**BEFORE**
**THE PUBLIC UTILITIES COMMISSION OF OHIO**

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

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# SUPPLEMENTAL TESTIMONY
# OF
# DYLAN SULLIVAN
# ON BEHALF OF THE
# NATURAL RESOURCES DEFENSE COUNCIL

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**I: Introduction**

**Q: What is your name, address, and position?**

A: My name is Dylan Sullivan. My business address is 2 North Riverside Plaza, Suite 2250, Chicago, Illinois 60606. I am employed by the Natural Resources Defense Council ("NRDC") as a Staff Scientist.

**Q: Are you the same Dylan Sullivan who earlier gave Direct Testimony in this proceeding?**

A: Yes.

**Q: Please summarize your Supplemental Testimony?**

A: Based on my review of the projected benchmarks and savings included in the Energy Efficiency and Peak Demand Reduction Program Portfolio Plans for 2013 through 2015 (the "Plan") of Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company ("FirstEnergy" or "Companies"), and the Companies' testimony and discovery responses, I believe that the Plan is *NOT* designed to meet or exceed Ohio's statutory benchmarks for energy efficiency, and in fact may not achieve the statutory benchmarks for energy efficiency ("benchmarks"). The Plan as-filed fails to consistently achieve the benchmarks no matter how the benchmarks are calculated (incremental annual savings or cumulative savings) or how savings are calculated (using the annualized or *pro-rata* convention).

**Q: What do you rely on to make this conclusion?**

A: Crucially, I rely upon information presented by the Companies at the September 24, 2012 Collaborative meeting: the reported cumulative results achieved to-date from the Companies' Existing Portfolio, including mercantile customer sited projects pending and approved as of September 18, 2012. I also rely on Revised Code Section 4928.66(A)(1)(a), PUCO Table 7A-7G for each Operating Company, Companies Exhibit BDE-1, and Companies Exhibit ECM-2, for which the Companies provided Microsoft Excel versions in response to NRDC Request for Production of Documents 1.

Because nowhere in the Plan do the Companies actually compare the benchmarks to the expected impacts of the Plan's programs, I had to do several calculations myself, which I will explain below.

**Q: On what authority are you filing this Supplemental Testimony?**

A: I am filing this Supplemental Testimony pursuant to Ohio Administrative Code Section 4901-1-29(C).

**Q: Could you have, with reasonable diligence, filed this testimony earlier?**

A: No. First, exhibits DES-3 and DES-4 are based in substantial part on information received on September 24, 2012, 10 days before the testimony deadline. Second, with the expedited procedural schedule, our review of the plan was truncated. Third, nowhere in the Plan do the Companies compare the benchmarks to the expected results of programs. Benchmarks are presented only on a cumulative basis,[1] while the law requires the utilities to save an "additional" amount of energy efficiency each year. Savings are projected in an easily accessible form only on a *pro-rata* basis[2], even though the Companies request a waiver so that savings can be reported using an annualized accounting methodology.[3]

## II: The Plan is Not Designed to Meet the Energy Efficiency Benchmarks

**Q: What is your understanding of the benchmarks the Companies will be required to meet over this Plan?**

A: It is my understanding that the Companies must meet benchmarks for both cumulative energy savings and incremental energy savings: that is, they must save an *additional* amount of energy each year, which, when added to previous years' benchmark amounts, must equal a *cumulative* amount of energy savings. I term this annual additional amount of energy savings "incremental savings." The amount of these incremental savings required each year are in Revised Code

[1] Exhibit BDE-1.
[2] Exhibit ECM-2
[3] Application at 12 Paragraph 30.

Section 4928.66(A)(1)(a): in 2013 each Operating Company must save an additional .9% of three-year average sales, and an additional 1% of sales in both 2014 and 2015.

**Q: Do the Companies' Plans describe the amount of incremental savings each Operating Company must achieve each year?**

A: No. The Companies only include the amount of cumulative savings each Operating Company must achieve each year. This calculation of cumulative savings is included in the Direct Testimony of Eberts in Exhibit BDE-1. Eberts doesn't calculate the incremental savings benchmarks, only cumulative benchmarks. This makes understanding the projected impacts of the Plans relative to the statutory benchmarks difficult.

