

**BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO**

In the Matter of the Annual Verification)	
of the Energy Efficiency and Peak)	
Demand Reductions Achieved by the)	Case No. 13-1027-EL-UNC
Electric Distribution Utilities Pursuant)	
to Section 4928.66, Revised Code.)	

COMMENTS OF DUKE ENERGY OHIO, INC.

I. Introduction

The Public Utilities Commission of Ohio (Commission) initiated this proceeding on April 25, 2013. The Report of the Ohio Independent Evaluator, 2011 Ohio Efficiency Programs, was filed on May 2, 2013 (2011 Evaluator's Report). On December 11, 2013, the Commission established a comment period in order to assist the Commission in its review of the Evaluator's Report. Duke Energy Ohio, Inc., (Duke Energy Ohio) submits the following comments for the Commission's consideration.

II. Procedural History and Background

Ohio Revised Code (R.C.) Section 4928.66 sets forth detailed requirements for energy efficiency and peak demand reduction that must be met by Ohio electric distribution utilities. In addition to the mandates set forth therein, the law requires that the Commission annually verify the levels of energy efficiency and peak demand reduction achieved by each electric distribution utility.

In order to develop a methodology for this requirement, the Commission opened a proceeding to facilitate the creation of a technical reference manual (TRM) that would provide protocols for measurement and verification of energy efficiency and peak demand reduction

measures. In Case No. 09-512-EL-UNC, the Commission selected a consultant to assist the Staff of the Commission (Staff) in creating a TRM. The TRM was published in draft form on August 6, 2010. Pursuant to an Entry issued on October 4, 2010, comments were then submitted by interested parties on November 3 and reply comments on November 15, 2010. The comments submitted included those of the Commission's own consultant, Vermont Energy Investment Corporation (VEIC), which accepted and agreed that the TRM should be modified in several regards.¹ On July 31, 2013 the Commission issued an Entry on Rehearing stating that, rather than further modifying the TRM, the TRM should include those modifications explicitly agreed to by VEIC, thereby creating an "effective TRM" where draft and comments must be read together. The Commission stated that the TRM should be "regarded as a set of guidelines rather than a mandate."²

In its Entry on Rehearing, the Commission articulated a safe harbor approach: "Any utility that elects to adhere to the guidance in the TRM will benefit from a presumption of reasonableness, which any other party not in agreement would have the burden to rebut in any applicable proceeding. To the extent that a utility seeks to utilize...any other method of determining energy savings and demand reductions, *the Commission* will review the utility's request on a case-by-case basis, and the utility will bear the burden of demonstrating that its alternative method is just and *reasonable*).³ The Commission added that, "[a]lthough we strongly encourage the electric utilities and gas utilities to utilize the TRM, we emphasize again

¹ *In the Matter of Protocols for Measurement and Verification of Energy Efficiency and Peak Demand Reduction Measures*, Case No. 09-512-GE-UNC, Reply Comments of Vermont Energy Investment Corporation (November 15, 2010).

² *In the Matter of Protocols for Measurement and Verification of Energy Efficiency and Peak Demand Reduction Measures*, Case No. 09-512-GE-UNC, Entry on Rehearing, at paragraph 33 (July 31, 2013).

³ *Id.* (emphasis added).

that no provision within the TRM shall be considered binding on any party, including Staff, in any Commission proceeding.”⁴

The Commission also directed Staff to update the TRM, in coordination with the Independent Program Evaluator, to incorporate changes and to develop a process by which to update the TRM on a regular basis. The 2009 and 2010 Evaluator’s Report was filed by the Staff for the Commission’s consideration on August 29, 2012.⁵ That report reviewed evaluations that were published by Duke Energy Ohio’s third-party evaluator, TecMarket Works, during 2009 and 2010 and were addressed in Duke Energy Ohio’s 2010 and 2011 annual update filings respectively.⁶ The Commission received comments from parties on the 2009 and 2010 Evaluator’s Report during 2012. Consistent with its July, 31, 2013, Entry on Rehearing in Case 09-512-EL-UNC, wherein the Commission reserved to itself the disposition of the recommendations provided by the Independent Evaluator, the Commission issued an order ruling on the 2009 and 2010 Evaluator’s Report recommendations on August 7, 2013 (August 7 Order).⁷

