[Company Exhibit 5]

BEFORE THE
PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of the Application of Ohio	)	
Edison Company, The Cleveland Electric	)	
Illuminating Company, and The Toledo	)	Case Nos. 12-2190-EL-POR
Edison Company For Approval of Their	)	12-2191-EL-POR
Energy Efficiency and Peak Demand	)	12-2192-EL-POR
Reduction Program Portfolio Plans for 2013	)	
through 2015	)	
	)	

DIRECT TESTIMONY OF

EREN G DEMIRAY

ON BEHALF OF

OHIO EDISON COMPANY
THE CLEVELAND ELECTRIC ILLUMINATING COMPANY
THE TOLEDO EDISON COMPANY

<u>UUINTRODUCTION AND BACKGROUND</u>

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

A. My name is Eren G. Demiray, and my business address is 76 South Main Street, Akron, Ohio 44308. I am a Staff Business Analyst in the Compliance & Development Group of the Energy Efficiency Department of FirstEnergy Service Company.

Q. **ON WHOSE BEHALF ARE YOU TESTIFYING TODAY?**

A. I am testifying on behalf of Ohio Edison Company ("Ohio Edison"), The Cleveland Electric Illuminating Company ("CEI"), and The Toledo Edison Company ("Toledo Edison") (collectively, the "Companies"). Unless otherwise stated, my testimony applies equally to all three Companies.

Throughout my testimony I refer to sections included in each of the Companies' Energy Efficiency ("EE") and Peak Demand Reduction ("PDR") Plans ("Proposed Plans") for the period January 1, 2013 through December 31, 2015 ("Plan Period") which were filed with the Companies' Application as Attachments A (Ohio Edison), B (CEI) and C (Toledo Edison). Rather than reiterate in my testimony the details of the sections to which I refer, I am incorporating those portions of each of the Companies' Proposed Plans by reference as part of my testimony.

Q: WHAT IS YOUR PROFESSIONAL AND EDUCATIONAL BACKGROUND?

A. I have been employed by FirstEnergy companies for over eleven years. During this time, I've held various positions in Customer Services, Sales & Marketing, Price Forecasting & Market Analytics, Business Analytics, and Rates & Regulatory Affairs. In November of 2009, I began working as an Analyst in the Compliance & Development group in FirstEnergy's Energy Efficiency Department, my current position. I hold a Bachelor of Arts degree in Psychology, Classical Humanities, and Ancient Greek from Miami University, and a Master of Business Administration degree with a Finance concentration from Kent State University.

Q. PLEASE DESCRIBE YOUR CURRENT RESPONSIBILITIES WITHIN THE ENERGY EFFICIENCY DEPARTMENT.

A. I work with the Compliance & Development group that is responsible for activities related to energy efficiency and conservation ("EE&C") for the FirstEnergy utilities in Ohio, Maryland, New Jersey, Pennsylvania and West Virginia. This primarily involves the development of programs and filings to meet the FirstEnergy utilities' EE&C requirements and obligations. My responsibilities are focused on development and compliance activities in Ohio. I also administer FirstEnergy's Ohio Energy Efficiency Collaborative group. I report to the Manager of Compliance & Development in FirstEnergy's Energy Efficiency Department.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to describe the Shared Savings Incentive Mechanism ("Incentive Mechanism") contained in the Companies' Proposed Plans.

DEVELOPMENT OF THE SHARED SAVINGS INCENTIVE MECHANISM

Q. WHAT IS A SHARED SAVINGS INCENTIVE MECHANISM?

A. A shared savings incentive mechanism provides added encouragement for the Companies to exceed the EE&PDR benchmarks, further supporting the Companies' prudent and cost effective decisions that maximize net benefits to the extent possible within the Proposed Plans' budgets. The National Action Plan for Energy Efficiency addressed the role that incentive mechanisms such as shared savings play in comprehensive energy efficiency policies in its publication, *Aligning Utility Incentives with Investment in Energy Efficiency*[1]. Policy regarding the incentives of energy efficiency programs from a utility perspective typically addresses three main areas: (i) program cost recovery; (ii) lost revenue recovery; and (iii) performance Incentives such as shared savings. The first two areas relate to removing potential negative impacts to utilities associated with energy efficiency programs, while the last focuses on incenting utility performance to exceed established targets. Many jurisdictions recognize the need to include a utility incentive component, comparable to the shared savings incentive mechanism proposed by the Companies, in order to make utility investment in EE&PDR programs attractive when compared to supply-side alternative investment opportunities.

