

**BEFORE THE PUBLIC UTILITIES COMMISSION OF OHIO**

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

**ALTERNATIVE ENERGY RESOURCE PLAN  
2011 THROUGH 2021**

**APRIL 15, 2011**

**CASE NO. 11-2491-EL-ACP**

## **I. INTRODUCTION**

Pursuant to Rule 4901:1-40-03(C) of the Ohio Administrative Code ("OAC"), Ohio Edison Company ("Ohio Edison"), The Cleveland Electric Illuminating Company ("CEI"), and The Toledo Edison Company ("Toledo Edison") (collectively, the "Companies") file their Alternative Energy Resource Plan for compliance with future annual advanced and renewable energy resource benchmarks for the period January 1, 2011 through December 31, 2021 (the "Plan"). This Plan is speculative in nature and is subject to change as statutory requirements for renewable energy resources increase, the alternative energy resource market further develops, and the statutory requirements for advanced energy resources take effect in a current calendar year.

## **II. ALTERNATIVE ENERGY RESOURCE PLAN**

### **A. Baselines and Benchmarks for Alternative Energy Resource Compliance**

Section 4901:1-40-03(B), OAC, provides that an electric utility's baseline for compliance with the alternative energy resource requirements shall be determined using the following methodology:

. . . the baseline shall be computed as an average of the three preceding calendar years of the total annual number of kilowatt-hours of electricity sold under its standard service offer to any and all retail electric customers whose electric load centers are served by that electric utility and are located within the electric utility's certified territory. The calculation of the baseline shall be based upon the average, annual, kilowatt-hour sales reported in that electric utility's three most recent forecast reports or reporting forms.

In compliance with Section 4901:1-40-03(B) set forth above, the Companies calculated their total annual number of kilowatt-hours of electricity sold to their respective retail electric customers under their standard service offer ("SSO") for each of calendar years 2008, 2009, and 2010 utilizing their three most recent reporting forms (herein referred to respectively as, the "2008 Sales" "2009

Sales” and “2010 Sales”).<sup>1</sup> The Companies then averaged their respective 2008 Sales, 2009 Sales and 2010 Sales to compute their respective 2011 baselines (“2011 Baselines”). The Companies did not make any adjustments to the 2011 Baselines. *See* Appendix A.

The Companies’ baselines, for the purpose of this Plan, for 2012 forward are calculated using 2009 Sales and 2010 Sales (when applicable to formulate an average of the three preceding calendar years), and a projected amount of sales for calendar years 2011 forward, in each case to formulate an average of the three preceding calendar years (“Projected Sales”). The Companies then averaged their respective Projected Sales to compute their respective 2012-2021 baselines (“2012-2021 Baselines”).<sup>2</sup> The Companies’ forecast years do reflect shopping levels that may occur. *See* Appendix A. The Companies then calculated their respective renewable energy resources and solar energy resources benchmarks in accordance with Amended Substitute Senate Bill 221. *See* Appendix A. The Companies do not have a statutory requirement for reporting on advanced energy resources in this ten year planning period.

#### **B. Supply Portfolio Projection**

The Companies plan to supply the generation associated with the above baselines in accordance with standard service offer procurement plans (“SSO Procurement Plans”).<sup>3</sup> These quantities represent the energy that the suppliers of the SSO will be obligated to supply through applicable supplier master agreements associated with the SSO Procurement Plans.

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<sup>1</sup> The actual kilowatt hours sold in each of 2008, 2009, and 2010 were reported on the SE-1 Reporting Forms.

<sup>2</sup> The Companies’ baselines for calendar years 2012-2021 will be updated to reflect actual sales when such information becomes available, and shall be reported in the Companies’ applicable Annual Status Report and Compliance Review.

<sup>3</sup> The Companies’ SSO Procurement Plans contemplate power purchases. The Companies do not own generation.

### C. Methodology Used to Evaluate Compliance Options

Given that the Companies do not own alternative energy resource facilities, the Companies' methodology or process for assessing compliance options was to evaluate a variety of potential options. Such options included banking and purchasing renewable energy credits ("RECs") through both long-term contracts, short-term spot purchases, and SREC auctions. The Companies also considered building alternative energy resource facilities to generate RECs. However, the Companies are not in the business of generating electricity, renewable or otherwise, and currently do not foresee entering the energy generation business. Thus, the Companies ultimately did not move forward with that option.

