records single-phase power quality data at the meter base, as well as through a three-pronged electric outlet, to provide a comprehensive residential power quality assessment without disrupting electrical service to the customer.

FEATURES:

- Hot Wire™ 400 amp meter base recorder
- Eagle 120 single-phase receptacle recorder (optional)
- FCT 2/12 PowerFlex CTs
- Compact dolphin clips
- WinScan ProVision™ analytical software
- USB communications cable



CAPABLE WIRELESS PQ RECORDERS

Eagle 220, 330 & 440

WIRELESS RECORDERS FOR SINGLE-PHASE, THREE-PHASE AND THREE-PHASE WITH NEUTRAL MONITORING

Eagle 220, 330 and 440 PQ Wireless recorders are PMI's go anywhere 600 volt, 5000 amp power and harmonics recorders. They calculate real-time waveforms and harmonic values for triggered events in single-phase, three-phase and three-phase neutral monitoring applications. Eagle recorders weigh just 18 oz. and they're small enough to fit inside a shirt pocket. The NEMA 4X case is weatherproof, so Eagle can be installed outdoors on pole-mounted transformers, underground transformers, meter bases, or secure electrical enclosures behind a locked fence.

ENHANCED MEMORY

Eagle 220, 330 & 440
PQ Wireless recorders come
standard with 8 MB of
internal RAM for extended
data storage capacity.

- Summary Data: over 1 year
- Event Data: 500 records
- Significant Change Data: 2000 records
- Flicker Data: 1000 records



EAGLE 220 – features two voltage and current inputs for single-phase residential and light commercial applications.



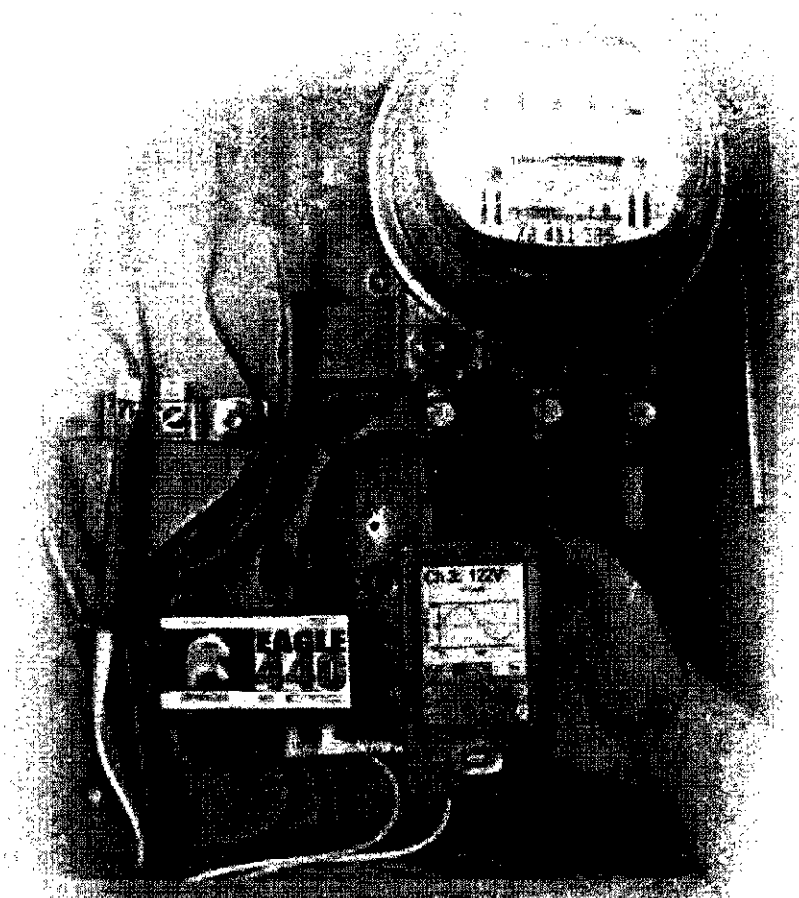
EAGLE 330 – features three voltage and current inputs for three-phase commercial and industrial monitoring.