Shared savings incentive mechanisms provide for the Companies to share in the calculated discounted net benefits created for measurable EE&PDR programs with customers. The net benefit proposed in this Incentive Mechanism is calculated on a Utility Cost Test ("UCT") basis, and is the difference between the costs avoided by implementing the EE&PDR programs and the utility incurred costs of the EE&PDR programs.[2]

Q. WHY ARE THE COMPANIES PROPOSING THAT THE DISCOUNTED NET BENEFITS BE CALCULATED USING THE UTILITY COST TEST?

A. Each of the five cost effectiveness tests generally recognized for energy efficiency views the costs and benefits of the program or portfolio from a different perspective. The Total Resource Cost Test ("TRC") used in Rule 4901:1-39-04 (B), Ohio Administrative Code to assure total portfolio cost effectiveness is designed to evaluate the net benefits of energy efficiency measures to the region as a whole. The TRC utilizes program overhead and implementation costs that include all incremental measure costs (whether paid by the customer or the utility). Conversely, the UCT focuses on the perspective of the utility or agency implementing the program. As such, it does not consider total incremental measure costs, but only the portion paid by the utility.

The quantifiable benefits under either this TRC or a UCT calculation are generally the same, but the costs can be significantly different. By using the UCT to determine the discounted net benefits calculated under the Incentive Mechanism, the Companies are encouraged to establish incentive levels that are set high enough to drive customer participation in program offerings, but balanced so as not to unnecessarily over compensate. As the TRC is not designed to

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[1] *See* http://www.epa.gov/cleanenergy/documents/suca/incentives.pdf

[2] UCT as described herein is consistent with *Understanding Cost-Effectiveness of Energy Efficiency Programs,* November 2008, as published by the National Action Plan for Energy Efficiency. The UCT (also known as the Program Administrator Cost Test, or PACT in that publication) generally includes the following costs: program overhead costs, utility/program administrator incentive and installation costs; and the following benefits: energy-related costs avoided by the utility,c-related costs avoided by the utility, including generation, transmission, and distribution.

consider the proper incentive levels, the UCT is an appropriate mechanism upon which to base the Incentive Mechanism. When viewed in total, use of the TRC for portfolio and program selection, and the UCT for utility incentives, provides a system that encourages the Companies to make prudent and cost effective decisions throughout program design, administration, and implementation.

Q. DO THE COMPANIES' EE&PDR PLANS CURRENTLY IN EFFECT AS APPROVED BY THE COMMISSION IN CASE NO. 09-1947-EL-POR ET AL ("EXISTING PLANS") INCLUDE AN INCENTIVE MECHANISM?

A. No. The Companies included an incentive mechanism in the Existing Plans that was rejected by the Commission. In its March 23, 2011 Order in which it approved the Existing Plans, the Commission ordered the Commission Staff to propose a strawman incentive mechanism for consideration by the Companies and interested parties.

Q. DID THE COMMISSION STAFF MAKE SUCH A PROPOSAL?

A. Yes. On October 24, 2011, the Commission Staff filed their strawman proposal in Case No. 09-1947-EL-POR et al. As part of this proposal, Staff noted:

> *Staff does not have a strong preference for the Duke shared savings method over AEP's approach. For the sake of simplicity, it is easier to determine what the results would be under the AEP-Ohio mechanism.*[3]

Based on this observation by Staff, the Companies performed a thorough review of AEP Ohio's then current mechanism. On November 29, 2011, AEP Ohio filed its Energy Efficiency/Peak Demand Reduction (EE/PDR) Action Plan for the