The Companies have purchased and plan to continue to purchase RECs through a competitive request for proposal solicitation structure for the duration of this ten year plan ("RFP REC Procurement Process"). The RFP REC Procurement Process is an efficient means of meeting the annual benchmarks as required by Amended Substitute Senate Bill 221 ("SB 221"), and provides the Companies with market intelligence about potential suppliers and the availability of RECs from completed and planned renewable projects. The 2010 RFP REC Procurement Process was managed by Navigant Consulting, Inc. ("NCI"). The particulars of the RFP REC Procurement Process are described more fully in the Companies' Annual Report and request for a force majeure determination in Case No. 11-2479-EL-ACP. The Companies plan to retain an independent consultant for the management of future RFP REC Procurement Processes. In addition to the RFPs that the Companies have already conducted, the Companies have applied for Commission approval of an RFP for 10-year REC purchase agreements in Case No. 10-2891-EL-ACP, which is currently pending before the Commission. Lastly, the Companies will continue to attempt to purchase SRECs (both Ohio and Out-of-State) through auctions, brokers and bilateral agreements.

#### **D. Impediments to Achieving Compliance**

The most significant impediment to achieving compliance (particularly for solar renewable energy resources) is the limited availability of renewable energy resources. Such limited availability is exacerbated by the legislative requirement that fifty percent of the renewable energy resource originate from facilities located within Ohio, and the regulatory requirement that renewable energy resource facilities be certified by the Public Utilities Commission of Ohio ("Commission"). Given the length of time it takes to bring a new facility (particularly solar) on line, this impediment is likely to continue for some time into the future.

Moreover, in most cases, siting, easements, permits, interconnections, contracts, and site preparation will require twelve to eighteen months. As a result, unless facilities are well under construction at this time, there is little opportunity for new facilities to come online and produce sufficient RECs for some time. Such facilities will also require Commission certification. In short, although the supply of RECs are likely to increase as the market further develops, the demand will also increase as benchmark requirements increase over time making achieving compliance an ongoing challenge. The Companies may also face an additional challenge in purchasing sufficient solar RECs in 2011 to not only cover the 2011 statutory benchmarks in a tight market, but to also cover, if ordered by the Commission, the 2010 in-state solar RECs shortfall. The Companies' only suggestion for addressing impediments to achieving compliance is for the Commission to remain flexible in the event regulatory relief is necessary as this new market develops.

### **III. CONCLUSION**

The Companies' Plan is filed pursuant to and complies with Section 4901:1-40-03(C), OAC. As stated above, the Plan is speculative in nature and is subject to change as statutory requirements for renewable energy resources increase and sufficient quantities of alternative energy resources

become reasonably available in the marketplace. The Companies appreciate the opportunity to file this initial Plan and expect this Plan will be updated and refined over the ten-year planning horizon.

Respectfully submitted,

/s/ Carrie M. Dunn

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ATTORNEYS FOR OHIO EDISON  
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TOLEDO EDISON COMPANY

**Ohio Edison Company**  
Renewable Energy Resources Baselines and Benchmarks

(Megawatt Hours/Year)

Planning baselines and benchmarks in the forecasted years are calculated using forecasted SSO Retail Electric Sales and the same percentage of customer sales taking SSO service as 12/2010 actual. Associated compliance baselines and benchmarks will reflect actual SSO Retail Electric Sales.