EAGLE 440 – features four voltage and current inputs for advanced single, three-phase and three-phase neutral monitoring applications.



**EAGLE 440 SERIES RECORDER INSTALLED INSIDE
A THREE-PHASE METER BASE ENCLOSURE.**



AND ANALYTICAL SOFTWARE

WinScan

ProVision™

WinScan ProVision is the latest release of PMI's popular WinScan™ power quality analytical software. It's designed to be as user-friendly as it is flexible in the way it stores, searches for, manages and reports real-time power quality data.

With ProVision's integrated wireless communications features you can remotely initiate, schedule, download and manage multiple, real-time PQ recorders from within a single PC application. All recorder settings are viewable and configurable on your PC laptop, desktop, handheld PC, or select Palm® platform PDAs.

Once real-time and stored data are downloaded to your computer, ProVision gives you unprecedented control over the way they are viewed, managed and reported. You determine the way you want to search for and access your files.

FLEXIBLE FILE MANAGEMENT

WinScan ProVision places the tools you need to manage files and views at your fingertips – from an easy to navigate explorer bar to tool bars, shortcuts, and online technical support. Instead of exiting to the Windows™ operating system, you'll initiate and schedule multiple recorders, as well as download, save, search for and analyze PQ data – all from the same graphical console.

CUSTOM ANALYTICAL REPORTS

It's easy to change colors and font styles, increase or decrease the scale of the data and insert annotations on charts and graphs. You can even add your company logo to create a totally unique look for your reports.

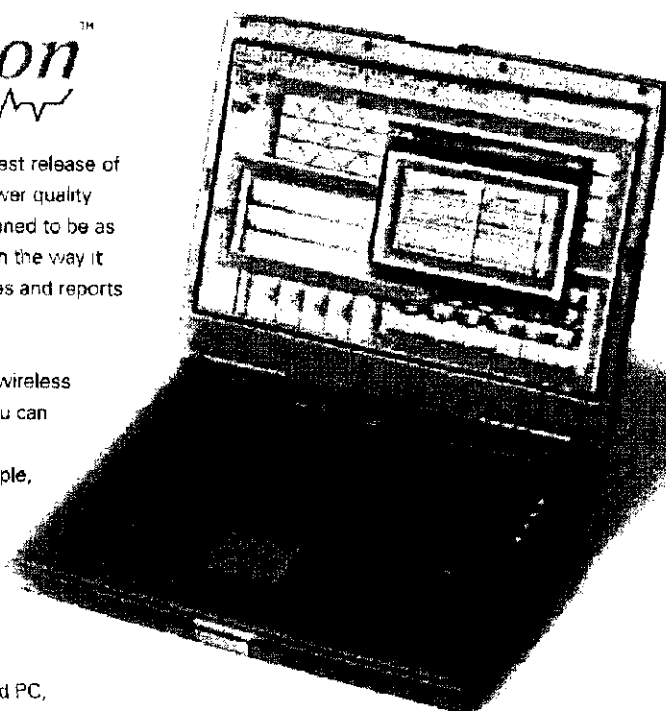
ProVision transforms real-time and stored PQ data into an array of colorful charts and graphs. They make it easy to track long-term trends and identify problems during triggered events.

Standard Reports

- Event Change Report
- Single Cycle Voltage Histogram
- Significant Change Report
- Abnormal/Loose Neutral Report
- Interval Report
- Flicker Reports
- Power Outage Report

Voltage, Current & Power

- Interval Graph & Report
- Out of Limits Report
- Histogram Graph Report
- Daily Profile Graph



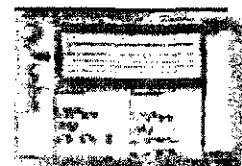
DRAG & DROP

How does one set of data relate to another? WinScan ProVision's innovative drag and drop feature lets you overlay one chart on top of another. So you get an instant visual comparison of data recorded at different times on the same recorder, or data gathered from many recorders in different locations.



EXPLORER BAR

The handy explorer bar is similar to those found on Outlook Express™ and other widely used E-mail programs. It combines shortcut buttons with quick access to folders and sub-folders, making it easier to organize projects, manage power quality data and automate repetitive tasks.



