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 Edison Company For Approval of Their Energy Efficiency and Peak Demand Reduction Program Portfolio Plans for 2013 through 2015	)	Case Nos.12-2190-EL-POR 12-2191-EL-POR 12-2192-EL-POR

DIRECT TESTIMONY
OF
GLENN REED
ON BEHALF OF THE
SIERRA CLUB

October 5, 2012

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I. Introduction

1. Q. Please state your name for the record.

A. Glenn Reed.

2. Q. Mr. Reed, what do you do for a living?

A. I am a Principal of Energy Futures Group. My business address is 576 Rutland Street, Carlisle, Massachusetts 01741.

3. Q. What is Energy Futures Group?

A. Energy Futures Group (EFG) is a Vermont-based consulting firm that specializes in efficiency programs, policies and markets. We provide our clients with expertise in a number of areas including, but not limited to, efficiency program design, program implementation support, policy development, potential studies, building energy codes, program evaluation, and collaborative engagements between efficiency program administrators and other stakeholders.

4. Q. How long have you been so employed?

A. Since EFG's founding in 2010.

5. Q. Can you please provide a brief synopsis of your professional career?

A. Yes. From 2005-2010, I was a Managing Consultant for Vermont Energy Investment Corporation (VEIC). From 2001-2005, I was first Residential Program Manager and then the Director of Regional Initiatives for Northeast Energy Efficiency Partnerships (NEEP). From 1987-2000, I was a Senior Consultant and

then Deputy Director of East Coast Consulting at XENERGY, Inc., and from 1983-1987 I was a Principal Planner for the Massachusetts Executive Office of Energy Resources.

6. Q. Mr. Reed, have you ever been published?

A. Yes, examples include "Pearls of Wisdom: Assuring Efficient Lighting Product Quality and Program Integrity"[1] and "Engaging Industry: Better Their Money than Ours" [2].

7. Q. Mr. Reed, have you ever submitted expert testimony before?

A. Mostly recently I provided written testimony to the Pennsylvania Public Utility Commission. In 2011 I provided direct evidence before the Nova Scotia Utility and Review Board and I provided expert testimony to the Massachusetts Department of Public Utilities in 1985.

8. Q. Are you familiar with FirstEnergy's three-year Energy Efficiency and Peak Demand Reduction Program Portfolio filing

A. Yes. I have reviewed the July 31st filing and exhibits in Public Utilities Commission of Ohio Case Nos 12-2190-EL-POR, 12-2191-EL-POR, and 12-2192-EL-POR.

9. Q. Are you familiar with the benchmarks that FirstEnergy is required meet with its Program Portfolio?

[1] Pearls of Wisdom: Assuring Efficient Lighting Product Quality and Program Integrity. *Elizabeth Titus, Glenn Reed, Noah Horowitz, and Chris Granda. 2005 International Energy Program Evaluation Conference, New York City, New York, August 2005.*

[2] *Engaging Industry: Better Their Money than Ours*. Glenn Reed, Peter Bardhi, Ed Murphy, Jeff Pratt, and Subid Wagley. 2002 ACEEE Summer Study on Energy Efficiency in Buildings, Pacific Grove, California, August 2002.

A. Yes. I have reviewed and am familiar with the benchmarks.

10. Q. Can you please describe your professional expertise relative to the issues raised in this proceeding?

A. I have been actively engaged for over 25 years in energy efficiency program design, program implementation oversight, baseline development, program evaluation, and energy codes and efficiency standards development. For the past several years I have worked with efficiency program administrators and other stakeholders in providing support for the design and oversight of residential energy efficiency programs in Massachusetts, Rhode Island, and Connecticut. I am also the lead author of the Northeast Energy Efficiency Partnerships' 2011 regional Residential Lighting Strategy as well as its recent update. Over the past six years I have been involved in undertaking potential studies or in the critical review of such studies in Vermont, New York, Connecticut, Rhode Island, Louisiana, Pennsylvania, Ohio, Iowa, and Nova Scotia. I am also the project manager of a soon to be released white paper for the Regulatory Assistance Project on the 10 most common pitfalls of energy efficiency potential studies. Finally, I am part of the New York State Energy Research and Development Authority's (NYSERDA) evaluation assistance team that works with NYSERDA's evaluation staff and its evaluation contractors to provide oversight, direction, and review of planned and ongoing evaluation activities. This experience gives me insights into critically reviewing FirstEnergy's proposed Plan, comparing it to other similar efficiency program efforts, and assessing the Plan's likelihood of success.

II. Overall Comments on the Three-Year Plan

13. Q. What is the purpose of your testimony?

A. The purpose of my testimony is two-fold. First, to show that FirstEnergy's Plan is seriously flawed, lacks strategic focus, does little to support and grow an energy efficiency infrastructure in Ohio particularly within the geographic service territories of the three FirstEnergy Ohio Electric Distribution Utilities, and fails to capture economies of scale from joint program implementation. As my testimony details, these issues are sufficiently serious that that they raise concerns that FirstEnergy may not meet its benchmarks. In response, several program recommendations are put forward that will reduce this uncertainty and better serve the needs of FirstEnergy's customers. While several of my comments will be at the portfolio level, my more focused testimony will be directed towards FirstEnergy's residential programs.

The second part of my testimony will describe a proposed shared savings incentive mechanism that will reward FirstEnergy for achieving savings above those required by the benchmarks. The proposed incentive mechanism will provide financial rewards to FirstEnergy and to its shareholders to exceed the statutorily defined minimum benchmarks and to minimize the large amounts of remaining cost effective energy efficiency that would otherwise be left untapped.

14. Q. What are your overall impressions of FirstEnergy's Plan?

A. It is largely, if not singularly, focused on just meeting the prescribed minimum benchmarks. There is little broader strategic focus on developing a culture of efficiency that would create a sustainable and supportive

environment for customers, contractors, design professional, manufacturers and other key stakeholders. The Plan is focused on ensuring that just enough widgets: light bulbs, showerheads, efficient refrigerators, etc. enter the market to generate the minimum savings to achieve FirstEnergy's benchmarks.

III. Lack of Comprehensiveness and an Unbalanced Portfolio

15. Q. But aren't the Companies Program and Measure offerings fairly comprehensive?

A. On first examination they might appear to be, but there is little depth to their program offerings. For most programs and measures the Companies have proposed fairly modest participation rates at best.