The August 7 Order provides direction on the appropriate *forward* application of the Independent Evaluator’s recommendations, both generally and on a utility-specific basis. In the Order, the Commission, in summarizing the Independent Evaluator’s 2009 and 2010 Report highlighted the following:

⁴ *Id.*

⁵ *In the Matter of the Annual Verification of the Energy Efficiency and Peak Demand Reductions Achieved by the Electric Distribution Utilities Pursuant to Section 4928.66, Revised Code*, Case No. 12-665-EL-UNC, Report of the Ohio Independent Evaluator, August 29, 2012.

⁶ *In the Matter of the Annual Energy Efficiency Portfolio Status Report of Duke Energy Ohio, Inc.*, Case No.10-317-EL-EEC, March 15, 2010 (containing evaluation reports published in 2009) and *In the Matter of the Annual Energy Efficiency Portfolio Status Report of Duke Energy Ohio, Inc.*, Case No.11-1311-EL-EEC, March 15, 2011 (containing evaluation reports published in 2010).

⁷ *In the Matter of the Annual Verification of the Energy Efficiency and Peak Demand Reductions Achieved by the Electric Distribution Utilities Pursuant to Section 4928.66, Revised Code*, Case No. 12-665-EL-UNC, Finding and Order (August 7, 2013).

- A. The Commission noted that the use of a TRM installation rate adjustment factor for CFLs is considered a safe-harbor. Despite the Independent Evaluator's recommendation that primary research could be utilized, the Commission states that it is for the Commission to determine whether "any other method" is just and reasonable.⁸
- B. The Commission declined to agree with the Independent Evaluator's recommendation that all process recommendations made by utility third-party evaluators be adopted.⁹
- C. The Commission found the Independent Evaluator's efforts to develop a standard, free-ridership question battery were premature and utilities should continue to employ gross savings for compliance with Section 4928.66, Revised Code.¹⁰
- D. The Commission stated that it:

"agrees that [the Independent Evaluator's] recommendations, *to the extent that they are adopted by the Commission*, should *only be applied prospectively* for the purpose of assessing compliance ... and the electric utilities should not be required to amend their energy efficiency savings or otherwise update their compliance filings for 2009, 2010, 2011, or 2012, in light of the timing of [the Independent Evaluator's] first verification report. However, we emphasize that the electric utilities may be directed to adjust their energy efficiency savings in accordance with recommendations made by the Evaluator in future verification reports, *as determined by the Commission*"¹¹

III. Duke Energy Ohio Programs Recommendations

The Independent Evaluator, in the 2012 proceeding, recommended that Duke Energy Ohio adjust CFL savings using an in-service rate adjusted by primary data from customer surveys or, otherwise, use the TRM. The Commission responded that those using an approach not in accordance with the TRM will bear the burden of proof.¹²

⁸ *Id.* at paragraph 12.

⁹ *Id.* at paragraph 17.

¹⁰ *Id.* at paragraph 19.

¹¹ *Id.* at paragraph 22 (emphasis added).

¹² *Id.* at paragraphs 39 and 40.

Additionally, the Independent Evaluator recommended improvement for audit and behavior programs. Duke Energy Ohio responded that the cost associated with the additional quantity of surveying recommended by the Independent Evaluator would not add significant value and would increase costs prohibitively. The Commission indicated that, where a utility does not rely on the TRM, the Commission will review on a case by case basis.¹³

Finally, the Independent Evaluator recommended *that future evaluation work* should rely on primary data collected from Ohio customers and be completed as close as realistically possible to the program year being evaluated. The Commission found the recommendation to be reasonable, adding, “*although we note that it appears that Duke is already making efforts to comply with the recommendation to the extent feasible*” (emphasis added).¹⁴

In the present proceeding, the 2011 Evaluator’s Report was filed by Staff on May 2, 2013. The 2011 Independent Evaluator’s Report reviews third-party evaluation reports published predominantly during 2011 that were included in the 2011 Annual Energy Efficiency Portfolio Status Report (Case No. 12-1477-EL-EEC filed in May of 2012).¹⁵ The comments of Duke Energy Ohio on matters raised by the 2011 Evaluator’s Report are set forth below.

