

**BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO**

In the Matter of the Review of the Application of)	
Ohio Edison Company, The Cleveland Electric)	
Illuminating Company and The Toledo Edison)	Case No. 12-2190-EL-POR
Company for Approval of Their Energy)	Case No. 12-2191-EL-POR
Efficiency and Peak Demand Reduction)	Case No. 12-2192-EL-POR
Program Portfolio Plans for 2013 through 2015.)	

DIRECT TESTIMONY OF

JOHN SERYAK, PE

**ON BEHALF OF
THE OMA ENERGY GROUP**

October 5, 2012

**DIRECT TESTIMONY
JOHN SERYAK, PE
OMA ENERGY GROUP
CASE NO. 12-2190-EL-UNC, 12-2191-EL-UNC AND 12-2192-EL-UNC**

BACKGROUND AND EXPERIENCE

Q. PLEASE STATE YOUR NAME, POSITION, AND BUSINESS ADDRESS.

A. My name is John Seryak, PE. I am the Chief Executive Officer and Founder of Go Sustainable Energy, LLC and my business address is 3709 N. High St., Suite 100, Columbus, Ohio 43214.

Q. PLEASE SUMMARIZE YOUR QUALIFICATIONS AND EXPERIENCE.

A. I received Bachelor's and Master's of Science degrees in Mechanical Engineering from the University of Dayton (UD), with a concentration in thermodynamics and fluid dynamics. While there, my research area was industrial, commercial, and residential end-use energy efficiency. I was enrolled in the Industrial Assessment Center (IAC) program where I participated in over sixty (60) energy audits of small and medium industries, one of the largest participation rates ever in the 30-year-old, national program. Also while there, the UD IAC was awarded the designation as the number one (#1) IAC in the nation.

Following this, I spent two (2) years in New England and New York working with a leading energy-efficiency consultancy, providing technical support to utility energy efficiency programs and industrial customers. This included an evaluation of the Process Reengineering for Increased Manufacturing Efficiency

1 (PRIME) pilot program in Connecticut and Massachusetts. I am currently the
2 Chief Executive Officer and Founder of Go Sustainable Energy, LLC, an energy-
3 efficiency consulting firm that works closely with manufacturers. I am a
4 registered Professional Engineer (PE) in the State of Ohio. Further, I am a
5 United States Department of Energy (DOE) "Energy Expert" in pumping systems.
6 As an Energy Expert for the DOE, I have worked with manufacturers throughout
7 the country on improving the efficiency of large pumping systems. My company
8 and I continue to serve manufacturing clients throughout Ohio and nearby states.
9 We also regularly publish concepts, methods, and results of industrial energy
10 efficiency in academic publications, such as at the American Council for an
11 Energy-Efficient Economy's (ACEEE) Summer Study on Industry.

12 **Q. HAVE YOU PREVIOUSLY SUBMITTED TESTIMONY IN REGULATORY**
13 **PROCEEDINGS?**

14 **A.** No, I have not.

15 **PURPOSE OF DIRECT TESTIMONY**

16 **Q. FOR WHOM ARE YOU APPEARING IN THIS PROCEEDING?**

17 **A.** I am appearing on behalf of the OMA Energy Group ("OMAEG").

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

19 **A.** My testimony will support the position of the OMAEG with respect to the fact that
20 FirstEnergy's EE/PDR Plan is insufficient and does not reflect the real world
21 consideration and adoption of energy efficient measures in industrial customer
22 facilities.

1 **DIRECT TESTIMONY**

2 **Q. HOW ARE FIRSTENERGY'S ENERGY EFFICIENCY PLANS INSUFFICIENT?**

3 **A.** FirstEnergy's energy efficiency incentive programs are insufficient and
4 cumbersome for manufacturers to adopt. For manufacturing, maintaining costs
5 are extremely important and tools for controlling costs through energy efficiency
6 are vital for maintaining and enhancing competitiveness. Innovation has
7 transformed manufacturing products and processes, and as a part of that, energy
8 efficiency is an increasingly important competitiveness strategy as Ohio
9 transitions to market.

10 Below are my recommendations for improvements to FirstEnergy's EE/PDR Plan
11 which would provide reasonable, affordable, and efficient programs for
12 customers.

13 **RECOMMENDATIONS**

14 **Q. IN WHAT WAYS DOES FIRSTENERGY'S EE/PDR PLAN LACK PROGRAM**
15 **OFFERINGS THAT ARE ACCOMMODATING TO MANUFACTURERS'**
16 **UNIQUE ENERGY OPPORTUNITIES?**

17 **A.** Many industrial efficiency opportunities have low equipment-costs, but are
18 knowledge intensive. For example, efficient sequencing of a process chiller
19 requires new knowledge but no new equipment. Additionally, constrained capital
20 funding for manufacturers limits opportunities for equipment replacement, which
21 makes up a significant portion of FirstEnergy's EE/PDR Plan.

22 **Q. WHAT DO YOU RECOMMEND?**

23 **A.** I recommend that FirstEnergy implement a "Track and Tune" program, and/or an
24 Operations and Maintenance program.

1 **Q. WHAT IS A TRACK AND TUNE PROGRAM?**

2 **A.** A Track and Tune program is analogous to the Retro-commissioning programs
3 for the commercial sector. Track and Tune, and other similar programs, incent
4 manufacturers to optimize the sequence of operations and control logic of their
5 industrial process and ancillary supporting equipment. The savings result from
6 “tuning” the existing equipment, not from an equipment upgrade.