16. Q. How do the Companies propose to meet their benchmarks?

A. The Companies are proposing to attain a disproportionate amount of savings from a limited number of program activities. For the residential sector, just three program activities are expected to generate nearly 88 percent of its residential sector savings: retail lighting, efficiency kits, and refrigerator recycling. In particular the Companies' proposed efficiency kits represent 36 percent of total 2013-2105 aggregate residential savings and 32 percent of small mercantile savings. The attached Figure 1 shows the breakout of 2013 residential savings for Ohio Edison. These kits represent the single largest source of residential savings. In the small commercial sector the kits represent the second largest source of savings after the lighting program. From an end use perspective an estimated 62 percent of

residential savings are from lighting, while lighting represents approximately 11 percent of total residential energy use.[3]

In comparison, only 1.4 percent of residential savings are projected to come from actual in-home audits and any resulting improvements made to participating customers' homes[4]. While heating, cooling and water heating represent about 32 percent of residential electricity use[5], FirstEnergy only proposes to attain 2.4 percent of its residential savings from the cumulative efforts of their in-home Comprehensive and All-electric audits and from their efficient heating, cooling and water heating equipment rebates. In short, FirstEnergy's proposed efficiency portfolio is poorly balanced and will not meet the needs of any significant number of customers seeking to achieve comprehensive and meaningful energy savings beyond those attained from lighting improvements in their homes and businesses.

17. Q. Don't many efficiency programs rely on lighting for a large percentage of their savings?

A. Yes, they do. Though with the exception of other FirstEnergy retail companies, few, if any, rely on mailing six to nine compact fluorescent lamps to residential customers and to small businesses to achieve a large proportion of their lighting goals. For the residential sector, of the 62% of total sector savings coming from lighting an estimated 44% of this comes from mailing efficiency kits to residences.

17. Q. Do these efficiency kits yield significant savings?

[3] p 99. Market Potential Study. Energy Savings and Demand Reduction for Ohio Edison, Toledo Edison, and The Illuminating Company. Prepared for FirstEnergy Corp. Black & Veatch Holding Company. June 22, 2012
[4] Responses to Requests SC Set 1-INT-36-Attachment 1
[5] Black & Veatch Holding Company. Market potential Study, op. cit.

A. Only if one accepts the assumptions used by FirstEnergy in deriving their savings estimates. However, I believe that the assumptions used by FirstEnergy overestimate the savings from the kits. Use of more realistic savings assumptions put attainment of FirstEnergy's benchmarks at risk given their overreliance on this set of measures.

First, FirstEnergy assumes the same TRM in-service rate (86 percent) for kit lamps as it does for those purchased at retail by a customer. One might expect a lower in-service rate for free CFLs than those purchased intentionally by a consumer at a retail store. FirstEnergy does not provide justification as to why it uses a retail in-service rate for its efficiency kits[6]. Similar in-service rate concerns apply to the smart power strips that are included in the kits for which it appears a 100 percent in-service rate is assumed as there is no in-service rate adjustment to this measures in the Ohio TRM.

In response to discovery questions on its efficiency kit savings assumptions First Energy noted that similar kits had realization rates of 98 to 102 percent in Pennsylvania.[7] However, a more detailed review of the Pennsylvania Statewide Evaluator (SWE) reports on FirstEnergy's second program year show that the realization rates were not derived through any robust evaluation effort. In fact, the in-service rates for CFLs were treated as a "deemed" value (84 percent in Pennsylvania) and were not subject to revision. The SWE evaluator did estimate that CFLs distributed by efficiency kits had an initial in-service rate of 70 percent,

[6] Requests to Responses SC Set 4– RPD-14, Attachment 2
[7] Requests to Responses SC Set 1–INT-6, Attachment 3

but this was estimated through online surveys. While a small number of onsite validation surveys were performed the SWE noted the difficulty in distinguishing between the CFLs in the efficiency kits and those either already in place or purchased subsequent to the receipt of the efficiency kits.[8]

Even lower in service rates were estimated and used by Enbridge Gas to estimate savings for their efficiency kits. The utility distributed kits consisting of four CFLs, two low flow showerheads, one kitchen faucet aerator, and two bathroom faucet aerators. Based on telephone surveys, the in net – after removals - in service rates for these products were:

- CFLs – 52 percent
- Showerheads – 61 percent
- Kitchen aerators – 50 percent
- Bathroom aerators – 34 percent

These results were used by Enbridge Gas to adjust their program savings claims.[9]

Second, FirstEnergy claims the same savings for its efficiency kits in each of the three-years of the Plan. However, EISA standards will diminish the savings that can be claimed by 75 watt equivalent CFLs in 2013 and by 60 and 40 watt equivalent CFLs in 2014. While FirstEnergy has stated that it has accounted for the EISA standards in its efficiency kit savings estimates, it is not clear how they could

[8] See for example: Annual Report to Pennsylvania Public Utility Commission. For the Period June 2010 to May 2011. Program Year 2. Prepared for the Pennsylvania Electric Company. November 15, 2011.
[9] Enbridge Gas Distribution Inc. Demand Side 2011 Draft DSM Annual Report. April 2012.

have and still claim identical savings for the kits in each year from 2013 through 2015.

If FirstEnergy is allowed to distribute Efficiency Kits in Ohio – which I speak to below - I strongly recommend that the assumed in-service rates for all of the proposed measures to be included in the efficiency kits be reviewed and revised accordingly. I believe that the in-service rates for all of the measures in the efficiency kits are overstated. Given the large amount of savings coming from efficiency kits this critical re-examination of the measures' savings assumptions is warranted.

18. Q. Are there other concerns with the efficiency kits?

A. Yes. One of their greatest drawbacks is that they circumvent the normal market channels for the promotion and sale of efficient lighting. The efficiency kits do little if anything to increase the stocking, promotion and sale of CFLs and LEDs by retailers. In fact, the efficiency kits are likely to reduce the number of efficient lighting products purchased at retail. Why undertake program activities that distort the market and work against the interests of FirstEnergy's key trade allies in the lighting market?

19. Q. Would you recommend that the efficiency kits be removed from the Plan?

A. Yes, that would be my recommendation. Their savings are almost certainly to be less than estimated by FirstEnergy and large scale distribution of the kits works at cross purposes to the goals of the retail lighting program. If the Commission were

to approve FirstEnergy's efficiency kits I would recommend that their distribution be significantly curtailed with their contents modified.

Much of the residential efficiency kit budget should be used to further expand the Efficient Products Program. Such an expansion should be through upstream incentives wherever possible, particularly for efficient lighting. If efficiency kits are retained they should be limited and targeted to hard to reach customer segments, including lower income customers, non-English speaking customers, etc. The contents of the efficiency kits should also be modified. The number of CFLs in the kits should be reduced by half or more and replaced with coupons that can be redeemed for CFLs at participating retailers. Finally, all of the products distributed in the efficiency kits should be permanently labeled so that subsequent evaluation activities can unambiguously identify these units distinct from other CFLs, power strips, etc. that the customer may have purchased on their own prior to or subsequent to the receipt of the kit. As noted above, this was an issue in Pennsylvania where the onsite verification audits could not always clearly identify the CFLs distributed through kits.