Year	Delivery Retail Electric Sales Excluding Losses (2)	Delivery Retail Electric Sales Including Losses (3)	Company's Calendar-Month SSO Retail Electric Sales (4)	Renewable Energy Resource Target % (5)	Solar Energy Resource Target % (6)	Alternative Energy Baselines (7)	Renewable Energy Resource Benchmark (8)=(5)*(7)	Solar Energy Resource Benchmark (9)=(6)*(7)	Renewable Less Solar Benchmark (10) = (8)-(9)	Contracted SRECS (11)	Long Term solar RFP awaiting PUCO approval (12)	Contracted non-solar RECS (13)	Long Term non-solar RFP awaiting PUCO approval (14)	Supply Portfolio Projection (15)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)=(5)*(7)	(9)=(6)*(7)	(10) = (8)-(9)	(11)	(12)	(13)	(14)	(15)
2007	23,925,000	25,681,000	7,799,876	1.00%	0.03%	16,670,929	166,709	5,001	161,708	2,068	2,296	161,890	9,180	8,372,006
2008	24,444,000	26,205,000	7,968,744	1.50%	0.08%	12,257,491	183,862	7,354	176,508		2,828		9,428	8,542,830
2009	24,712,000	26,466,000	8,056,712	2.00%	0.09%	8,565,822	171,316	7,709	163,607		3,362		9,664	8,627,916
2010	24,793,000	26,543,000	8,082,518	2.50%	0.12%	7,941,577	198,539	9,590	189,009		3,854		9,635	8,653,018
2011	24,734,000	26,475,000	8,063,284	3.00%	0.15%	8,035,791	281,253	12,054	269,199		3,843		9,606	8,630,850
2012	24,940,000	26,570,000	8,032,640	4.50%	0.18%	8,067,305	363,029	14,521	348,508		3,816		9,540	8,596,820
2013	24,562,000	26,283,000	8,007,212	5.50%	0.22%	8,059,481	443,271	17,791	425,540		3,795		9,487	8,568,258
2014	24,447,000	26,159,000	7,969,722	6.50%	0.25%	8,034,379	522,235	20,889	501,346		3,790		9,474	8,527,834
2015	24,084,000	25,764,000	7,851,384	7.50%	0.30%	8,003,191	600,239	24,010	576,229		3,790		9,475	8,399,064
2016	23,693,000	25,340,000	7,723,918	8.50%	0.34%	7,942,773	675,196	27,005	648,191		3,790		9,475	8,260,840
2017	23,693,000	25,340,000	7,723,918	9.50%	0.38%	7,848,341	745,592	29,824	715,768		3,316		9,475	8,260,840

32.6% Percent of customer sales taking SSO service on 12/2010 (as shown on PUCO Form SE-4)

Column (2) and (3) PUCO Case No. 10-504-EL-FOR PUCO FORM FE4-D1 (2021 set to equal 2020)  
 Column (4) = 2007 through 2010 From PUCO Form(s) SE-1: Monthly Historical Electricity Data, Part A  
 = 2011 through 2021 From Column (2) Times percent of customer sales taking SSO service on 12/2010  
 Column (5) and (6) from OAC 4901:1-40-03 (A)  
 Column (7) Average of the three preceding calendar years of Column (4)  
 Column (8) and (9) from OAC 4901:1-40-03 (A) [Column (9) is not incremental to Column (8)]  
 Column (10) = Net renewable benchmark  
 Columns (12) & (14) = Filed in Case 10-2891-EL-ACP, as stipulated to in 10-0388-EL-SSO.  
 Column (15) = Column (3) times the percent of customer sales taking SSO service on 12/2010 Service Offer percent of delivery retail electric sales.  
 SSO supplier is obligated to provide Standard Service Offer percent of delivery retail electric sales including distribution losses.

The Cleveland Electric Illuminating Company  
Renewable Energy Resources Baselines and Benchmarks

(Megawatt Hours/Year)

Planning baselines and benchmarks in the forecasted years are calculated using forecasted SSO Retail Electric Sales and the same percentage of customer sales taking SSO service as 12/2010 actual. Associated compliance baselines and benchmarks will reflect actual SSO Retail Electric Sales.