**Q: Did you independently calculate the incremental amount of energy that each Operating Company is required to save each year?**

A: Yes. For the years 2013 through 2015, I multiplied the baseline given in Column 8 of Exhibit BDE-1 by the required amount of incremental savings: .9% in 2013 and 1% in 2014 and 2015. The incremental benchmarks for each year and Operating Company are shown in Column 4 of Exhibits DES-4 and 5.

**Q: When the projected cumulative impacts of the Plan, combined with the cumulative impacts to-date of the Existing Plan, are compared to the cumulative benchmarks, does the Plan as-filed meet the targets?**

A: No. When the projected cumulative impacts of the Plan, combined with cumulative impacts from the Companies' Existing Plan (including mercantile customer projects pending and approved as of September 18, 2012) are compared to the cumulative benchmarks, the Plan fails to meet the cumulative benchmarks in 6 out of the 9 Operating Company-compliance years. This is shown in Exhibit DES-3.

**Q: From where did you get the cumulative benchmarks and the projected cumulative impacts of the Plan?**

A: The cumulative benchmarks are in Column 10 of Exhibit BDE-1, and shown in Column 3 of Exhibit DES-3. The projected cumulative impacts are from Exhibit ECM-2 (the “MWh Saved” row in the “Portfolio Plan total – Cumulative Projected Savings” column), and shown in column 4 of Exhibit DES-3.

**Q: From where did you get the cumulative impacts of the Existing Plan?**

A: From information presented at the Companies September 24, 2012 Collaborative meeting, and included as Exhibit DES-6. The Existing Plan impacts, shown in Column 5 of Exhibit DES-5, include the impacts of mercantile customer projects pending and approved as of September 18, 2012. These numbers are of course subject to evaluation, measurement, and verification, and not all pending applications may be approved. Also, some mercantile customer applications could be filed between September 18, 2012 and November 1, 2012 (the Companies’ deadline if they process the application). These additional applications would not be reflected in the savings included in Column 5.

**Q: When incremental savings measured from the Plan’s programs using a *pro-rata* accounting convention are compared to incremental benchmarks, does the Plan meet the benchmarks?**

A: No. When judged on a *pro-rata* savings basis, the Plan as-filed does not achieve the benchmarks. This is shown in Exhibit DES-4.

**Q: How did you determine each program year’s savings on a *pro-rata* basis?**

A: The information is in Exhibit ECM-2. But as presented by Miller, the savings accumulate over the life of the Plan: that is, Cumulative Projected Savings in Program Year 2015 include the impacts of Program Year 2013 and 2014. To determine the incremental impact of the Companies’ Plan on a *pro-rata* basis, I subtracted Program Year 2013 Cumulative Projected MWh savings from Program Year 2014 Cumulative Projected MWh savings to determine incremental *pro-rata* savings in 2014 and I subtracted Program Year 2014 Cumulative Projected MWh savings from Program Year 2015 Cumulative Projected MWh savings to determine incremental *pro-rata* savings in 2015.

**Q: When incremental savings measured from the Plan's programs using an annualized accounting convention are compared to these incremental benchmarks, does the Plan meet the benchmarks?**

A: When judged on an annualized savings basis, the Plan as-filed does not achieve the benchmarks in 6 out of the 9 Operating Company-compliance years. This is shown in Exhibit DES-5, Columns 11 and 12.

**Q: How did you calculate the amount of incremental annualized savings for each portfolio and Operating Company?**

A: I had to use a roundabout method to calculate the amount of annualized savings each Operating Company's energy efficiency portfolio produced in each year of the Plan period, because nowhere do the Companies present annualized savings for a portfolio in each year of the Plan. The Companies do not include this information even though they are asking the Commission for a waiver so they can report annual program progress using an annualized accounting convention. To determine incremental annualized savings, I used PUCO Table 7A through 7G. Each portfolio table includes an Annual MWh Saved column at the right edge of the page. But the savings accumulate in the Column: that is, reported savings for 2015 include the impacts of the program in 2013 and 2014. So to determine *incremental* annual savings in 2014 I subtracted 2013 Annual MWh Saved from 2014 Annual MWh Saved and to determine *incremental* annual savings in 2015 I subtracted 2014 Annual MWh Saved from 2015 Annual MWh Saved. The result for each portfolio, Operating Company, and Program Year is reported in Columns 5 through 9 of Exhibit DES-5.