20. Q. Where should the residential efficiency kit budget be reallocated?

A. Efficiency kits represent an estimated 29% of the total residential sector budget. As a result, budget from the kits can and should be re-allocated to multiple residential sector programs and subprograms. While a significant proportion should be spent to support a more robust Efficiency Products Program, there are other components of the residential sector portfolio that are inadequately funded. As

noted, little of the savings from the so-called Home Performance Program actually comes from customers making significant improvements to existing homes. Only 3% of the Home Performance Program's savings comes from the Comprehensive and All-electric audits. The remainder comes from efficiency kits (81 percent), home energy reports (8 percent), residential new construction (5 percent), and online audits (3 percent).[10] It is highly unusual for a program administrator to achieve greater savings from their new construction program then from their existing home retrofit market given the much larger savings potential in existing homes. Through August 2012, there were 13,762 single family and multifamily housing permits pulled in Ohio.[11] In comparison, there are 5.1 million housing units in Ohio.[12]

This points to a lack of support for credible, in-home efficiency services for existing homeowners and landlords, not that the residential new construction program is in any way overfunded. This further highlights the lack of balance and strategic focus in FirstEnergy's Plan.

21. Q. How many onsite versus online audits do the Companies propose to do over the Plan's three years?

A. For example, Ohio Edison proposes to do 11,700 online audits compared to only 4,032 onsite audits over the three years of the Plan.[13] The three-year onsite audit

[10] Responses to Requests SC Set 1-INT-36-Attachment 4
[11] http://www.nahb.org/generic.aspx?sectionID=130&genericContentID=45409
[12] http://quickfacts.census.gov/qfd/states/39000.html
[13] Ohio Edison Company Energy Efficiency & Peak Demand Reduction Program Portfolio. July 31, 2012 Docket No. 12-2190-EL-POR. Appendix C-2.

participant numbers represent less than one-half of one percent of Ohio Edison's residential customers.

22. Q. Does this seem like an appropriate balance and level of onsite audit activity?

A. No, for several reasons. First, the small number of onsite audits is not likely to make any appreciable impact on the very large savings opportunity for building envelope and HVAC distribution system improvements. Second, the low level of in-home program audits and subsequent home improvement activity will not support the growth of a robust home performance contractor infrastructure. Third, the savings from the online audit are uncertain and may not materialize. FirstEnergy's online savings estimates are not well documented and their transferability to Ohio is not known. It would be better to direct much if not most of these program resources into in-home audits and follow-on measure installations; the results are both visible and tangible. While other program administrators such as those in Connecticut and Massachusetts, offer online audits they mostly do so as a customer education tool and as a means to direct customers into their in-home audit and existing home retrofit program efforts.[14] Online audits should complement and supplement an aggressive in-home retrofit program effort, not substantially supplant it as FirstEnergy has proposed.

Finally, it is worth noting that the online audit program has cumulative three-year operation costs of nearly one million dollars for Ohio Edison alone. This is greater than the operation costs for Ohio Edison's low income activities or for its combined

[14] See for example: http://www.cl-p.com/energycalculator/main.aspx and http://c03.apogee.net/calcs/rescalc5x/Question.aspx?hostheader=nstar&utilityid=nstar

appliance and consumer electronics program efforts[15]. The basis for these online audit operation costs is unclear.

23. Q. What is the key participation requirement for FirstEnergy's residential new construction subprogram?

A. All participating homes must meet the ENERGY STAR Homes version 3.0 (V3.0) guidelines.

24. Q. Is this an appropriate subprogram requirement?

A. This is one of the few, if not the only, instances of FirstEnergy over reaching and setting a program participation bar too high. This is also a program that FirstEnergy seems to have some understanding of the need for trade ally outreach and training, at least as evidenced by their discovery question response.[16] However, the requirements for V3.0 may be too challenging and demanding even for builders that have previously participated in new construction programs tied to earlier versions of the ENERGY STAR Home criteria.

Experience in other jurisdictions and feedback to ENERGY STAR point to a number of concerns regarding the implementation of the full set of V3.0 criteria. These include HVAC contractor certification requirements, water management system requirements, etc. These stringent program requirements may serve as an impediment to program participation and make it difficult for this subprogram to meet its savings goals.

[15] Ohio Edison Company Energy Efficiency & Peak Demand Reduction Program Portfolio. Appendix B-4. Op. cit.
[16] Responses to Requests SC Set 1-INT-23, Attachment 5.

24. Q. Do you have alternative program design recommendations for FirstEnergy's residential new construction program?

A. Yes. FirstEnergy should retain ENERGY STAR Homes V3.0 as an option within its new construction subprogram. The subprogram should have a tiered incentive structure tied to percentage energy savings above Ohio building code requirements; the greater the savings, the higher the incentive. There should also be other minimum program requirements for lighting, mechanical ventilation, and for other electric end uses. Certain components of ENERGY STAR V3.0 should be retained such as some of the thermal envelope checklists.

An objective of such a tiered incentive structure is that it allows for easier entry into the program by first time builders. Over time the expectation would be for builders to participate at more stringent tiers and the incentive levels could be modified to provide participating builders motivation to move up to more stringent tiers. Also, as Ohio's energy code is revised the incentives for each tier can be revised to better reflect the incremental cost of reaching a given tier.

This tier structure should include a highest tier set at an agreed to level approximating net zero energy for new homes, though not requiring the installation of renewables as a condition for program participation. However, the homes should be "renewable ready" to allow easy and less costly installation of photovoltaics in the future. This level of efficiency would be equivalent to about a 40 to 45 HERS index. Such a tier could be promoted through some type of Net Zero Energy Home

Challenge as has been done in other states such as Connecticut which has successfully run its CT Zero Energy Challenge for several years[17].

IV. The Need to Strategically Address Free-Ridership in Program Design

25. Q. Does the proposed program design adequately address free-ridership?

A. There is little, if any, discussion in the Plan as to both recognizing free ridership as a legitimate program design concern and proposing what actions would be taken to minimize free ridership. Free ridership is a particular concern in a state like Ohio where there are no adjustments to savings to account for free ridership. A poorly designed program that fails to consider free ridership will allow a utility to claim gross savings for measures that would have been installed without utility intervention and without the payment of ratepayer funded rebates and incentives.

26. Q. How can free ridership be minimized?

A. Baseline assumptions and program eligibility criteria should be carefully reviewed to ensure that current practice is not identified, and rewarded, as an efficient technology or practice. For example, EPA estimates that in 2011 56 percent of all refrigerators sold nationally met or exceeded its ENERGY STAR refrigerator criteria. For TVs this ENERGY STAR market share is 96 percent[18]. This would strongly argue for FirstEnergy to adopt higher program eligibility criteria for refrigerators and TVs in 2013. In Appendix C-1 FirstEnergy does note that program criteria for a number of measures will be either ENERGY STAR or some higher efficiency level; in some cases one of the Consortium for Energy Efficiency's

[17] http://www.ctzeroenergychallenge.com/
[18] http://www.energystar.gov/ia/partners/downloads/unit_shipment_data/2011_USD_Summary_Report.pdf?a3fe-16e1

product tiers. Using the recently released 2011 ENERGY STAR market share data, all of the proposed Efficient Product Program baseline assumptions and measure eligibility criteria should be reviewed to minimize free ridership.