A Recent Downloads

folder provides quick access to recently saved data. You can also schedule multiple recorders to automatically download data to a PC laptop, desktop, handheld PC, or select Palm platform PDAs via Bluetooth communications link, serial port, modem, TCP link, and USB cable.

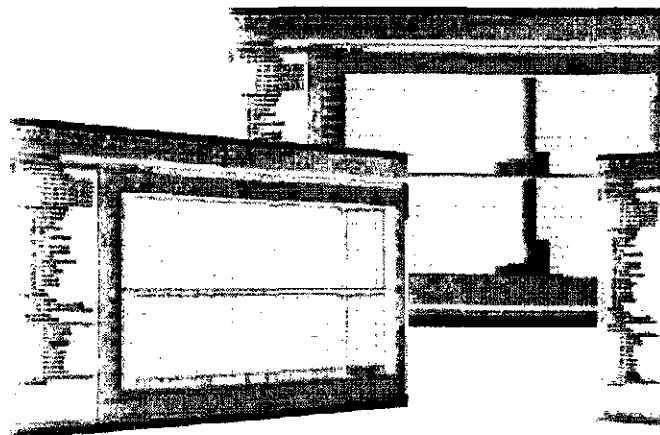


TOOL BAR

The tool bar feature incorporates an array of simple tools for automating data management tasks and customizing the graphic presentation of data to meet your specific needs:

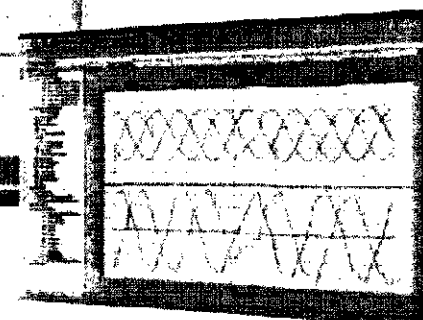
- Annotated text tool
- Pointer annotation tool
- Arrows drawing tool
- Scaling tool
- Zoom tool
- Legend editing tool
- Color selection tool
- Font selection tool
- Font styles tool
- Vertical lines tool for highlighting significant events

RMS Voltage Cycle Histogram



RMS Voltage & Current

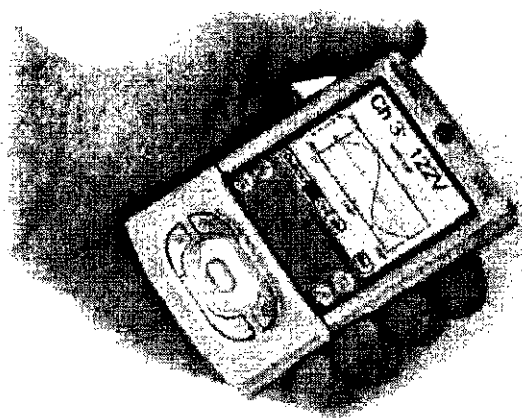
Voltage and Current Waveform Capture



COMPACT, WIRELESS PQ RECORDERS



Compact enough to fit
inside your shirt pocket:
5 3/8" L x 3 1/16" W x 1 1/4" H.
Weighs just 16 oz.



Residential

Commercial

Industrial

Electric Utility

WIRELESS COMMUNICATIONS

Eagle Class recorders are equipped with Bluetooth® wireless communications technology. This enables users to remotely identify, initialize and program the recorder, then download and view real-time and recorded data from up to one hundred feet away on Bluetooth enabled PC laptops, hand-held PCs and selected Palm® platform PDAs. Alternate communication functionality is also available via USB cable connection.