7 **Q. WHAT IS AN OPERATIONS AND MAINTENANCE PROGRAM?**

8 **A.** Operations and Maintenance programs can be very similar to Track and Tune.
9 Utilities may take slightly different approaches and use different naming
10 conventions. Whether called Track and Tune or Operations and Maintenance,
11 the end goal is similar in that they incent capturing energy savings from changes
12 in equipment operations.

13 **Q. DOES FIRSTENERGY’S EE/PDR PLAN LACK TECHNICAL ASSISTANCE**
14 **FOR MANUFACTURERS?**

15 **A.** Yes. FirstEnergy’s prescriptive measures are largely targeted at commercial
16 loads and the savings are based upon the same. Therefore, the largest industrial
17 electrical loads typically require custom measure analysis, which imposes an
18 additional cost to the manufacturer to participate in the program. The only
19 available technical assistance is \$4,000 for a Level II energy audit, surprisingly,
20 the same for industry as for churches, for example.

21 **Q. WHAT SHOULD FIRSTENERGY DO?**

22 **A.** FirstEnergy should use a \$4,000 cap only for facilities that use less than 3,000
23 MWh/year in energy. For facilities that use more than 3,000 MWh/year in

energy, the cap should be increased to incentivize manufacturers by 1.5 cents/MWh for energy audits.

Q. DOES FIRSTENERGY'S EE/PDR PLAN LACK QUALITY IN TECHNICAL ASSISTANCE.

A. Yes.

Q. PLEASE DESCRIBE THE LACK OF QUALITY IN FIRSTENERGY'S TECHNICAL ASSISTANCE?

A. During the September 6, 2012 technical conference, FirstEnergy provided that its Pennsylvania utilities experience low project output from cost-shared energy audits. While data is still preliminary, I believe that many of OMAEG's top energy efficiency performers in other territories received energy audits, therefore, suggesting that program and/or auditor quality may be an issue in FirstEnergy's Pennsylvania territory.

Q. WHAT DO YOU RECOMMEND?

A. I recommend that FirstEnergy establish a requirement that energy audit savings calculations and estimates be stamped and certified by a licensed Professional Engineer (PE) in the State of Ohio, in order to encourage quality in work and establish a minimum level of qualification for energy auditors. Further, certified energy managers and certified energy auditors should not qualify to perform the audits, because their certification requirements are not as rigorous as professional engineers.

Q. HOW DOES FIRSTENERGY'S EE/PDR PLAN FAIL TO BID ENERGY EFFICIENCY RESOURCES INTO PJM MARKET?

A. As proposed, FirstEnergy's EE/PDR Plan does not budget PJM revenue into its programs, thereby increasing the cost of programs to manufacturers.

1 **Q. HOW CAN FIRSTENERGY CORRECT THIS?**

2 **A.** I recommend that FirstEnergy bid a hedged amount of energy efficiency
3 resources into the PJM market.

4 **Q. SHOULD THERE BE A SHARED SAVINGS CAP?**

5 **A.** FirstEnergy should not maintain a cap for the shared savings arrangement.

6 **Q. DOES FIRSTENERGY'S EE/PDR PLAN LACK PRESCRIPTIVE MEASURES**
7 **FOR MANUFACTURERS?**

8
9 **A.** Yes. FirstEnergy's prescriptive measures are largely targeted at, and savings
10 are based on, commercial loads. This increases the burden of custom analysis
11 on industry.

12 **Q. WHAT SHOULD THE COMMISSION DO?**

13 **A.** The Commission should direct FirstEnergy to develop a pilot of three (3) industry-
14 specific prescriptive measures, such as, industrial insulation, cogged V-belts, and
15 venturi compressed air nozzles. FirstEnergy would cover a fraction of the
16 development cost and pay only a \$0.01/kWh commission on any project using
17 these measures, in addition to payment of the administrator fee.

18 **Q. PLEASE DESCRIBE INDUSTRIAL ISULATION, COGGED V-BELTS, AND**
19 **VENTURI COMPRESSED AIR NOZZLES?**

20
21 **A.** Industrial insulation can reduce the exterior surface temperature of hot
22 manufacturing equipment. It improves plant safety while reducing energy
23 consumption. Several types of industrial insulation exist, most typically
24 consisting of a ceramic fiber with special backing and covers to protect the
25 insulation from degradation.

1 A V-belt is a rubber loop used to transmit power, most typically from a motor to a
2 pump, fan, or some other application. The cross-section of the belt has a "V"
3 shape. Cogged V-belts have a serrated inner surface, or notches, compared to a
4 smooth V-belt. Cogged V-belts flex easier, dissipating less heat and thus
5 improving transmission efficiency from 2-8%. They also last significantly longer
6 than smooth belts.

7 Venturi compressed air nozzles entrain ambient plant air with a compressed air
8 stream, thus providing lower pressure but higher volume air streams appropriate
9 for their application. In doing so, less compressed air is needed, and thus less
10 energy.

11 Industrial insulation could be incented by prescriptive measure. Cogged V-belts
12 and venture nozzles could also be prescriptive, but are ideally suited for a point-
13 of-sale program, similar to how CFLs are rebated.

14 **Q. WOULD IT BE IMPROPER FOR FIRSTENERGY TO SUSPEND PROGRAMS**
15 **WITHOUT APPROVAL?**

16 **A.** Yes. FirstEnergy should continue all existing programs in 2013 until a new
17 program is approved.

18 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

19 **A.** Yes.

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing was served upon the following parties of record by e-mail and/or regular U.S. mail, this 5th day of October 2012.



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Summary: Testimony of John Seryak, PE electronically filed by Teresa Orahod on behalf of
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