27. Q. Are there other program or measure eligibility concerns with the residential portfolio?

A. Yes. For a few measure categories FirstEnergy is proposing to provide rebates for technologies that have very different levels of savings. Specifically, FirstEnergy is proposing to rebate storage water heaters and heat pump water heaters. The other example is FirstEnergy's plans to promote halogen lamps in the residential sector. FirstEnergy should not offer rebates for either of these measures.

28. Q. Why are these rebates a concern?

A. There are several reasons. First, there is an overriding concern of creating market confusion. For both technologies the more efficient option saves several times more energy than the less efficient option. Yet consumers will perceive both as being efficient since they are being promoted by FirstEnergy. Further, and particularly in the case of the two hot water technologies, the more efficient option is more costly. The net effect will likely be that sales of the less efficient option will cannibalize the sales of the more efficient one.

In the case of the two hot water options the savings from an efficient storage hot water tank could be as little as 3% for a 50 gallon tank and this assumes that the baseline for a storage hot water tank is the federal minimum. If the baseline is above the federal minimum then this savings will be even smaller. However, for a

heat pump water heater the savings can be upwards and greater than 50 percent. There is little rationale to promote the less efficient storage hot water heater measure and it should be deleted from FirstEnergy's residential portfolio.

For lighting the Plan is not clear as to what type of efficient halogen technology FirstEnergy is proposing to promote. The federal lamp standards in EISA will require that by 2014 all general service lamps be at least as efficient as current halogen technology. While there is some likelihood that more efficient halogen technologies may be available on a limited basis in early 2013 FirstEnergy should not promote this as-not-yet-available technology until more is known as to its performance, availability, savings, and cost.

Even if this technology were to provide cost-effective savings, there are still reasons to exclude it from FirstEnergy's residential lighting portfolio. FirstEnergy estimates that 90 percent of its efficient lighting subprogram savings will come from CFLs and from LEDs. Consumers already face a bewildering array of lamp choices at retailers, particularly at home improvements centers and larger hardware stores where the choices can run into the several hundred. Consumers have to decide among standard incandescent lamps, halogens, CFLs, and, increasingly, LEDs.

This residential lighting landscape is further complicated by the implementation of the EISA standards and the recent mandating of Federal Trade Commission Lighting Facts Labels on most residential lamps. Increasingly consumers will need to choose lamps based on lumens, not on watts. FirstEnergy needs to

unambiguously identify CFLs and LEDs as "the" efficient lamp choice and educate consumers how best to choose the right lamp based on both lumens and color temperature. Further, for efficient lighting products it remains critical that program support be restricted to ENERGY STAR qualified products. There are too many non-qualified products, nearly all LEDs, still on retailer shelves. Any future efficient halogen products will not meet current ENERGY STAR lamp criteria (which are technology specific) and unlikely to meet proposed ENERGY STAR lamp criteria (which are technology neutral).

Given the lack of a commercially available product, uncertainty as to cost and savings, likelihood of increased customer confusion, and the lack of an ENERGY STAR qualification I recommend that halogen lamps not be supported by FirstEnergy. It is worth noting that Sponsors of the Northeast Energy Efficiency Partnerships' Efficient Products Initiative recently came to a similar conclusion. In updating their 2011 regional Residential Lighting Strategy they removed the recommendation to consider the promotion of efficient halogen lamps.

V. The Need for Joint – not Coordinated – Program Delivery

29. Q. Do you have any other overarching observations as to the proposed Plan?

A. Yes. FirstEnergy's programs do not operate in a vacuum. Similar programs are being implemented or proposed by other electric and gas utilities in Ohio. Wherever possible programs and subprograms, e.g., residential new construction and retail lighting programs should be jointly implemented on a consistent statewide basis.

30. Q. But doesn't FirstEnergy speak to coordination with other utilities in its Plan?

A. It does, but there is a noticeable lack of detail. There are no sector level let alone program level details as what specific actions and activities that FirstEnergy would undertake to pursue coordination with other Ohio utilities. Further, the level of commitment and timeline to achieve the proposed coordinate programs is uncertain. Note that I have specifically recommended that FirstEnergy – and the other Ohio utilities - work towards joint implementation, not just coordination. "Coordination" is too ill defined a term and is easily open to multiple interpretations. Finally, it is not clear from the Plan text if the proposed coordination extends to electric as well as to gas utilities. Working jointly with gas utilities is critical for the successful implementation and engagement with trade allies in the new construction, HVAC, and existing home retrofit program components.

31. Q. What are the advantages of joint implementation?

A. I will note a few here. Joint implementation ensures that trade allies do not have to educate themselves about different program requirements as they do business in different parts of the state. Similarly, business customers with facilities in multiple service territories will also only need to familiarize themselves with a single set of program requirements. As utilities move more of their program incentives upstream, being able to speak as a single statewide market will get greater attention from manufacturers, distributors and retailers. Finally, by implementing programs

statewide common costs will be shared and unnecessary duplication of services eliminated. This will reduce program costs to both utilities and to ratepayers.

32. Q. What are the characteristics of a jointly implemented program?

A. These include, but are not limited to: identical rebate and incentive levels and measure eligibility criteria, common program application forms and procedures – both hardcopy and online, identical contractor training and certification requirements, common rebate and incentive processing procedures, identical quality control and quality assurance procedures, jointly procured statewide implementation vendors, etc.

VI. Shared Savings Incentive Mechanism

33. Q. Do you recommend that a shared savings incentive mechanism be put in place as part of the Three-Year Plan?

A. Yes. I recommend that such an incentive mechanism be put in place.

34. Q. Why do you make this recommendation?

A. There will be large amounts of cost-effective energy efficiency that will not be attained if FirstEnergy just meets its benchmarks. A shared savings mechanism will provide FirstEnergy management and its shareholders with a strong financial incentive to achieve savings beyond those required by the benchmarks.

35. Q. What are the key components of the proposed shared savings incentive mechanism?

A. There are three main components. First there is a trigger that defines the minimum amount of savings that must be achieved in each year before an incentive can be earned. Second, there is a calculation of net benefits based on the Utility Cost Test (UTC). Third, there is a tiering of the amount of the calculated net benefits that are paid to FirstEnergy based on the extent to which savings exceed the trigger.

36. Q. Is the proposed trigger tied to the current mandated benchmarks?

A. Yes, but there are proposed adjustments to the baseline usage and the resulting savings goals. The trigger is tied to an Adjusted Benchmark.

37. Q. How does this Adjusted Benchmark differ from the current mandated benchmarks?

A. The Adjusted Benchmark requires that baseline sales be adjusted by excluding Mercantile Self-Direct customer load from the three-year average sales baseline from which the proposed annual energy efficiency Adjusted Benchmarks are determined. This revised sales baseline would be multiplied by the current mandated annual energy efficiency benchmark percentages to derive the Adjusted Benchmark. Savings are based on the verified, annualized program savings as reported in the Annual Portfolio Status Report, excluding savings from Transmission and Distribution projects and savings from the Plan's Mercantile Customer Program and Mercantile Self-Direct.