EAGLE CLASS RECORDER SPECS

Eagle 220, 330 and 440

INPUT

AC Voltage	0 to 600 VAC
AC Current	0 - 5000 amps
Sample Rate	15,360 samples per second/channel 256 samples per cycle

CHANNELS

Voltage	2, 3, or 4 channels
Current	2, 3, or 4 channels

MEASURED QUANTITIES PER CYCLE

RMS Voltage	Volts
RMS Current	Amps
Real Power	Watts
Apparent Power	VA's
Reactive Power	VARs
Phase Angle	Degrees
Power Factor	Watts/VA
Displacement PF	Cos(phase angle)
Power Usage	kWh, kVARh, kVAh

ACCURACY

	% OF FULL SCALE
Voltage	0.33 %
Current	1.0 % excl. probe
Power	1.0 %
Phase Angle	1 Degree
Power Factor	±0.02
Displacement PF	±0.02

HARMONICS

Voltage	to the 51st
Current	to the 51st
Measurements	Magnitude, phase, and THD

INFORMATION STORAGE

RAM	2 MB SRAM
Flash	8 MB

WAVEFORM CAPTURE

Triggered (value set by operator)

COMMUNICATIONS

Wireless	Bluetooth
Local	USB cable

CAPACITY

Summary Data	Exceeds 1 year
Event Data	500 records
Significant Change Data	2000 records
Flicker Data	1000 records

INTERVAL GRAPHS

(4 hours to more than 1 year)	Voltage, Current, Power Factor, Displacement Power Factor, Real Power, Reactive Power, Volt-Amps, Phase Angle, THD, Harmonics
-------------------------------	--

POWER REQUIREMENTS

Recording load	<2.5 watts
----------------	------------

PHYSICAL DIMENSIONS

Size	5 1/8" L x 3 1/16" W x 1 1/4" H
Weight	less than 1 pound
Case	NEMA 4X

BATTERY RIDE-THROUGH

Enables the recorder to operate with no input voltage for more than 4 hours. This added feature allows the Eagle 220, 330 and 440 to measure down to 0 volts during power outage periods.

Eagle 120

INPUT

AC voltage	Line-neutral 0 to 240 VAC peak 0 to 140 VAC
RMS	Continuous Neutral-ground 0 to 75 VAC RMS
AC current	0-80 amps RMS (15 amps continuous)
Sample rate	7,680 per channel/second
Recording channels	2 voltage, 1 current

CHANNELS

Voltage	2
Current	1

MEASURED QUANTITIES PER CYCLE

RMS Voltage	Volts
RMS Current	Amps
Real Power	Watts
Apparent Power	VA's
Reactive Power	VARs
Phase Angle	Degrees
Power Factor	Watts/VA
Displacement PF	Cos(phase angle)
Power Usage	kWh - kVARh - KVAh

ACCURACY

Voltage	0.33% of full scale
Current	1% of full scale
Power	1% of full scale
Phase Angle	1°
Power Factor	±0.02
Displacement PF	±0.02

HARMONICS

Voltage	to the 51st
Current	to the 51st
Measurements	Magnitude, phase, and THD

INFORMATION STORAGE

RAM	1 MB SRAM
Flash	8 MB

CAPACITY

Summary Data	Over 1 year
Event Data	500 records
Significant Change Data	1,000 records
Flicker Data	1,000 records

COMMUNICATIONS

Wireless	Bluetooth
Local	USB cable

INTERVAL GRAPHS

(4 hours to over 1 year)	Voltage, Current, Power Factor, Displacement PF, Real Power, Reactive Power, Volt-Amps, Phase Angle, THD Individual Harmonics
--------------------------	---

POWER REQUIREMENTS

Recording load	<2.5 watts
----------------	------------

ENVIRONMENTAL

Operating temperature	-20° F to 135° F
Shock	60Hz to 2kHz
Acceleration	25G
Vibration	10Hz to 50Hz
Amplitude	1.8mm

PHYSICAL DIMENSIONS

Size	4 1/8" L x 2 5/8" W x 1 1/4" H
Weight	One-Watt power
Case	ABS plastic, black

PROVISION MINIMUM SYSTEM REQUIREMENTS

100 MB hard drive free space, 512 MB of RAM
Microsoft Windows® 2000 or XP operating system
Microsoft .NET Framework, Version 1.1

NOTE: specifications subject to change without notice.

PMI is a registered trademark and WinScan and ProVision are trademarks of Power Monitors, Inc. Windows is a registered trademark and Outlook Express is a trademark of Microsoft Corporation. Bluetooth is a registered trademark of Bluetooth SIG, Inc.