## III: Conclusion

**Q: What can you conclude from the benchmark-anticipated savings comparisons described above?**

A: If the Companies' programs generate the projected results, the Companies will fall short of their benchmarks. The Plan as-filed does not appear to be designed to achieve the benchmarks.

**Q: Does this conclude your Supplemental Testimony?**

A: Yes.

## CERTIFICATE OF SERVICE

I hereby certify that a true and accurate copy of the foregoing *Motion for Leave to File Supplemental Testimony and Motion for Expedited Ruling* has been served upon the following parties via electronic mail on October 22, 2012.

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Christopher J. Allwein

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Exhibit DES-3

Cumulative benchmarks/cumulative savings

| Company | Year | Cumulative benchmark (MWh) | Projected Cumulative pro-rata Savings (MWh) from Portfolio | Cumulative Savings from Existing Plan (MWh) | Shortfall (MWh), Surplus (-MWh) | **Shortfall (% of cumulative benchmark)** |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| **CEI** | | | | 651,443 | | |
| | 2013 | 608,007 | 63,849 | | -107,285 | - |
| | 2014 | 810,348 | 172,501 | | -13,596 | - |
| | 2015 | 1,015,987 | 285,767 | | 78,777 | **7.75** |
| | | | | | | |
| **OE** | | | | 597,160 | | |
| | 2013 | 777,392 | 120,898 | | 59,334 | **7.63** |
| | 2014 | 1,033,169 | 328,307 | | 107,702 | **10.42** |
| | 2015 | 1,292,460 | 530,273 | | 165,027 | **12.77** |
| | | | | | | |
| **TE** | | | | 279,820 | | |
| | 2013 | 339,969 | 62,393 | | -2,244 | - |
| | 2014 | 462,569 | 169,617 | | 13,132 | **2.84** |
| | 2015 | 594,962 | 266,360 | | 48,782 | **8.20** |
| | | | | | | |
| Notes | (3) from Exhibit BDE-1, Column 10 | | | | | |
| | (4) from Exhibit ECM-2, "Portfolio Plan Total - Cumulative Projected Savings" "MWh saved" | | | | | |
| | (5) from Portfolio Progress Estimate as of 7/31/2012, Ohio Energy Efficiency Collaborative, September 24, 2012 | | | | | |
| | (6) = (3)-(4)-(5) | | | | | |
| | (7) = (6)/(3)*100 | | | | | |

Exhibit DES-4

Incremental benchmark/*pro-rata* savings

| Company | Year | Baseline (GWh) | Incremental annual benchmark (MWh) | Incremental *pro-rata* projected Portfolio savings (MWh) | Shortfall (MWh) | **Shortfall (% of incremental annual benchmark)** |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| **CEI** | | | | | | |
| | 2013 | 19,000 | 171,002 | 63,849 | 107,153 | **63** |
| | 2014 | 19,294 | 192,940 | 108,653 | 84,287 | **44** |
| | 2015 | 19,538 | 195,382 | 113,265 | 82,117 | **42** |
| | | | | | | |
| **OE** | | | | | | |
| | 2013 | 24,294 | 218,642 | 120,898 | 97,744 | **45** |
| | 2014 | 24,599 | 245,993 | 207,409 | 38,584 | **16** |
| | 2015 | 24,855 | 248,550 | 201,967 | 46,583 | **19** |
| | | | | | | |
| **TE** | | | | | | |
| | 2013 | 10,624 | 95,616 | 62,393 | 33,223 | **35** |
| | 2014 | 11,014 | 110,136 | 107,224 | 2,911 | **3** |
| | 2015 | 11,442 | 114,416 | 96,743 | 17,673 | **15** |
| | | | | | | |
| Notes | (3) From Exhibit BDE-1 Column 8 | | | | | |
| | (4) = (3)*.009 in 2013 and (3)*.01 in 2014 and 2015 | | | | | |
| | (5) From Exhibit ECM-2, "Portfolio Plan Total - Cumulative Projected Savings," 2013 = Program Year("PY") 13, 2014 = PY14-PY13, 2015=PY15-PY14 | | | | | |
| | (6) = (4)-(5) | | | | | |
| | (7) = (6)/(4)*100 | | | | | |