38. Q. Does the trigger have any other requirements?

B. Yes. All of the operating Companies must meet the trigger before any is eligible to earn a shared savings incentive.

39. Q. How are the net benefits calculated?

A. They are based on Utility Cost Test net benefits. Utility costs and program savings will be calculated on a Utility Cost Test basis, as verified in each Company's Annual Portfolio Status Report, and trued-up based on the findings of the Commission's Independent Evaluator. Certain program net benefits will be excluded from the calculation of overall Company net benefits.

40. Q. What program net benefits are to be excluded?

A. We propose to exclude from the Plan's Mercantile Customer Program (the existing Mercantile Self-Direct Program) and Mercantile Self-Direct projects submitted by a Customer (or representative of the Customer) to the Commission, Transmission and Distribution Projects, and the Low Income Program. Further, the calculated net benefits will exclude net benefits from Energy Usage Reports and the Online Audit program unless the savings from that measure/program have been shown to persist beyond one year.

41. If all of the Companies meet their Adjusted Benchmark triggers, how are their incentive payments calculated?

A. The Company is paid a shared savings incentive based on a percentage of the calculated net benefits as described above. The percentage used to calculate the payment increases in a series of stepped tiers as the Company's reported savings increases. More savings and better performance are rewarded with higher incentive payments. The

calculated incentive payment amount is allocated among the three individual Companies proportional to the non-Mercantile Self-Direct load each Company serves.

42. Q. How do the proposed incentive tiers encourage the Companies to maximize their savings above the Adjusted Benchmark?

A. The proposed incentive structure is progressive. That is, as the savings amount above the Adjusted Benchmark trigger is exceeded, the marginal incentive payment per increases. Thus, the percentage return increases as the savings above the trigger savings. An illustrative example is provided below:

Annual Energy Efficiency Performance (% of Adjusted Benchmark)	Shared Savings Incentive (% of Net Benefits)
< 100-110	0
>110-120	2
>120-130	4
> 130-140	6
> 140-150	9
>150-160	12
>160+	14

43. Q. Is there a cap to the annual incentive payment?

A. No. There is no proposed annual incentive cap,

44. Q. Does this conclude your testimony?

A. Yes it does, but I reserve the right to add or modify this testimony based upon new information received or discovered.

CERTIFICATE OF SERVICE

I hereby certify that a true and accurate copy of the foregoing *Direct Testimony of Glenn Reed* has been served upon the following parties via electronic mail on October 5, 2012.

/s/ Christopher Allwein
Christopher J. Allwein

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GLENN REED, PRINCIPAL

EDUCATION

M.S., Energy Management and Policy, University of Pennsylvania, 1982
B.A., Biology, Wesleyan University, 1979

EXPERIENCE

2010-present: Principal, Energy Futures Group, Hinesburg, VT
2005-2010: Managing Consultant, Vermont Energy Investment Corporation, Burlington, VT
2001-2005: Dir. of Regional Initiatives, Northeast Energy Efficiency Partnerships, Lexington, MA
1987-2000: Deputy Dir. of East Coast Consulting, XENERGY, Inc. (now KEMA), Burlington, MA
1983-1987: Principal Planner, Massachusetts Executive Office of Energy Resources, Boston, MA

PROFESSIONAL SUMMARY

Glenn Reed has more than 25 years experience in demand-side management (DSM) program planning and evaluation; energy-efficiency policy development and implementation; building codes and appliance standards development; and group facilitation and consensus building. Mr. Reed currently is a lead residential advisor to the Massachusetts Energy Efficiency Advisory Council (EEAC) assisting and overseeing program design and implementation of residential lighting, appliance, HVAC, and consumer electronics programs. As the lead residential consultant to the Connecticut Energy Efficiency Board (EEB), he plays a similar technical assistance and oversight role in that state. For the Rhode Island Energy Efficiency Resource Management Council (EERMC) he provides oversight support on National Grid's lighting, appliances and gas and electric HVAC programs. In addition to his on-going work in Massachusetts, Connecticut, and Rhode Island, Mr. Reed has performed or directly overseen cost-effectiveness screening and program design for clients in New York, Prince Edward Island, and Vermont. Mr. Reed also developed or co-developed the Cost-effectiveness and Program Planning and Design modules for The Association of Energy Service Professional's *DSM 101* training and presented this material to utility staff in several locations in the US.

SELECTED PROJECTS

- ***Massachusetts Energy Efficiency Advisory Council.*** Provides on-going technical and programmatic advice to, and oversight of, the Massachusetts gas and electric program administrators' residential efficient products (lighting, appliances and consumer electronics), multifamily, and HVAC programs. This includes review of key screening tool inputs and development of three year program savings goals. Also assists Council evaluation consultants Leads Council engagement on the development of the residential measure characterizations for Massachusetts' new Technical Resource Manual.

- ***Connecticut Energy Efficiency Board (EEB).*** Leads residential team to provide oversight of the state's electric and gas residential efficiency program. Works closely with the state's utilities to develop cost-effective program designs and goals for the annual Conservation and Load Management Plan. Connecticut's programs are subject to both utility and TRC test review by their regulators. These services are provided through the utilities' engagement with the EEB.

- ***Rhode Island Energy Efficiency Resource Management Council.*** Senior Advisor providing on-going technical and programmatic advice to, and oversight of, Rhode Island's residential efficient products (lighting, appliances and consumer electronics) and HVAC programs. Works

closely with National Grid staff to develop cost-effective program designs and goals for their energy efficiency plans.

- ***Regulatory Assistance Project (RAP).*** Developing a white paper to identify and address the ten most commonly encountered "issues' when undertaking or reviewing an energy efficiency potential study. This document will assist regulators, utilities, stakeholder groups and others to ensure that completed potential studies meet regulatory and programmatic expectations and objectives.

- ***New York State Energy and Research Development Authority (NYSERDA).*** Part of evaluation oversight team currently assisting NYERDA with planning, coordinating, implementing and reviewing a wide range of program evaluation efforts. Principal engagement has been on evaluation of NYSERDA's residential lighting program and transportation RD&D activities.

- ***Alliance for Affordable Energy.*** Provided technical support for this New Orleans-based stakeholder organization. As part of Entergy's IRP proceeding completed detailed review of recently completed energy efficiency potential study. Provided guidance as to how results should be integrated into IRP process to inform Entergy's next set of planned efficiency program efforts.

- ***PennFUTURE and Keystone Energy Efficiency Alliance.*** Provided technical support for those two efficiency stakeholder groups in Pennsylvania. Completed review of recently completed energy efficiency potential study. Provided guidance as to how results inform proposed goals for utilities' next four year plan. Assisted with comments on implementation of Act 129, state legislation that frames utilities' energy efficiency activities.