Power Monitors, Inc.
The Quality in Power Quality

1661 Virginia Avenue
Harrisonburg, VA 22802
Phone: (800) 296-4120
Fax: (540) 432-9430
www.powermonitors.com

INTERROGATORIES

INT-1. Please provide the following detailed information on the net metering inspections undertaken by the FirstEnergy Companies for each of the three complaint cases.

a. Date, time, and approximate duration of the inspection

RESPONSE:

Objection to INT-1(a)-(c) as to the characterization of the inspection as a "net metering inspection". [Kolich] Without waiving this objection, the Company performed certain tests on each Complainant's generator:

Giesler – April 3, 2007 – approx 9:00 AM. For approx. 1 hr.

Lemke – Same as above, except at 10:00 AM

Malott – April 11, 2007 – Approx. 10:00 AM for approximately 1 hour
[Rommel]

b. Name, title and position description of all FE personnel
performing the inspection

RESPONSE:

Giesler – Pete Lungulow, TE Metering Services Supervisor; Bob Vallejo, TE Meter Mechanic; Rich Reineck, TE Customer Support Representative.

Lemke – Same as Giesler

Malott – Rich Adeleman, Customer Support Representative; Don Oleska, Engineer; Chirs Harper, Supervisor, Engineering Services
[Rommel]

c. The nature of the tests performed and the results

RESPONSE:

The tests at Giesler and Lemke residences were done with a standard volt meter with no recording or analytical capability. The test at Malott's residence was performed with a PMI Eagle 330 Meter.

Giesler – The location of the test was at the customer's meter location centrally located on a pedestal between the customer's house and shop which is the location of the wind turbine equipment. The meter socket is 400 amp with a bypass switch. The meter was removed and the load side was checked. No voltage present. You could hear the wind turbine go into a free wheel spin upon removal of line voltage. Another test was performed where the bypass switch at the meter socket was closed and the voltmeter was put into the load side meter terminals. 240 volts were present. The bypass switch was then opened. Voltage at the meter load side went to zero. You could hear the wind turbine go into a free wheel spin. The meter was reinstalled and approximately 20 seconds transpired before the wind turbine began generating again. This was determined by hearing the wind generator going from a free wheel spin to a load condition. It was also determined that the wind turbine was generating electricity at the inverter control panel during the test.

Lemke – The location of the test was at the customer's meter location on his house. The tests described for Giesler were done at the Lemke premises.

Malott – A PMI Eagle 330 Meter was connected simply to verify that the system stopped producing energy on loss of utility power. The equipment was not capable of testing under varying voltage and/or frequency conditions. The PMI meter was connected hot to neutral on the load side of the utility meter on each leg of service. The utility meter was pulled to simulate a utility outage. The voltage was near zero in about 8 to 10 cycles.

[Rommel]

INT-2. Subsequent to the testing referred to INT-1, did FE determine that any of the wind systems pose any safety hazard to FE linemen? If yes, please describe the safety hazard.

RESPONSE: See objection in INT-1 as to the characterization as a net metering inspection. [Kolic] Without waiving said objection, no, but the tests did not conclude that they did not pose such a risk either. The monitoring equipment used was incapable of determining how long the systems would continue to produce energy under low voltage conditions which could contribute to increased damage and delayed operation of utility apparatus under fault conditions. Rather, it was concluded that there was a low probability of serious injury to FE personnel. [Rommel]

INT-3. Were the FE net metering test results shared with the complainants?

RESPONSE: There were no such results. [Rommel]

a. If yes, was the information provided in a written or verbal form?

RESPONSE: N/A [Rommel]

b. Were they provided on the same day or sometime after?

RESPONSE: N/A [Rommel]

c. Were the test results explained to the net metering customers?

RESPONSE: N/A [Rommel]

d. If the test results were not shared with the net metering customer
please explain why not?

RESPONSE: N/A – there were no such test results to share. [Rommel]

INT-4. Does FE require that all net metering customers install a bi-directional
meter even if the customer's existing meter was capable of registering the
flow of energy in both directions?