Exhibit DES-5
Incremental benchmarks/annualized savings

| Company | Year | Baseline (GWh) | Incremental annual benchmark (MWh) | Projected Annualized Savings (MWh) from Residential Portfolio | Projected Annualized Savings (MWh) from Small Enterprise Portfolio | Projected Annualized Savings (MWh) from Mercantile Customer Program | Projected Annualized Savings (MWh) from MercantileUtility Portfolio | Projected Annualized Savings (MWh) from Government Portfolio | Projected Annualized Savings (MWh) from Total Portfolio | Shortfall (MWh) Surplus (-MWh) | **Shortfall (% of incremental annual benchmark)** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| **CEI** | | | | | | | | | | | |
| | 2013 | 19,000 | 171,002 | 36,768 | 39,851 | 18,999 | 11,027 | 185 | 106,830 | 64,172 | **38** |
| | 2014 | 19,294 | 192,940 | 40,666 | 52,806 | 13,299 | 12,295 | 308 | 119,374 | 73,566 | **38** |
| | 2015 | 19,538 | 195,382 | 45,551 | 52,829 | 9,499 | 12,364 | 308 | 120,552 | 74,831 | **38** |
| | | | | | | | | | | | |
| **OE** | | | | | | | | | | | |
| | 2013 | 24,294 | 218,642 | 79,633 | 59,394 | 40,166 | 18,843 | 150 | 198,187 | 20,454 | **9** |
| | 2014 | 24,599 | 245,993 | 89,597 | 85,670 | 28,539 | 19,979 | 187 | 223,972 | 22,020 | **9** |
| | 2015 | 24,855 | 248,550 | 84,753 | 73,291 | 20,083 | 19,979 | 187 | 198,292 | 50,258 | **20** |
| | | | | | | | | | | | |
| **TE** | | | | | | | | | | | |
| | 2013 | 10,624 | 95,616 | 25,080 | 31,960 | 20,115 | 25,003 | 25 | 102,183 | -6,567 | **-** |
| | 2014 | 11,014 | 110,136 | 34,443 | 40,356 | 13,763 | 26,681 | 25 | 115,268 | -5,133 | **-** |
| | 2015 | 11,442 | 114,416 | 20,401 | 30,113 | 9,528 | 26,681 | 25 | 86,748 | 27,668 | **24** |
| | | | | | | | | | | | |
| Notes | (3) From Exhibit BDE-1 Column 8 | | | | | | | | | | |
| | (4) = (3)*.009 in 2013 and (3)*.01 in 2014 and 2015 | | | | | | | | | | |
| | (5) From PUCO Tables 7A-B, Summed "Annual" "MWh saved" of programs, 2013=2013, 2014=2014-2013, 2015=2015-2014 | | | | | | | | | | |
| | (6) From PUCO Tables 7C, Summed "Annual" "MWh saved" of programs, 2013=2013, 2014=2014-2013, 2015=2015-2014 | | | | | | | | | | |
| | (7) From PUCO Tables 7D, Summed "Annual" "MWh saved" of programs, 2013=2013, 2014=2014-2013, 2015=2015-2014 | | | | | | | | | | |
| | (8) From PUCO Tables 7E, Summed "Annual" "MWh saved" of programs, 2013=2013, 2014=2014-2013, 2015=2015-2014 | | | | | | | | | | |
| | (9) From PUCO Tables 7F, Summed "Annual" "MWh saved" of programs, 2013=2013, 2014=2014-2013, 2015=2015-2014 | | | | | | | | | | |
| | (10) = (5)+(6)+(7)+(8)+(9) | | | | | | | | | | |
| | (10) no savings from Transmission and Distribution because the Companies project no savings | | | | | | | | | | |
| | (11) = (4)-(10) | | | | | | | | | | |
| | (12) = (11)/(4)*100 | | | | | | | | | | |