IV. General Comments

¹³ It should be noted that the TRM does not articulate a specific methodology for residential audit programs or behavior programs. The recommendations by the Independent Evaluator therefore are in addition to what is contained in the TRM.

¹⁴ *Id.* at paragraphs 49 and 50.

¹⁵ Duke Energy Ohio adopts the following naming convention for referring to the Independent Evaluator’s Reports. The “2009 and 2010 Independent Evaluator’s Report” will refer to the report that contains the Independent Evaluator’s review of the utilities’ Annual Energy Efficiency Status Reports for 2009 and 2010 and the associated third-party evaluation reports already contracted for by the utilities. The “2011 Independent Evaluator’s Report” refers to the report that contains the Independent Evaluator’s review of the utilities’ Annual Energy Efficiency Status Report for 2011 and associated third-party evaluation reports already contracted for by the utilities.

Many of the matters raised herein arise from the challenges associated with the timing of the Independent Evaluator's reports relative to the dates when Duke Energy Ohio must plan for and complete its impact evaluations, due to commitments in other filings. For example, the August 7 Order on the 2009 and 2010 Independent Evaluator's Report was issued after evaluations of Duke Energy Ohio programs were filed or substantially complete for the following three years (*i.e.*, evaluations published in 2011, 2012, and much of 2013).¹⁶ As a result, although Duke Energy Ohio is using its best efforts to effectuate the recommendations adopted by the Commission, much of the work for the 2013 Annual Energy Efficiency Status Report had already been completed or was substantially underway at the time of the order.

The Commission recognized the challenges created by the late timing of the Evaluator's Reports when it determined that no utility would be required to amend its energy efficiency savings or otherwise update its compliance filings for 2009, 2010, 2011, and 2012 based on the Evaluator's Reports.¹⁷ The Commission also reserved for itself the role of ruling on the recommendations of the Independent Evaluator.¹⁸

The 2011 Independent Evaluator's Report was filed before the Commission ruled on the 2009 and 2010 Independent Evaluator's Report. With regard to Duke Energy Ohio, the 2011 Independent Evaluator's Report states that "[m]any of the [utility third-party] reports (particularly those relating to estimating savings from audits and home energy comparison reports) had the same problems discussed related to the PY2009 and PY 2010 evaluations."¹⁹ Similar comments continue throughout the report, suggesting that Duke Energy Ohio should

¹⁶This is also true of the July 31, 2013, Entry in Case No. 09-512-GE-UNC, which was issued after evaluations were published for 2011, 2012, and much of 2013.

¹⁷*In the Matter of the Annual Verification of the Energy Efficiency and Peak Demand Reductions Achieved by the Electric Distribution Utilities Pursuant to Section 4928.66, Revised Code*, Case No. 12-665-EL-UNC, Finding and Order, at pg. 7, para.22 (August 7, 2013).

¹⁸*Id.* at pg. 3, para. 10.

¹⁹ Page 35, Report of the Ohio Independent Evaluator, 2011 Ohio Efficiency Programs, Volume I: Main Report, April 21, 2013.

have been aware of or adopted the Independent Evaluator's viewpoints from the previous evaluation. Duke Energy Ohio seeks to cooperate with the Independent Evaluator but it is not an accurate characterization and is inherently unfair to suggest that the Company is not responsive to recommendations that had *not yet been filed with or ruled on by the Commission*.

Duke Energy Ohio recognizes that the Independent Evaluator did not have the benefit of the Commission's August 2013 ruling before submitting the 2011 Independent Evaluator's Report. However, as there are some matters raised in the report that had already been ruled on by the Commission in Case No. 12-0665-EL-UNC, Duke Energy Ohio respectfully submits that clarification is needed with respect to whether: 1) the Independent Evaluator will continue to pursue work that the Commission had already deemed "premature" or finds duplicative and 2) the utilities are entitled to the Commission's stated "reasonableness" standard of review in the Independent Evaluator's verification of program impacts.