[3] *In the Matter of the Application of the [Companies] for Approval of Three Year Energy Efficiency and Peak Demand Reduction Plans and Initial Benchmark Report*, Case Nos. 09-1947-El-POR, 09-1948-EL-POR and 09-1949-EL-POR, Proposal For Incentivizing Utility Energy Efficiency Performance Submitted On Behalf Of The Staff Of The Public Utilities Commission Of Ohio at p. 5 (October 24, 2011).

period 2012-2014[4]. AEP Ohio's filing included an updated shared savings incentive mechanism that was ultimately adopted by the Commission on March 21, 2012. The Companies further refined their Incentive Mechanism based on AEP Ohio's proposed shared savings incentive mechanism.

Q. DID THE COMPANIES SEEK INPUT FROM OTHER PARTIES?

A. Yes. After evaluating the AEP Ohio shared savings incentive mechanism, the Companies modified the Staff's proposal and sought input from interested parties. They submitted a counter proposal to interested parties on November 16, 2011 and held several meetings and conference calls either as a group or with individual interested parties. The Incentive Mechanism included in the Proposed Plans was influenced by Staff recommendations, AEP Ohio's recently approved mechanism, and the result of negotiations with interested parties. While it was not possible to incorporate all suggestions and viewpoints—some of which were at odds with each other - I believe the Incentive Mechanism herein provides an equitable model that balances many stakeholder viewpoints and suggestions. Because the discussions were structured in terms of potential settlement, I am not at liberty to discuss in detail any individual party's position.

INCENTIVE MECHANISM

Q. WHAT DURATION ARE THE COMPANIES PROPOSING FOR THE INCENTIVE MECHANISM?

A. The Companies are proposing that the Incentive Mechanism run concurrently with the Plan Period. The Incentive Mechanism will begin with energy efficiency

[4] *In re Application of Columbus Southern Power Company and Ohio Power Company for Approval of Their Program Portfolio Plans*, Case No. 11-5569-EL-POR et al

savings reported for the period starting January 1, 2013, and will expire following the filing of the each Company's annual compliance report covering activity through December 31, 2015.

Q. WHAT WILL TRIGGER THE INCENTIVE MECHANISM?

A. The Incentive Mechanism will apply separately to each of the Companies and will trigger only if a Company exceeds both its annual and cumulative energy savings targets as set forth in Section 4928.66 (A)(1)(a), Revised Code, in any given year as determined by Ohio law and the Ohio Administrative Code. Based on these criteria, if a Company did not achieve its cumulative benchmark in a previous year, the Incentive Mechanism would not trigger in the current year unless the total cumulative energy efficiency savings were enough to cover both the annual target and the amount of the prior year's cumulative deficit. Exhibit EGD-1 shows an illustrative example of how the Incentive Mechanism would be triggered and is further discussed later in my testimony. All energy savings used for the purposes of this Incentive Mechanism will be based on annualized, rather than partial year, savings as reported in the Companies' Annual Reports.

Q. WHY DOES THIS INCENTIVE MECHANISM USE ANNUALIZED ENERGY SAVINGS INSTEAD OF PARTIAL YEAR ENERGY SAVINGS?

A. As Company Witness Dargie explains in his testimony (Company Exhibit 1), the Companies are requesting a waiver that would allow savings to be reported on an annualized basis. The Incentive Mechanism should be based upon information presented in the Companies' Annual Portfolio Status Reports to ensure calculations are consistent and transparent to interested parties. Partial year reporting would also needlessly confuse the calculation of discounted net benefits. To ensure that both the cost and benefits of achieved energy savings are properly aligned, the Companies would need to calculate partial year expenditures per measure for comparison against partial year energy savings covering that same period. This would span the financial information presented in multiple years of the Companies' Annual Portfolio Status Reports. Annualized reporting avoids this unnecessary complication and is more straightforward for the Companies and interested parties.