- ***Iowa Office of Consumer Advocate.*** Provided critical review of residential potential study. Results from this study will inform future electric utility efficiency goals.

- ***New York State Energy Research and Development Authority.*** Principal Investigator for commercial/residential code compliance study. This is one of the first studies in the nation undertaken to meet federal requirements to demonstrate 90 percent code compliance.

- ***Vermont Electric Power Company.*** Managed the residential efficiency cost-effectiveness assessment and program design tasks for the VELCO Southern Loop project. This effort sought to avoid the construction of upgraded transmission lines in southern Vermont. The proposed programs represent incremental activities above current Efficiency Vermont efforts in the area.

- ***Prince Edward Island Office of Energy Efficiency.*** Managed a potential analysis, measure screening, and program design and cost-effectiveness assessment for the provincial government. This analysis included the residential, C&I, and transportation sectors. Both energy and carbon savings were analyzed and estimated. Subsequent follow-up work included a critical review of Maritime Electric's DSM Plan and screening tool.

- ***Long Island Power Authority (LIPA).*** Led the VEIC residential team to provide ongoing technical and programmatic advice to LIPA on the design, implementation, and evaluation of their residential and renewable energy program. Responsible for detailed long-term program planning and cost-effectiveness screening, on-going program design and implementation review and assistance, and support of program evaluation efforts.

- *Orange and Rockland (O&R).* Led residential team to assess the cost-effective savings potential and to develop five-year program designs and budgets to attain this potential within prescribed budget caps. Potential analysis was informed by an on-site residential data collection task that was also part of their scope of work for O&R.

- *Association of Energy Services Professionals (AESP).* Lead trainer for AESP's DSM 101 workshops in NY, KS, IL, WA, and NC. Developed or co-developed Residential and C&I Technology, Cost-effectiveness, and Program Planning and Design training modules. These workshops, lasting as long as five days, provided efficiency program staff with details on all aspects of energy efficiency program planning, design, implementation, and evaluation.

- *Management of Regional Market Transformation Initiatives.* Responsible for NEEP's six residential and C&I regional market transformation Initiatives - ENERGY STAR® Products, Residential HVAC, ENERGY STAR Windows, Premium Efficiency Motors, Unitary HVAC and C&I Information Exchange - and for Initiative-related research and evaluation activities.

- *ENERGY STAR Products and Residential HVAC Initiatives.* As manager of these NEEP Initiatives, activities include facilitation of multi-state stakeholder Working Group meetings (Sponsors, Sponsors' contractors, collaborative consultants, DOE, EPA, CEE and others), management of multiple RFP processes (coordinated contractor procurement for Sponsors and solicitations to industry to develop and implement joint promotions), development of regional market transformation plans, and coordination with national and other regional market transformation programs. Under Mr. Reed's direction the ENERGY STAR Products Initiative and its Sponsors were recognized for five consecutive years at the National ENERGY STAR Awards.

- *Program for the Evaluation and Analysis of Residential Lighting (PEARL).* Served on the PEARL Board to address on-going concerns regarding the quality and performance of ENERGY STAR CFLs and fixtures. As a direct result of PEARL's efforts, ENERGY STAR instituted third-party quality assurance testing for ENERGY STAR CFLs and fixtures. Mr. Reed, individually and as a PEARL Board, was recognized for his *Outstanding Contributions Improving the Quality of Efficient Lighting* at the 2005 ENERGY STAR Awards.

- *Boston Edison Chiller Study.* Managed a comprehensive analysis of chiller replacement, conversion and retrofit potential for Boston Edison. This project entailed over 600 on-site surveys of installed commercial and industrial chiller. In total, the over 1,000 chillers surveyed provided space cooling for 100 million square feet of floor space. A follow-up assessment targeted smaller customers and involved 150 surveys of commercial and industrial facilities with packaged air conditioners.

- *Massachusetts Residential Code Impact Study.* Managed a residential code impact study for the Massachusetts Board of Building Regulations and Standards (BBRS). Nearly 200 on-site surveys of recently built homes were completed. Customer selection was done using cluster sampling techniques to limit the number of towns that had to be visited during the survey and to reduce overall project costs. DOE-2 was used to generate estimates of the savings attributable to the revised residential energy code.

- *Georgia Power C&I Baseline Study*. Managed an on-site survey and analysis project to determine new construction baseline practices. For this study for Georgia Power, data were

collected on-site at 480 facilities representing over 13 million square feet of new building space. All primary electric and gas equipment was inventoried. With the results from this study, program eligibility criteria for the utility's commercial new construction program were established.

- ***Massachusetts Statewide C&I Baseline Study.*** Managed a joint research project to characterize new construction practices in the commercial and industrial sectors. This project for four Massachusetts utilities analyzed data collected from 100 on-site surveys. In addition, 30 in-person interviews were performed to determine factors affecting specification of high efficiency equipment and controls in new buildings. The results were used for both program design and program evaluation purposes.

- ***New Jersey Residential HVAC Baseline Study.*** Managed a residential HVAC baseline study for the New Jersey HVAC working group consisting of the state's electric and gas investor owned utilities. Nearly 70 on-site surveys characterized HVAC specification and installation practices including system sizing, duct leakage, refrigerant charge and airflow over the indoor coils. XENERGY also completed market actor interviews with manufacturers, distributors, and contractors.

- ***Massachusetts Statewide C&I Baseline Study.*** Managed an on-site survey and analysis project of over 300 new gas-heated homes built in Massachusetts. This project, for a consortium of seven gas utilities, developed statistical characterizations of residential new construction practices. The project's findings were used to develop a joint program filing by the sponsoring utilities.

- ***Connecticut Commercial Baseline Study.*** Managed a data collection and analysis project to determine new construction practices in ten commercial building categories. This project, for Northeast Utilities, involved 70 on-site surveys. The results were used to define baseline practices for Northeast Utilities' performance-based commercial new construction program.

- ***DOE National Industrial Motor Study.*** Managed the on-site data collection task for a national study on industrial motor use for DOE. Recruited, trained, and managed a team of facility auditors and scheduling staff that completed over 250 industrial motor drive surveys in 20 locations through the United States. The data from these surveys were used to develop the most complete assessment of industrial motor use developed to date.

- ***Consolidated Edison EMS Research.*** Managed a project using both telephone surveys and on-site data collection to determine the potential demand reduction from upgrading existing energy management systems in large commercial buildings. The results from this project lead to a multi-year metering effort by XENERGY of several installed energy management systems.

- ***Carolina Power& Light Residential New Construction Program.*** Managed a comprehensive impact and process evaluation of CP&L's Common Sense Home residential new construction program. Process tasks completed included staff interviews, focus groups with HVAC contractors and builders, participant and nonparticipant telephone surveys, and builder telephone surveys. For the impact analysis, XENERGY used the ESPRE hourly simulation model to determine program energy and demand impacts. To support the simulation analysis, 100 detailed on-site surveys were completed; 50 of participants and 50 of nonparticipants.