V. Premature or Duplicative Work of the Independent Evaluator

The 2011 Independent Evaluator's Report oversteps by developing standard net-to-gross batteries for Ohio programs, publishing free rider estimates,²⁰ as well as stating an intention to continue research on net-to-gross batteries.²¹ This is inconsistent with the direction given by the Commission in the August 7 Order. The August 7 Order states:

The Commission agrees that [the Independent Evaluator's] efforts to develop a standard free ridership question battery and scoring algorithm are premature, as we have not indicated that net savings should be evaluated. Accordingly, the

²⁰ Report of the Ohio Independent Evaluator, 2011 Ohio Efficiency Programs, Volume I: Main Report, April 21, 2013. Pages 95 and 101.

²¹ The 2011 Independent Evaluator's Report states: "In 2012, the Independent Evaluator began developing a battery of survey questions and a scoring algorithm related to free ridership as a first step in creating a standard approach for estimating net impacts for the Ohio electric utilities. Based on these preliminary results, it appears that free ridership may be occurring in the Ohio utility programs. We will continue to examine this issue and refine the related self-report question battery in 2013." Page iii, Report of the Ohio Independent Evaluator, 2011 Ohio Efficiency Programs, Volume I: Main Report, April 21, 2013.

gross savings methodology should continue to be employed for purposes of determining the electric utilities' compliance with Section 4928.66, Revised Code.

In addition to being inconsistent with Commission direction, the Independent Evaluator's work on free ridership is duplicative of the work that Duke Energy Ohio has already committed to conduct in other proceedings.²² As a result, it adds an unnecessary layer of cost to customers. Moreover, Duke Energy Ohio questions the value added by the additional work. The incremental cost to administer a wholly separate battery so as to create a state-wide score may create a standard score, but it is not clear that it has any benefits over the work already being conducted.

Additionally, Duke Energy Ohio was not given notice of customer surveys or an opportunity to comment on the questions or survey protocols. Duke Energy Ohio is careful to avoid survey fatigue in its customer population and carefully tracks the frequency of contacts made with each customer. The additional work conducted by the Independent Evaluator has the potential to interfere with compliance data collection activities already underway by Duke Energy Ohio for other proceedings. Duke Energy Ohio submits that, in order to ensure that such interference is avoided, the Commission should direct the Independent Evaluator to cease such activities until the need for this additional work can be established and balanced with costs.

In regard to the other process issue of surveys being conducted by the Independent Evaluator, the Commission should restrict the Independent Evaluator's charge for process

²² See e.g. the Approved 2013 Duke Energy Efficiency Portfolio. Per Rule 4901:1-39-04(C)(5)(I) O.A.C.: The evaluation, measurement, and verification plans for each program are provided in the testimony of Ashlie J. Ossege. This testimony includes provisions for measuring free ridership and net to gross in the Company's Energy Efficiency Programs. *In the Matter of the Application of Duke Energy Ohio, Inc. for Approval of its Energy Efficiency and Peak-Demand Reduction Portfolio Programs*, Case No. 13-0431-EL-POR, Testimony of Ashlie Ossege filed April 15, 2013, Attachment AJO1, TecMarket Works, Overall Evaluation Approaches Duke Energy's Energy Efficiency Programs in Ohio, Spring 2013.

See also, *In the matter of the application of the Annual Energy Efficiency Status Report of Duke Energy Ohio, Inc.*, Case No. 12-1477-EL-EEC, May 15, 2012. TecMarket Works, Annual Summary of Planned EM&V Activities for Duke Energy's Energy Efficiency Programs in Ohio, May 15 2012, filed in Appendix C.

surveying to topics likely to deliver additional value beyond the evaluation work that has already been conducted by both the utilities and the Independent Evaluator. The Commission has already found that “the electric utilities appear to have thoroughly considered and implemented most, if not all, of the process recommendations.” As a result, it is unclear what additional benefit will be derived from the Independent Evaluator’s process research. Moreover, the Independent Evaluator found that the satisfaction of customers with regard to Ohio utility programs is already quite high.²³ A question thus arises as to whether there are sufficient new insights being generated from this research to justify the additional costs to customers. If the Commission does find that additional process work should be undertaken by the Independent Evaluator, it should be subject to the same checks and balances (notification, review of survey instruments) required by the Independent Evaluator of the utilities.