Q. HOW WILL THE INCENTIVE BE CALCULATED?

A. The incentive is calculated annually on an individual Company basis, consistent with information as presented in each Company's Annual Portfolio Status Report, consistent with Commission rules as set forth in Rules 4901:1-39-05 and 4901:1-39-06, Ohio Administrative Code. Should the Incentive Mechanism be triggered in a given year, a Company incentive will be calculated based upon two components: (i) an incentive percentage, and (ii) adjusted discounted net lifetime benefits based upon the UCT ("Adjusted Net Benefits").

Q. HOW WILL THE INCENTIVE PERCENTAGE BE CALCULATED?

Once the Incentive Mechanism has been triggered for a given year, the Companies will determine an Incentive Percentage based on:

- **Adjusted Annual Energy Savings** equal to the Company's Achieved Annual Energy Savings as reported in its Annual Portfolio Status Report, with a downward adjustment for the prior year's cumulative deficit, if appropriate.

- **Compliance Percentage** equal to the Adjusted Annual Energy Savings (MWh), divided by the Annual Target (MWh)
- **Incentive Tiers** as shown in the following table:

Incentive Tier	Compliance Percentage	Incentive Percentage
1	< 100%	0.0%
2	100-105%	5.0%
3	>105-110%	7.5%
4	>110-115%	10.0%
5	>115%	13.0%

Exhibit EGD-2 shows an illustrative example of how the Incentive Percentage would be calculated and is further discussed later in my testimony.

Q. HOW WILL THE ADJUSTED NET BENEFITS BE CALCULATED?

Adjusted Net Benefits will be calculated by modifying the Total Discounted Net Lifetime Benefits produced by the Portfolio in a given year to exclude the impacts of certain programs or projects. Adjusted Net Benefits will exclude the effects of:

- Mercantile customer projects that were installed prior to March 23, 2011, the date the Companies' Existing Plans were approved by the Commission;
- Certain Transmission and Distribution ("T&D") projects undertaken by the Companies. To the extent a T&D project was planned but modified to provide additional energy efficiency benefits, the incremental project results from the enhancements for energy efficiency will not be excluded; and

- Behavioral modification projects to the extent they do not demonstrate continued applicability towards compliance with statutory energy efficiency benchmarks.

The above-mentioned modifications will be made solely for the purposes of the Incentive Mechanism calculation and will in no way affect the kWh savings to be applied for purposes of compliance with Section 4928.66 (A)(1)(a), Revised Code as reported in the Company's Annual Portfolio Status Report.

Exhibit EGD-3 shows an illustrative example of how the Adjusted Net Benefits would be calculated and is further discussed later in my testimony.

Q. DOES THE PROPOSED INCENTIVE MECHANISM AFFECT THE COMPANIES' ABILITY TO BANK SAVINGS?

A. No. Any kWh savings above and beyond the statutory targets established in Section 4928.66, Revised Code after making up any shortfalls from prior year's requirements, will be banked and may be applied at the discretion of the Companies towards compliance with future statutory targets.

Q. HOW WILL EACH COMPANY REPORT THE INCENTIVE AMOUNT?

A. Each year, as part of its annual compliance filing, the Companies will include an Incentive Mechanism calculation performed in a manner consistent with their Proposed Plans and this testimony.

Q. HOW WILL THE COMPANIES COLLECT INCENTIVE DOLLARS?

A. If the Incentive Mechanism is triggered, the Companies will collect incentive dollars based on an allocation at the rate schedule level in the proportions at which the Adjusted Net Benefits were achieved for the reported year. The Companies will collect incentive dollars through Rider DSE.

Q. ARE THERE ANY MAJOR DIFFERENCES BETWEEN THE MECHANISM APPROVED FOR AEP AND THIS PROPOSED MECHANISM?

A. Yes, there is one. Unlike AEP Ohio's approved 2012 shared savings incentive mechanism, the Companies' neither supports, nor includes, in their proposed Incentive Mechanism a cap on the incentive amount. As I previously discussed, the purpose of a performance incentive such as a shared savings incentive mechanism is to encourage a utility to exceed its established targets. Artificially and arbitrarily limiting the amount of shared savings available to a utility has the potential to restrict motivation to continue exceeding targets beyond a point constrained by such a cap. This would effectively limit not only potential incentives, but also the total discounted net lifetime benefits to be shared by customers and the Companies.