RESPONSE: Objection. The requested information is beyond the scope of the
allegations set forth in the Complaint and, therefore, is irrelevant to the resolution of this
matter and not designed to lead to the discovery of admissible evidence. Without waiving
this objection, the Companies require the installation of a bi-directional meter as required
under the terms of their respective net metering rider. [Kulich (Obj.)/ Ledden (Answer)]

a. If yes, please explain FirstEnergy's rationale.

RESPONSE: See Response in Interrogatory 4. Without waiving this objection, the
Companies' rationale is based on the requirement that they must comply with
Commission approved rate schedules. [Kulich (Obj.)/ Ledden (Answer)]

b. If yes, what is the make and model of the meter installed?

RESPONSE: See Objection in Interrogatory 4. [Kulich]

c. What is the cost of the meter?

RESPONSE: See Objection in Interrogatory 4. [Kulich]

d. Who pays for the meter?

RESPONSE: See Objection in Interrogatory 4. [Kulich]

e. If the Company did not charge the complainants for the meter, how
is the Company recovering the cost of the meter?

RESPONSE: See Objection in Interrogatory 4. [KJKulich]

Rich Adelman

1 BEFORE THE PUBLIC UTILITIES COMMISSION OF OHIO

2 In the Matter of the :
3 Complaint of James Giesler, :

4 vs. : Case No. 07-498-EL-CSS

5 Toledo Edison Company. :

6 In the Matter of the :
7 Complaint of Lester L. :
8 Lemke, :

9 vs. : Case No. 07-514-EL-CSS

10 Toledo Edison Company. :

11 In the Matter of the :
12 Complaint of Brian A. and :
13 Christy G. Malott, :

14 vs. : Case No. 07-525-EL-CSS

15 Ohio Edison Company. :

16 - - - -
17 DEPOSITION

18 of Rich Adelman, taken before me, Karen Sue Gibson, a
19 Notary Public in and for the State of Ohio, at the
20 offices of Janine L. Migden-Ostrander, Ohio
21 Consumers' Counsel, 10 West Broad Street, Suite 1800,
22 Columbus, Ohio, on Monday, September 28, 2009, at
23 1:28 p.m.

24 - - - -
25 ARMSTRONG & OKEY, INC.
26 222 East Town Street, Second Floor
27 Columbus, Ohio 43215-5201
28 (614) 224-9481 - (800) 223-9481
29 FAX - (614) 224-5724

ORIGINAL

1 A. There may have been a verbal.

2 Q. And if they had been given verbal test
3 results, what do you think the nature of that would
4 have been? Would it have been pass? Fail? Would
5 you have gone into the numbers or -- if you know.

6 A. The real purpose for me during that test,
7 there again, was to make sure that when the loss of
8 utility source power, that the invertor would, in
9 fact, shut down so it couldn't back feed. That was
10 verified and the customer was simply told it did, in
11 fact, shut down.

12 Q. Okay. Now, since the testing in April of
13 2007, do you know if the Malotts have been provided
14 the written results of that test?

15 A. I do not know.

16 Q. Do you know if the Malotts -- what type
17 of meter they had connected at that time on their
18 property? Had the company installed a new meter by
19 then?

20 A. A new meter was installed while we were
21 on-site.

22 Q. So a meter was installed while you were
23 there. And can you tell me why a new meter was
24 necessary?

25 A. Yes, because previously while he was --

1 while the Malotts were operating the wind turbine, it
2 was causing the existing meter to run backwards, and
3 from a metering standpoint it was very confusing for
4 our billing people.

5 Q. Did you ask the Malotts whether they
6 wanted their meter changed?

7 A. I do not know.

8 Q. Do you know if the Commission's rules or
9 your tariffs require their permission to get the
10 meter changed?

11 A. It does state in the tariffs that upon
12 written request by the customer, we would install a
13 meter capable of measuring the flow of power in both
14 directions.

15 Q. And you didn't have a written request
16 from the Malotts for that, did you?

17 A. Not a handwritten one.

18 Q. So the Malotts verbally requested a
19 change?

20 A. There was several communications from the
21 Malotts as to why there was not a bidirectional meter
22 installed previously.

23 Q. So the bidirectional meter, the
24 installation of the bidirectional meter, was driven
25 by the Malotts' request?

1 A. No.

2 Q. Were the Malotts charged for the
3 installation of the bidirectional meter?

4 A. No.

5 Q. Now, just to back up a couple of
6 questions, if the test results had been provided to
7 the Malotts, whose responsibility would that have
8 been?