VI. Independent Evaluator Standard Should be One of Reasonableness not Substitution of Judgment

The Commission states that parties that do not rely on the TRM will have the burden of proof in persuading the Commission that the alternative method is “just and reasonable.”²⁴ The Commission should direct the Independent Evaluator to use the Commission’s articulated reasonableness standard in assessing the EM&V methodologies used by third-party evaluators. If the Independent Evaluator asks the third-party evaluators to follow a strict construction of how the Independent Evaluator would perform the study, this adds significant bureaucracy that must

²³ Two quotes from the 2011 Independent Evaluator’s Report illustrate this point: 1) “When asked about overall satisfaction with the residential rebate programs, participants across the [residential] programs had similar responses. ... 89 to 97 percent were very to somewhat satisfied. These results support the generally high satisfaction ratings participants gave to various program attributes...” and regarding nonresidential customers 2) “Participants were also asked to provide an overall satisfaction rating for the program in which they participated. An overwhelming majority of participants noted that they were somewhat, to very satisfied ... Those participants who said they were somewhat to very satisfied varied from a low of 88 percent in the AEP Ohio Express program to a high of 95 percent in Duke Energy’s Prescriptive program.” Report of the Ohio Independent Evaluator, 2011 Ohio Efficiency Programs, Volume I: Main Report, April 21, 2013. (page 69 and 85 respectively).

²⁴Case No. 12-0665-EL-UNC, Finding and Order, paragraph 12 (August 7, 2013). See also Case No. 09-512-EL-UNC, Entry on Rehearing, paragraph 33 (July 31, 2013).

be borne by customers without additional value. This is especially true for areas where there is no guidance in the TRM, such as in audit and behavior programs.

The Independent Evaluator and the Commission must recognize the judgment and thorough familiarity with the utility programs that third-party evaluators have to determine the application of EMV, as well as the ability to try alternate approaches. If one were to only follow the Independent Evaluator's recommended approaches, costs would increase substantially and there would be no room for alternate opinions or the application of new approaches that promote the innovations that generate additional value for customers. The Independent Evaluator (and the Commission) should be interested in encouraging innovation and promoting the use of alternate methods in the desire to see improvement in the field of EM&V.

For example, in Duke Energy Ohio's comparison report program, the Independent Evaluator has disagreed with aspects of the approach of third-party evaluators, even though two Professors of Economics and Statistics at different universities have reviewed the approaches and judged the approach of the third-party evaluators to be stronger and more cost effective than what has been recommended by the Independent Evaluator.²⁵ If two different experts have found the methods credible, Duke Energy Ohio should be entitled to a finding of "reasonableness."

VII. Comments on the General Recommendations Contained in 2011 Independent Evaluator's Report.

²⁵ Given that the TRM is silent on audit and behavior programs, the Duke Energy Ohio evaluation team has requested peer reviews to demonstrate that the approach being employed is "reasonable" from two highly-qualified professors of statistics and economics. Both have agreed with the validity of the models employed by the TecMarket team. Economics Professor Don Waldman, PhD is the Associate Chair of Graduate Studies at the University of Colorado at Boulder. He has a focus on micro-economic models of the sort being employed in the Audit and Comparison Report Programs. (Personal Communication 1/8/2013). In addition Professor of Statistics, Martin Levy, Pd.D., of the University of Cincinnati has also reviewed the Home Energy Comparison Model in particular and agreed with the analytical approaches employed (Personal Communication 8/20/2010).

Although the Commission has already ruled that no utility would be required to amend its energy efficiency savings or compliance filings for 2009 through 2012, Duke Energy Ohio is pleased to respond to comments on the 2011 Independent Evaluator's Report. Given that the Commission's ruling on the 2009 and 2010 Independent Evaluator's Report provides direction to both the Independent Evaluator and the utilities and their third party evaluators, it is reasonable to expect that a ruling on the 2011 Independent Evaluator's Report will provide direction for future years as well. It is also very likely that these same issues will recur, given that Duke Energy Ohio is evaluating many of the same programs from year to year and had already planned, budgeted and filed the following year's EM&V work plans according to the template provided by the Independent Evaluator before the 2011 Independent Evaluators' Report was received. *See, e.g.*, Annual Summary of Planned EM&V Activities for Duke Energy's Energy Efficiency Programs in Ohio, Appendix C, filed in Case No. 12-1477-EL-EEC on May 15, 2012.