Q. WHAT IS THE PURPOSE OF EXHIBITS EGD-1 THROUGH EGD-4?

A. The attached Exhibits EGD-1 through EGD-4 are illustrative and for the purposes of discussing how the Incentive Mechanism would be calculated based on information contained in the Companies' Annual Portfolio Status Reports. The numbers contained in this scenario, including annual and cumulative targets, company annual savings performance, discounted lifetime costs and benefits under a UCT calculation, and exclusions to net benefits, are examples included only as points of discussion and are not indicative of expected performance.

EGD-1 includes scenarios in which the Company may or may not achieve its annual or cumulative compliance targets. As indicated in EGD-1, it is assumed that the Company did not achieve its target in 2013. As such, the Company does not trigger the Incentive Mechanism in that year. In 2014, the Company exceeded its annual target, yet still does not trigger the Incentive Mechanism as it did not meet its cumulative target due to the cumulative deficit shown in Column I. In 2015, the Company exceeded both its annual and cumulative targets. The Company triggers the Incentive Mechanism only for the reporting period covering 2015.

Exhibit EGD-2 builds upon the information from 2015—where the Company triggered the Incentive Mechanism. The Company's Achieved Annual Energy Savings (Column C) are reduced by the Prior Year Cumulative Deficit (Column D). These Adjusted Annual Energy Savings (Column E) equal 107% of the Annual Target (Column B). Based on the Incentive Tiers, the Company is eligible for an Incentive Percentage of 7.5% of the Adjusted Net Benefits produced by the Company's programs.

In Exhibit EGD-3, the Portfolio Total Discounted Net Lifetime Benefits are adjusted to exclude the effects of the certain programs as previously described in my testimony. Adjusted Net Benefits, are calculated as follows:

- First, Discounted Lifetime Costs and Benefits are calculated under the UCT (Columns B and C, respectively). These will be performed in a manner consistent with industry standards—only illustrative results are shown herein;

- Discounted Lifetime Costs are then subtracted from Discounted Lifetime Benefits to calculate the Total Discounted Net Lifetime Benefits (Column D);
- Adjustments to the Total Discounted Net Lifetime Benefits are calculated based upon specific Discounted Net Costs and Benefits arising from projects that meet the exclusions noted in this testimony (e.g. a Mercantile Customer Project installed in 2008).

Finally, Exhibit EGD-4 brings together the information presented in the previous Exhibits to calculate the Company's percentage of the Adjusted Net Benefits. In this illustrative example, the Company would be entitled to 7.5% of the $22.6 M in Adjusted Net Benefits.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.

Exhibit EGD-1

Example of Incentive Mechanism Trigger Calculation (For Illustrative Purposes Only)

A	B	C	D = ΣB	E = ΣC	F	G = ΣF	H = F-C	I= ΣH	J
Year	Annual Benchmark	Annual Target MWh*	Cumulative Benchmark	Cumulative Target MWh*	Achieved Annual Energy Savings MWh	Achieved Cumulative Energy Savings MWh	Annual (Deficit)/ Bank	Cumulative (Deficit)/ Bank	Prior Year Cumulative (Deficit) / Bank
2009	0.30%	300,000	0.30%	300,000	300,000	300,000	0	0	-
2010	0.50%	500,000	0.80%	800,000	500,000	800,000	0	0	0
2011	0.70%	700,000	1.50%	1,500,000	700,000	1,500,000	0	0	0
2012	0.80%	800,000	2.30%	2,300,000	800,000	2,300,000	0	0	0
2013	0.90%	900,000	3.20%	3,200,000	850,000	3,150,000	(50,000)	(50,000)	0
2014	1.00%	1,000,000	4.20%	4,200,000	1,020,000	4,170,000	20,000	(30,000)	(50,000)
2015	1.00%	1,000,000	5.20%	5,200,000	1,100,000	5,270,000	100,000	70,000	(30,000)