- ***New York Gas Group Gas Cooling Study.*** Managed the development of a research agenda to accelerate the commercialization of gas cooling technologies in New York. This analysis

addressed both technical and market acceptance issues. Detailed DOE2.1e simulations were completed to develop a life cycle cost comparison between matched pairs of electric and gas cooling technologies. Interviews with manufacturers and research organizations were completed to assess current trends in product development. Focus groups were held in two locations in the state to examine design professional and contractor perceptions regarding gas cooling technologies.

- ***Consolidated Edison Technical Potential Analysis.*** Lead analyst in a research project to determine the DSM technical potential in the residential (retrofit and new construction) and commercial (new construction) sectors. This work, for Consolidated Edison, was done for their first annual comprehensive conservation filing to the New York Public Service Commission.

- ***Massachusetts Electric C&I Rebate Design.*** Managed a project to develop commercial and industrial new construction rebates for a large Massachusetts utility. These rebates were calculated by weighting energy and demand savings across 12 avoided cost periods. Over 30 lighting, envelope and HVAC measures were analyzed.

- ***New Jersey Statewide Efficiency Assessment.*** Managed a Comprehensive Resource Assessment (CRA) for a working group of New Jersey's electric and gas investor-owned utilities. This study examined an extensive set of efficiency and renewable energy opportunities in New Jersey, and provided a ranking for the technologies to inform future program planning and budget allocation decisions. Testified before the NJ Board of Public Utilities on the study's findings.

SELECTED PUBLICATIONS

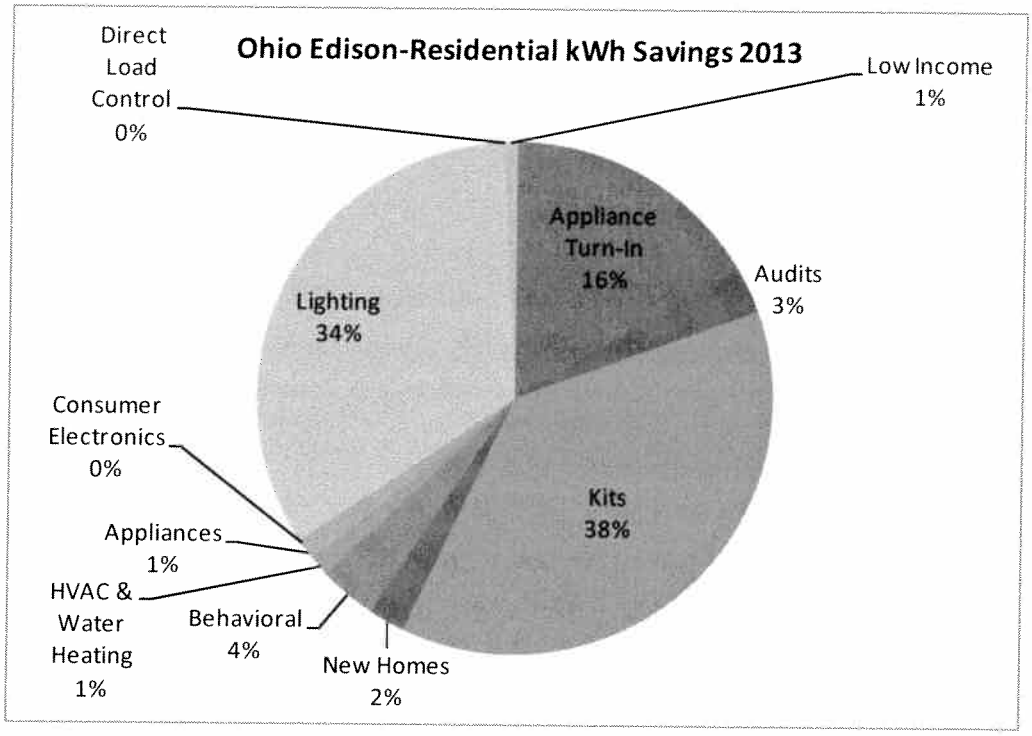
- *Northeast Residential Lighting Strategy*. (With Optimal Energy, D&R International, and Ecova). Northeast Energy Efficiency Partnerships. Lexington, MA. March 2012
- *The Costs and Benefits of Measuring if States Meet 90% Compliance with Building Codes*. R. Wirtshafter, Glenn Reed, et. al.), Proceedings of the International Energy Program Evaluation Conference (IEPEC), August 2011.
- *Do CFLs Still Pass the Test.* Chris Granda and Glenn Reed. Home Energy. May/June 2010.
- *Comparative Performance of Electrical Energy Efficiency Portfolios in Seven Northeast States*. Stuart Slote, Glenn Reed, and John Plunkett. 2006 ACEEE Summer Study on Energy Efficiency in Buildings, Pacific Grove, California, August 2006.
- *Savings Without Rebates: Moving Toward Claiming Savings from Market Transformation*. Glenn Reed, Toben Galven, and Blair Hamilton. 2006 ACEEE Summer Study on Energy Efficiency in Buildings, Pacific Grove, California, August 2006.
- *Pearls of Wisdom: Assuring Efficient Lighting Product Quality and Program Integrity*. Elizabeth Titus, Glenn Reed, Noah Horowitz, and Chris Granda. 2005 International Energy Program Evaluation Conference, New York City, New York, August 2005.
- *Engaging Industry: Better Their Money than Ours*. Glenn Reed, Peter Bardhi, Ed Murphy, Jeff Pratt, and Subid Wagley. 2002 ACEEE Summer Study on Energy Efficiency in Buildings, Pacific Grove, California, August 2002.
- *Reaching the Consumer: Different Approaches to Common Themes*. Marci Sanders, Sue Sowek, Glenn Reed, Wally McGuire, and Maureen McNamara. 2002 ACEEE Summer Study on Energy Efficiency in Buildings, Pacific Grove, California, August 2002.
- *Status of the U.S. Market for Green Power*. Glenn Reed and Ashley Houston. 2000 ACEEE Summer Study on Energy Efficiency in Buildings, Pacific Grove, California, August 2000.
- *Commercial New Construction Practices in Georgia: Findings from 480 On-Site Surveys*. Second National New Construction Programs for Demand-Side Management Conference, San Diego, California, October 1993.
- *Freeridership Estimation in the New Construction DSM Market*. Betty Tolkin and Glenn Reed, Sixth International Energy Program Evaluation Conference, Chicago, Illinois, August 1993.
- *Determination of Baseline Commercial New Construction Practices in Massachusetts*. Building for the Future - New Construction Programs for Demand-Side Management Conference, Lake Tahoe, California, May 1992.
- *Is Fuel Switching a Viable DSM Option: Assessment of Impacts and Potential for Conversion to Gas Cooling in the Rhode Island Commercial Sector*. Glenn Reed and Gary Epstein, Fifth National Demand-Side Management Conference, Boston, Massachusetts, 1991.