9 A. More than likely would have come through
10 either myself or Mr. Remmell.

11 Q. Did the Malotts ever ask for those
12 results?

13 A. Not to me.

14 Q. Would these type of test results normally
15 be shared with the customers?

16 A. I wouldn't because we don't normally do
17 these types of tests. It's not a typical
18 requirement.

19 Q. Now, the Malotts were producing power
20 when you were on their premises; is that correct?

21 A. The generator was operating when we first
22 arrived, yes.

23 Q. And this was in April of 2007 --

24 A. That's correct.

25 Q. -- correct? Now, did you ask them or

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15 Christy G. Malott, :

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18 - - -

19 DEPOSITION

20 of Robert Vallejo, taken before me, Karen Sue Gibson,
21 a Notary Public in and for the State of Ohio, at the
22 offices of Janine L. Migden-Ostrander, Ohio
23 Consumers' Counsel, 10 West Broad Street, Suite 1800,
24 Columbus, Ohio, on Monday, September 28, 2009, at
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32 - - -

1 orders through my foreman requesting this customer
2 needs a bidirectional meter. We go out there and set
3 it.

4 Q. Okay. And what type of device do you
5 take with you to ensure that this meter -- the
6 bidirectional -- newly installed bidirectional meter
7 is operating properly?

8 A. By taking the voltmeter with me, checking
9 the voltage, make sure there is no back feed, and
10 then install the meter and there is two different
11 types of readings. One is for the house, and the
12 other one is for the windmill.

13 Q. Now, we have the bidirectional meters and
14 these prior -- they are still used but the type of
15 meters that would run backwards if there's power
16 being fed through like somebody's generator, like
17 what are those? Unidirectional meters?

18 A. I don't quite understand your question.

19 Q. Well, there is a bidirectional meter.
20 Then there is the meter that most of us still have at
21 the side of our house that only measures in one
22 direction.

23 A. There's two -- that's two different types
24 of meters. One for the house, we use one called a
25 detent which it's got a little lever; it doesn't make

1 the meter run backwards. A bidirectional meter is a
2 different situation.

3 Q. Uh-huh. So these non-bidirectional
4 meters have a lever that you can set so they won't
5 run backwards?

6 A. No. They are built right into the meter
7 itself.

8 Q. Okay.

9 A. You can't adjust them.

10 Q. So is there any alternative? Let's say I
11 live out in Lindsey and I decide I am going to put up
12 a windmill. Right now, I have got the older meter
13 that just records usage in one direction. Do I have
14 to have a bidirectional meter to hook up my windmill?

15 A. Yes.

16 Q. Because --

17 A. Because it will make that other meter run
18 backwards as soon as you run electricity from the
19 windmill.

20 Q. So it just won't work.

21 A. Right.

22 Q. It won't run backwards.

23 A. Not with the bidirectional meter.

24 Q. No, I meant the other meter.

25 A. The other meter, if you got that on the

1 house and you got your generator or your windmill
2 running, it will make the meter run backwards.

3 Q. Now, can you estimate for me
4 approximately how long you were at both residences
5 that day performing these tests?

6 A. I would say probably about 45 minutes to
7 an hour.

8 Q. So these aren't lengthy, involved tests
9 then?

10 A. No.

11 Q. Now, you said you're involved now
12 oftentimes when someone has a bidirectional meter
13 installed in order to set up interconnection with FE.
14 Are you involved in any other part of that process?

15 A. No.

16 Q. Okay. You don't sign off on any
17 agreements or review them or anything like that?

18 A. No.

19 Q. If you know, are any of the customers
20 that have the bidirectional meters installed for net
21 metering purposes charged for the installation?