A	K=F/C	L=G/E	M
Year	Annual Compliance	Cumulative Compliance	Eligible for Incentive?
2013	94%	98%	N
2014	102%	99%	N
2015	110%	101%	Y

**Assumes constant Utility baseline of 100,000,000 MWh, for simplicity. The actual annual baselines will be calculated as the average of the prior three year sales, consistent with ORC 4928.66 (A)(1)(a).*

Note: For illustrative purposes only. This exhibit includes a scenario in which the Company did not achieve its annual or cumulative compliance target in 2013. As such, the Company does not trigger the Incentive Mechanism in that year. In 2014, the Company exceeded its annual target, yet still does not trigger the Incentive Mechanism as it did not meet its cumulative target due to the cumulative deficit shown in Column I. In 2015, the Company exceeded both its annual and cumulative targets. The Company triggers the Incentive Mechanism only for the reporting period covering 2015.

Exhibit EGD-2

Example of Incentive Percentage Calculation (For Illustrative Purposes Only)

A	B	C	D	E = C+D	F = E/B
Year	Annual Target MWh	Achieved Annual Energy Savings MWh	Prior Year Cumulative Deficit	Adjusted Annual Energy Savings MWh	Incentive Mechanism Compliance Percentage
2015	1,000,000	1,100,000	(30,000)	1,070,000	107.0%

Incentive Tier	Compliance Percentage	Incentive Percentage
1	< 100%	0.00%
2	100-105%	5.00%
3	>105-110%	7.50%
4	>110-115%	10.00%
5	>115%	13.00%

Exhibit EGD-3

Example of Adjusted Net Benefits (For Illustrative Purposes Only)

A	B	C	D = C - B
Program	Discounted Lifetime Costs	Discounted Lifetime Benefits	Total Discounted Net Lifetime Benefits
Direct Load Control	$4,300,000	$6,000,000	$1,700,000
Appliance Turn-In	$3,300,000	$4,700,000	$1,400,000
Energy Efficient Products	$7,900,000	$11,000,000	$3,100,000
Home Performance	$8,200,000	$11,500,000	$3,300,000
Low-Income	$1,000,000	$1,400,000	$400,000
C&I Energy Efficiency Equipment-Small	$2,300,000	$3,200,000	$900,000
Energy Efficient Buildings-Small	$9,500,000	$13,400,000	$3,900,000
Mercantile Customer	$8,900,000	$12,500,000	$3,600,000
Demand Reduction	$9,400,000	$13,100,000	$3,700,000
C/I Energy Efficient Equipment-Large	$4,000,000	$5,500,000	$1,500,000
Energy Efficient Buildings-Large	$6,200,000	$8,700,000	$2,500,000
Government Tariff Lighting	$900,000	$1,200,000	$300,000
Transmission & Distribution Projects	$300,000	$400,000	$100,000
Total	*$66,200,000*	*$92,600,000*	*$26,400,000*

Adjustments			
Mercantile Projects Pre-3/23/2011	$8,500,000	$12,000,000	$3,500,000
T&D Projects not modified for additional EE benefits	$100,000	$200,000	$100,000
Behavioral Modification Projects that do not demonstrate persistence	$400,000	$600,000	$200,000
Total	*$9,000,000*	*$12,800,000*	*$3,800,000*

Adjusted Discounted Net Lifetime Benefits ***$22,600,000***

Note: All values in the above scenario are illustrative and for the purpose of discussion only. Actual values will be calculated consistent with information as presented in the Company's Annual Portfolio Status Report, with discounted lifetime costs and benefits determined under the Utility Cost Test (UCT), and calculated in line with industry standards.

Exhibit EGD-4

Example of Company Incentive Calculation (For Illustrative Purposes Only)

A	B	C	D	E	F = B*E
Year	Adjusted Net Benefits	Compliance Percentage	Incentive Tier	Incentive Percentage	Company Incentive
2015	$22,600,000	107%	3	7.50%	$1,695,000