In the table below Duke Energy Ohio provides responses to the overarching recommendations contained in the 2011 Independent Evaluator's Report.

Overarching Comment	Duke Energy Ohio response
1. Properly account for participation in other efficiency programs when evaluating Audit and Home Energy Comparison program Savings	Beginning with the 2012 Annual Energy Efficiency Status Report, Duke Energy Ohio does account for other program participation in Audit and Comparison Program Reports. However, the Company will work to improve the documentation of variable definitions in evaluation research reports undertaken in 2014.
2. Have evaluators select control groups for home energy comparison programs.	Duke Energy Ohio third party evaluators are aware of the concern in valid treatment and control group assignment. Third party evaluators have in the past and will continue to oversee the selection of treatment and control groups.
3. Utilities should continue to examine the issue of free ridership and net versus gross impacts. Independent Evaluator will continue to develop standard net to gross	Duke Energy Ohio Program Managers and third-party evaluators already do this as a routine part of their evaluation research due to commitments from other filings. For example, free CFL distribution programs utilize prior CFL participation databases to reduce the prevalence of free riders in CFL programs. As to the Independent Evaluator's stated intention to

batteries. ²⁶	continue to develop standard net-to-gross batteries, the Commission has already ruled that these efforts are premature.
4. More detail needed on Peak Demand Reduction programs.	As directed by the Commission, Duke Energy Ohio will be increasingly committing demand reduction efforts to the PJM Interconnection, Inc., (PJM) auctions. Thus PJM will be the primary oversight agent for demand reduction achievement documentation. In that process, PJM will be reviewing the peak load reduction evaluation approaches and research activities of Duke Energy Ohio's third-party evaluator. Continued direction by the Independent Evaluator on this topic has the potential to add cost without adding substantial value to demand reduction evaluation oversight and could create conflict with the <i>contractual</i> requirements of PJM by requiring different or additional EM&V. In view of the Commission's support of Duke Energy Ohio's PJM participation Independent Evaluator reviews are redundant and add no value.
5. Adopt program process recommendations presented in the utility evaluation reports.	Duke Energy Ohio tracks the responses to the recommendations received by the third party, TecMarket Works, Inc. in an active database and regularly reports on this to the Collaborative. A blanket statement that process recommendations be adopted runs counter to the decision already reached by the Commission in the August 7 Order. The Commission recognizes that utilities are already considering the process recommendations. Moreover, program process recommendations may in some cases be rendered moot or untimely as programs are phased in, or vendors are replaced. In light of the Commission's previous order, Duke Energy Ohio recommends that the Commission direct the Independent Evaluator to reduce process evaluation research efforts as the work does not appear to add substantial value to the work already completed.

VIII. Comments on the Recommendations Specific to Duke Energy Ohio Evaluations

Duke Energy Ohio's responses to the specific recommendations provided by the 2011 Independent Evaluator's Report follow.

²⁶ The 2011 Independent Evaluator's Report states: "In 2012, the Independent Evaluator began developing a battery of survey questions and a scoring algorithm related to free ridership as a first step in creating a standard approach for estimating net impacts for the Ohio electric utilities. Based on these preliminary results, it appears that free ridership may be occurring in the Ohio utility programs. We will continue to examine this issue and refine the related self-report question battery in 2013." Page iii, Report of the Ohio Independent Evaluator, 2011 Ohio Efficiency Programs, Volume I: Main Report, April 21, 2013.

- a) The Independent Evaluator would like more discussion on how CFL savings are calculated. This recommendation is somewhat puzzling in that a full CFL evaluation was neither planned for nor delivered in 2011. Evaluations of programs that contain CFL measures published in 2011 rely on the previous years' EM&V of CFLs for delta watts calculations. Moreover the statement included in the recommendation, "[i]f Duke Energy is still assuming that 100 percent of CFLs are installed..." does not avail itself of the facts in evidence in the reports that the Independent Evaluator reviewed for this period. Duke Energy Ohio did not "assume" that 100% of CFLs are installed. In-service rates (ISR) are documented in the reports that the Independent Evaluator reviewed in Case No. 12-1477-El-EEC submitted by the Company on May 15, 2012.