Year	(2) Delivery Retail Electric Sales Excluding Losses	(3) Delivery Retail Electric Sales Including Losses	(4) Company's Calendar-Month SSO Retail Electric Sales	(5) Renewable Energy Resource Target %	(6) Solar Energy Resource Target %	(7) Alternative Energy Baselines	(8)=(5)*(7) Renewable Energy Resource Benchmark	(9)=(6)*(7) Solar Energy Resource Benchmark - SRECS	(10) = (8)-(9) Renewable Less Solar Benchmark - RECS	(11) Contracted SRECS	(12) Long Term solar RFP awaiting PUCO approval	(13) Contracted non-solar RECS	(14) Long Term non-solar RFP awaiting PUCO approval	(15) Supply Portfolio Projection
2007	18,215,000	19,650,000	17,403,733	1.00%	0.03%	12,883,240	128,632	3,859	124,773	1,596	1,771	124,913	7,083	5,777,100
2008	18,291,000	19,709,000	17,157,556	1.50%	0.06%	8,929,125	133,937	5,357	128,590	1,596	2,060	124,913	6,868	5,794,446
2009	18,556,000	19,984,000	14,450,199	2.00%	0.09%	5,904,910	118,098	5,314	112,784	1,596	2,332	124,913	6,862	5,875,296
2010	19,215,000	20,679,000	6,981,965	2.50%	0.12%	5,396,076	134,902	6,475	128,427	1,596	2,619	124,913	6,546	6,079,628
2014	19,347,000	20,816,000	5,688,018	3.50%	0.15%	5,494,076	192,293	8,241	184,052	1,596	2,627	124,913	6,568	6,119,904
2015	19,253,000	20,719,000	5,681,852	4.50%	0.18%	5,597,564	251,890	10,076	241,814	1,596	2,627	124,913	6,520	6,091,366
2016	19,253,000	20,643,000	5,641,272	5.50%	0.22%	5,686,380	311,650	12,466	299,184	1,596	2,688	124,913	6,670	6,069,042
2017	19,188,000	20,554,000	5,617,732	6.50%	0.26%	5,663,714	368,141	14,726	353,415	1,596	2,672	124,913	6,679	6,042,878
2018	19,108,000	20,266,000	5,539,842	7.50%	0.30%	5,640,292	423,022	16,921	406,101	1,596	2,672	124,913	6,677	6,042,878
2019	18,843,000	19,968,000	5,459,590	8.50%	0.34%	5,599,622	475,969	19,039	456,929	1,596	2,672	124,913	6,690	5,958,204
2020	18,570,000	19,968,000	5,459,590	9.50%	0.38%	5,539,058	526,211	21,048	505,163	1,596	2,340	124,913	6,697	5,870,592
2021	18,570,000	19,968,000	5,459,590	9.50%	0.38%	5,539,058	526,211	21,048	505,163	1,596	2,340	124,913	6,697	5,870,592

29.4% Percent of customer sales taking SSO service on 12/2010 (as shown on PUCO Form SE-1)

Column (2) and (3) = PUCO Case No. 10-504-EL-FOR PUCO FORM FE-4-D1 (2021 set to equal 2020)  
 Column (4) = 2007 through 2010 From PUCO Form(S) SE-1: Monthly Historical Electricity Data, Part A  
 = 2011 through 2021 From Column (2) Times percent of customer sales taking SSO service on 12/2010  
 Column (5) and (6) from OAC 4901:1-40-03 (A)  
 Column (7) Average of the three preceding calendar years of Column (4)  
 Column (8) and (9) from OAC 4901:1-40-03 (A) [Column (9) is not incremental to Column (8)]  
 Column (10) = Net renewable benchmark  
 Column (12) & (14) = Filed in Case 10-2891-EL-ACP, as stipulated to in 10-0388-EL-SSO.  
 Column (15) = Column (2) times the percent of customer sales taking SSO service on 12/2010. Service Offer percent of delivery retail electric sales.  
 SSO supplier is obligated to provide Standard Service Offer percent of delivery retail electric sales including distribution losses.



The Toledo Edison Company  
Renewable Energy Resources Baselines and Benchmarks

(Megawatt Hours/Year)

Planting baselines and benchmarks in the forecasted years are calculated using forecasted SSO Retail Electric Sales and the same percentage of customer sales taking SSO service as 12/2010 actual. Associated compliance baselines and benchmarks will reflect actual SSO Retail Electric Sales.