22 A. That I don't know.

23 Q. Do you know if Mr. Giesler or Mr. Lemke
24 had been charged for installation of the
25 bidirectional?

1 A. No, I don't.

2 MR. REESE: Okay. Jerry.

3 MR. GIESLER: Yes.

4 MR. REESE: Do you have anything? I'm
5 done.

6 MR. GIESLER: Yes, I do.

7 - - -

8 EXAMINATION

9 By Mr. Giesler:

10 Q. Initially Mr. Reese asked if the original
11 meters could still be used with someone who has a
12 generator, and the response was no because they
13 are -- the original meters are meters that could not
14 run backwards, and then later you said you couldn't
15 use these because they run backwards. Now, my
16 question is if these original meters would run
17 backwards or forwards, wouldn't that be considered
18 bidirectional?

19 A. No. Detent meter, that's all it does.
20 That's a regular house meter.

21 Q. Yes.

22 A. All that does if it's running backwards,
23 that detent will not let it go backwards, so it won't
24 be subtracting the readings off that meter and that's
25 just a regular house.

1 Q. You said it -- first, you said it
2 wouldn't run backwards and then you said it would run
3 backwards and, now, you are saying it won't again?

4 A. No. What I am saying is a detent
5 meter --

6 Q. Yes.

7 A. -- will not run backwards because there's
8 a mechanism in there that does not let the disk go
9 backwards so it will subtract the readings. A
10 regular meter does not have a detent in it so that --
11 if you have got something running on a generator, it
12 will make it run backwards.

13 Q. Okay. So a regular meter could be used
14 instead of a meter with two separate readings?

15 A. No. A regular meter is just a regular
16 house meter.

17 Q. Yes, I understand that.

18 A. Right now, you are using a windmill, so
19 you are generating an electricity which in turn will
20 make that meter run backwards.

21 Q. So you are saying it would run backwards.

22 A. Yes, a regular meter, not a detent meter.
23 There is two different types of meters.

24 Q. I'm confused. First, you say it will run
25 backwards, and then you say it won't run backwards.

1 Mr. Malott's, which I realize is Ohio Edison
2 territory, there was testimony earlier or responses
3 earlier that theirs ran backwards. So, again, my
4 question is if it can run forwards or backwards, why
5 wouldn't that be considered a bidirectional meter?

6 A. Because we are talking about three
7 different types of meters here. One meter has a
8 detent on it which does not make the meter run
9 backwards. There's a regular house meter that will
10 run backwards if you put a load on it from a
11 generation system.

12 Q. Okay.

13 A. The bidirectional meter is a type of
14 meter that registers your windmill plus what you are
15 using in the house. The other one which is the
16 detent meter, it's got a lever in there that does not
17 make the meter run backwards, but it's only measuring
18 what you are using at the house. It has nothing to
19 do with the windmills.

20 Q. So it will -- a detent meter will only
21 measure going forwards, but it will not measure going
22 backwards.

23 A. That is correct but it only measures the
24 usage that you are using in the house. A
25 bidirectional meter you are measuring -- you are

1 measuring the voltage you are using inside the house
2 plus if you are generating, it's going to back feed
3 to that meter which it will make the difference, and
4 it will not run backwards.

5 Q. And then a regular meter that's not a
6 detent meter but not a bidirectional meter can run
7 forwards or backwards; is that correct?

8 A. That is correct.

9 Q. Okay.

10 A. But you have got to be generating
11 electricity to make the meter run backwards.

12 MR. GIESLER: I understand that. Okay.
13 That's all I have.

14 MS. KOLICH: Are you done?

15 MR. REESE: I'm done.

16 (Discussion off the record.)

17 MR. REESE: Back on the record. Go
18 ahead, Jerry.

19 Q. (By Mr. Giesler) Okay. I want to know if
20 the meter I had on my house, if he knows whether or
21 not that was a regular house meter or if that was a
22 detent meter.

23 A. That was a regular house meter.

24 Q. So that meter then actually could have
25 run backwards if I had been generating?

1 A. That is correct.

2 MR. GIESLER: Okay. That's all I have.

3 (Thereupon, the deposition was concluded
4 at 2:28 p.m.)

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CERTIFICATE OF SERVICE

It is hereby certified that a true copy of the foregoing the *Direct Testimony of Daniel J. Sawmiller on Behalf of the Office of the Ohio Consumers' Counsel* has been served via U.S. mail, postage prepaid, this 7th day of October, 2009.



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