Program Evaluation	ISR for CFLs discussed on page #s
TecMarket Works, Ohio - Energy Efficiency Education Program for Schools - Final Impact Evaluation Report - Dec 22 2011	Page 17, Table 12
TecMarket Works, Ohio - PER and OHEC - Final Impact Evaluation Report - Dec 22 2011	Page 18, Table 12, and Figure 1
TecMarket Works, Ohio - Residential Energy Assessments - HEHC Evaluation, May 16, 2011	ISR is shown on Table 1, Page 11, but the impacts were derived from a billing analysis, so ISR was not utilized.

In addition Duke Energy Ohio has already provided additional CFL research as part of the 2012 evaluation activities. The Independent Evaluator reviewed the SmartSaver Residential Energy Efficiency CFLs Report dated September 28, 2012 that was included in Case No. 13-1129-EL-EEC, Appendix E.

- b) The Independent Evaluator recommends that Duke Energy Ohio adjust the billing model specifications of several programs to include more detail and to add additional weather variables. The recommendation contained in the report states: "In some instances we have recommended that the model results not be used to calculate impacts for future

program years. If billing models are going to be used in future evaluations, then we recommend that our recommended changes be implemented so that more robust and believable estimates can be obtained.”

The September 9, 2011, Evaluation Report of the Home Energy Comparison Report (HECR) program included in the reviewed filing did include a weather analysis. However the results of that weather analysis were not included in the primary text of the report. They are included in the model specification details in Appendix M of the HECR report. Again, note that this report was published *before* the 2009 and 2010 Independent Evaluator’s Report was received; thus it was not possible to make changes to the reports to respond to the Independent Evaluator recommendations. In the forthcoming evaluation of the commercialized MyHER program (TecMarket, November 22, 2013), the complete model shows the weather and time factors.

Given that there is no safe harbor in the TRM on specific models for behavior or audit programs, the Duke Energy Ohio evaluation team has complied with the reasonableness standard articulated by the Commission. Peer reviews from two highly-qualified professors of statistics and economics have supported the validity of the models employed by the TecMarket team.²⁷ Thus the Comparison Report Program Models have been reviewed by two independent experts and found to be credible. If two different

²⁷ Economics Professor Don Waldman, PhD., is the Associate Chair of Graduate Studies at the University of Colorado at Boulder. He has a focus on micro-economic models of the sort being employed by the third-party evaluators for Duke Energy Ohio (billing analysis). Dr. Waldman writes: “At a high-level, some of the criticisms provided by the Independent Evaluator are what one would expect to receive on observational studies with much less rich data. In my experience, the modern, fixed effect multivariate regression model, when data allow such estimation, is a substantial improvement over methods suggested by the Independent Evaluator, because it more rigorously addresses the *potential* problems raised by the Independent Evaluator. In layman’s terms the monthly fixed effect model employed by the TecMarket team more naturally addresses issues of parameter estimation bias, rather than relying on older (and somewhat controversial) methods that superimpose manual matching or conventional wisdom on rigorous model specification.” (Personal communication, 1/8/ 2014). In addition, Professor of Statistics, Martin Levy, Pd.D., of the University of Cincinnati has also reviewed the Home Energy Comparison Model in particular and agreed with the analytical approaches employed. (Personal communication, 8/20/2010).

experts have found the methods credible, Duke Energy Ohio is entitled to a finding of “reasonableness.”

Looking more closely at the Home Energy House Call program, we do find the results reviewed in the 2011 Independent Evaluator’s Report to be high but still credible. The program’s process evaluation report, which was completed on May 16, 2011, includes a chart of “Actions Taken Since HEHC Enrollment,” which shows that customers took significant actions based on the information from the audit program.²⁸

The average annual usage for customer’s referenced in the 2011 report was 15,284 kWh/year. As a result, the average savings estimates are roughly 14%. Given the higher penetration of electric heat in Ohio compared to the reference values cited by the Independent Evaluator,²⁹ the cold winters, the direct install measures,³⁰ spillover and education, we would not expect the low numbers that the Independent Evaluator indicates.