- *A Case Study in Comprehensive DSM Measure Analysis and Incentive Setting.* Don Robinson, David Jacobson, Susan Haselhorst, and Glenn Reed, Fifth National Demand-Side Management Conference, Boston, Massachusetts, 1991.
- *No Before, Only After - The Importance of Establishing a Baseline for New Construction.* Fifth International Energy Program Evaluation Conference, Chicago, Illinois, 1991.

Figure 1

Ohio Edison

2013 Residential Energy Savings by Major Subprogram



SC Set 1
Witness: Fitzpatrick

Case No. 12-2190-EL-POR

In the Matter of the Application of OhioEdison Company, The Cleveland Electric Illuminating Company, and The ToledoEdison Company For Approval of Their Energy Efficiency and Peak Demand Reduction Program Portfolio Plans for 2013 through 2015.

RESPONSES TO REQUEST

SC Set 1– INT-4 Please provide all results from the retailer (and all other trade ally) interviews that were completed to inform the Market Potential study.

Response: See Section 5.0 of the Market Potential Study for a summary and analysis of the market for energy efficiency in the Companies' territories, along with EEPD measure availability, market penetration, store product characterization, and measure pricing as informed by discussions with the retailers and trade allies. Specific responses are confidential.

SC Set 4
Witness: Miller

Case No. 12-2190-EL-POR, Case No. 12-2191-EL-POR, Case No. 2192-EL-POR

In the Matter of the Application of Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company For Approval of Their Energy Efficiency and Peak Demand Reduction Program Portfolio Plans for 2013 through 2015

REQUEST FOR PRODUCTION OF DOCUMENTS

SC Set 4– RPD-14 Please provide any evaluation results that support the 0.86 in service rate (ISR) for CFLs included in the Efficiency Kits.

Response: The ISR is based off CFLs as included Draft Ohio TRM. As the proposed Efficiency Kit component of the Home Performance program is a new offering and has not yet been approved or launched, the Companies cannot yet provide evaluation results for this future offering. Additionally the OH TRM ISR value is similar to the PA and Mid Atlantic TRMs, both of which are publically available:

PA
http://www.puc.state.pa.us/pcdocs/1158402.docx

Mid Atlantic
http://neep.org/uploads/EMV%20Forum/EMV%20Products/A5_Mid_Atlantic_TRM_V2_FINAL.pdf

SC Set 1
Witness: Miller

Case No. 12-2190-EL-POR, Case No. 12-2191-EL-POR, Case No. 2192-EL-POR

In the Matter of the Application of Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company For Approval of Their Energy Efficiency and Peak Demand Reduction Program Portfolio Plans for 2013 through 2015.

RESPONSES TO REQUEST

SC Set 1–INT-6 Identify all evaluation results that confirm the savings estimates of the Efficiency Kits that FirstEnergy is planning to distribute, as well as information detailing whether the Kits will increase participation in other residential programs.

Response: Efficiency Kits are being proposed as a new program component in this Portfolio Plan, and as such, evaluation results do not exist for this program element relative to Ohio. However, the Companies' affiliates in Pennsylvania have conducted program evaluations as part of the Home Audit Program—the savings of which primarily stem from a kit program. Recent realization rates for the home audit program have ranged from 98% to over 102%. While the Companies have not conducted formal studies linking participation in Kit programs to increased participation in other programs, the Companies' program managers and program designers, based on the inclusion of efficiency education materials and informal feedback and program success in other jurisdictions, believe that the wide array of easy-to-install technology and educational information presented in Energy Efficiency Kits will introduce customers to efficiency technologies, help inform customers of the Companies' suite of Energy Efficiency offerings and drive participation in other Company programs.

Additionally, the Ohio Energy Project administers a school energy efficiency kit program that informed the offering included in this Portfolio Plan. In its 2010 Annual Report[1], OEP states:

> *On post-program evaluations, students and parents stated that the energy efficiency kits motivated them to purchase additional CFL's. Families reported purchasing an additional 40,960 CFL's to install in their homes as a result of receiving the energy kits.*

[1]

SC Set 1
Witness: Miller

Case No. 12-2190-EL-POR, Case No. 12-2191-EL-POR, Case No. 2192-EL-POR

In the Matter of the Application of Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company For Approval of Their Energy Efficiency and Peak Demand Reduction Program Portfolio Plans for 2013 through 2015

RESPONSES TO REQUEST

SC Set 1–INT-36 Provide aggregate annual kWh savings for each measure listed in the Tables found Appendices B-1, B-2, B-3, and B-4.

Response: Please see SC Set 1-INT-036-Attachment 1 for aggregate annual MWh savings by measure.

SC Set 1
Witness: Miller

Case No. 12-2190-EL-POR, Case No. 12-2191-EL-POR, Case No. 2192-EL-POR

In the Matter of the Application of Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company For Approval of Their Energy Efficiency and Peak Demand Reduction Program Portfolio Plans for 2013 through 2015

RESPONSES TO REQUEST

SC Set 1–INT-23 Identify what the Companies have done to prepare/inform builders, HVAC contractors and others of the detailed requirements for new homes under ENERGY STAR v3.0 that go beyond previous Energy Star new home requirements.

Response: Under the Companies existing Portfolio Plan, the Companies provided a variety of group and individual trainings, both in-person and online, to support raters, builders, and trade allies to meet the ENERGY STAR Version 3.0 transition. The primary means of training has been webinars, which provide an effective means to reach participants across all of the Companies' service territories. These webinars included:

- Sampling: An Overview (May 15, 2012)
- Energy Efficient Concepts that add little to no Cost to Construction (June 12, 2012)
- RESNET New Minimum Rated Features and CFA (June 26, 2012)
- Lights & Appliances: How to Benefit from the Low-Hanging Fruit (July 10, 2012)
- Measuring Airflow, Duct Testing & Modeling (July 31, 2012)
- ENERGY STAR 3.0 Incremental Costs Vs. Value (August 14, 2012)

Additionally, PSD (the Companies' third- party program implementer) is an authorized ENERGY STAR 3.0 Trainer, and has offered the following ENERGY STAR 3.0 Training sessions since the Ohio Program began in December 2011. These are comprehensive training sessions designed to prepare raters for the ENERGY STAR 3.0 test and certification. Program participants were extended a $40 discount on the training, and all training sessions were offered online for participant convenience.

- December 6-9, 2011
- March 13-16, 2012
- July 10-13, 2012
- October 9-12, 2012

PSD's QA staff has an ongoing working relationship with program participants to make sure that the homes submitted to the program meet or exceed the latest ENERGY STAR standards.

In addition, PSD routinely pass on information regarding EPA webinars to program participants via e-mail, and more recently, through the monthly newsletter. Included in the newsletter is both a "Tip of the Month" and "Industry News" section that is designed to highlight special information, such as important ENERGY STAR transition issues.

Summary: Testimony of Glenn Reed electronically filed by Mr. Christopher J Allwein on behalf of The Sierra Club