- c) The Independent Evaluator would like additional assurance that participation in other Duke Energy Ohio programs is accounted for in audit and home energy comparison programs. The current approach used by TecMarket Works does indeed include these variables as noted in the methodology sections of the Residential Energy Assessments and the EE for Schools reports (filed in the subsequent program year). The Residential

²⁸ See Table 8, on pages 18, 19, and 20.

²⁹ The 2009 and 2010 Independent Evaluator’s Report states, “Separate impact studies of the residential energy audit program in California (Home Energy Efficiency Survey or HEES) have also estimated savings ranging from 31 to 276 kWh annually.” Report of the Ohio Independent Evaluator 2009 and 2010 Ohio Efficiency Programs Volume I. August 29, 2012, Footnote 17, Page 7. Electric heat penetration in Duke Energy Ohio territory is approximately 5 times as great as that of California. As a result small changes in set points and shell measures can generate more savings.

³⁰ The evaluation report also includes evidence for increasing CFL direct installations. “Just recently, Duke Energy began emphasizing CFL installations and started asking the auditors to reach an objective of 6 CFLs installations per household.” TecMarket Ohio - Residential Energy Assessments - HEHC Evaluation, May 16, 2011 page 29.

SmartSaver HVAC analysis did include these variables but they had no effect; so they were removed and not included in the report.

Duke Energy Ohio agrees that it should be standard practice to run an analysis to check for the importance of incorporating participation in other programs.

- d) The Independent Evaluator would like information on custom project calculations. The 2011 Independent Evaluator Report states: “At a minimum, some information should be included about how these savings are calculated and verified. Given the large amount of savings and the typical complexity of these projects, we recommend that at least some evaluation work be conducted on the custom projects each year.”³¹

Duke Energy Ohio submits that, although a final EM&V report on custom projects is not issued every year, evaluation research is underway each year on custom projects. TecMarket Works has provided regular updates (*via* email) to data collection activities in the template provided by the Independent Evaluator. A summary of the updates to the SmartSaver Custom program field activities, indicating that M&V work is being conducted every year, is communicated to the Independent Evaluator.

Beginning in 2014, TecMarket Works can submit Site M&V Reports to Duke Energy Ohio in “batches.” After the Site M&V Reports are reviewed by Duke Energy Ohio, they will be submitted to Duke Energy Ohio as a “Batch Memo.” These Batch Memos will not be filed publicly (given customer confidentiality considerations), but could be submitted by Duke Energy Ohio in its annual Source Documentation that accompanies the Annual Update filing after redaction of customer information. Redacted versions of the Batch Memos will also be included in the Evaluation Reports, to be filed with Commission after the Custom Evaluation report is finalized.

³¹ Report of the Ohio Independent Evaluator, 2011 Ohio Efficiency Programs, Volume I: Main Report, April 21, 2013, at. pg. 44.

IX. Conclusion

The 2011 Independent Evaluator's Report may be of assistance to the Commission in reaching conclusions with respect to the utilities' evaluations. However, it has again been produced at a time considerably down the path of compliance. In fact, the 2011 Independent Evaluator's Report was delivered well into the time when evaluation research was underway in 2013 and after Duke Energy Ohio's most recent portfolio filing where EM&V plans were also filed. This represents a significant timing and fairness issue. The Commission may wish to consider extending the period that the utilities' Annual Energy Efficiency Reports need not be restated into 2014 to help the Independent Evaluator "catch up" or perhaps given the decision to not restate annual update filings, redirect the Independent Evaluator to focus on research already underway for 2014, skipping years 2012 and 2013.

Duke Energy Ohio appreciates the opportunity to comment herein on the Independent Evaluator's Report that was submitted on May 2, 2013, and respectfully requests that the Commission consider these comments in connection with the Report.

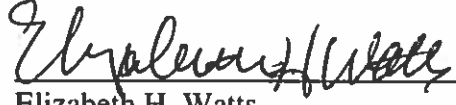
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Certificate of Service

I certify that the foregoing Comments of Duke Energy Ohio, Inc. were served by email upon parties of record identified below on January 13, 2014.



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