Year	(2) Delivery Retail Electric Sales Excluding Losses	(3) Delivery Retail Electric Sales Including Losses	(4) Company's Calendar-Month SSO Retail Electric Sales	(5) Renewable Energy Resource Target %	(6) Solar Energy Resource Target %	(7) Alternative Energy Baselines	(8)=(6)*(7) Renewable Energy Resource Benchmark	(9)=(6)*(7) Solar Energy Resource Benchmark - SRECS	(10) = (8)-(9) Renewable Less Solar Benchmark - RECS	(11) Contracted SRECS	(12) Long Term solar RFP awaiting PUCO approval	(13) Contracted non-solar RECS	(14) Long Term non-solar RFP awaiting PUCO approval	(15) Supply Portfolio Projection
2007	10,128,000	10,701,000	9,228,709	1.00%	0.03%	6,786,629	67,866	2,036	65,830	842	394	65,904	3,737	3,274,506
2008	10,267,000	10,764,000	9,006,924	1.50%	0.06%	4,817,877	72,281	2,890	69,371		1,111		3,705	3,289,904
2009	10,495,000	11,044,000	7,815,831	2.00%	0.09%	3,256,274	65,125	2,931	62,194		1,286		3,674	3,579,464
2010	10,649,000	11,198,000	3,258,594	2.50%	0.12%	3,147,720	78,693	3,777	74,916		1,527		3,819	3,426,588
2011	10,687,000	11,234,000	3,270,222	3.00%	0.15%	3,200,882	112,030	4,801	107,229		1,530		3,826	3,437,604
2012	10,686,000	11,203,000	3,263,796	4.50%	0.18%	3,246,762	146,104	5,844	140,260		1,536		3,840	3,459,954
2013	10,631,000	11,176,000	3,253,086	5.50%	0.22%	3,264,204	179,531	7,181	172,350		1,537		3,842	3,478,020
2014	10,571,000	11,103,000	3,224,726	6.50%	0.26%	3,262,968	212,054	8,482	203,572		1,539		3,847	3,478,020
2015	10,394,000	10,914,000	3,180,564	7.50%	0.30%	3,250,536	243,790	9,752	234,038		1,538		3,848	3,359,578
2016	10,210,000	10,715,000	3,124,260	8.50%	0.34%	3,222,792	273,957	10,957	262,980		1,538		3,844	3,359,578
2017	10,210,000	10,715,000	3,124,260	9.50%	0.38%	3,179,890	302,086	12,083	290,003		1,344		3,839	3,278,790

30.6% Percent of customer sales taking SSO service on 12/2010 (as shown on PUCO Form SE-1)

Column (2) and (3) PUCO Case No. 10-504-EL-FOR PUCO FORM FE4-D1 (2021 set to equal 2020)  
 Column (4) = 2007 through 2010 From PUCO Form(s) SE-1; Monthly Historical Electricity Data, Part A  
 = 2011 through 2021 From Column (2) Times Percent of customer sales taking SSO service on 12/2010  
 Column (5) and (6) from OAC 4901:1-40-03 (A)  
 Column (7) Average of the three preceding calendar years of Column (4)  
 Column (8) and (9) from OAC 4901:1-40-03 (A) [Column (9) is not incremental to Column (8)]  
 Column (10) = Net renewable benchmark  
 Columns (12) & (14) = Filled in Case 10-2891-EL-ACP, as stipulated to in 10-00888-EL-SSO.  
 Column (15) = Column (3) times the percent of customer sales taking SSO service on 12/2010 Service Offer percent of delivery retail electric sales,  
 SSO supplier is obligated to provide Standard Service Offer percent of delivery retail electric sales including distribution losses.

Total Ohio

Renewable Energy Resources Baselines and Benchmarks

(Megawatt Hours/Year)

Planning baselines and benchmarks in the forecasted years are calculated using forecasted SSO Retail Electric Sales and the same percentage of customer sales taking SSO services as 12/2010 actual. Associated compliance baselines and benchmarks will reflect actual SSO Retail Electric Sales.

Year	Delivery Retail Electric Sales Excluding Losses	Delivery Retail Electric Sales Including Losses	Company's Calendar-Month SSO Retail Electric Sales	Renewable Energy Resource Target %	Solar Energy Resource Target %	Alternative Energy Baselines	Renewable Energy Resource Benchmark	Solar Energy Resource Benchmark - SRECS	Renewable Less Solar Benchmark - RECS	Contracted SRECS	Long Term solar RFP awaiting PUCO approval	Contracted non-solar RECS	Long Term non-solar RFP awaiting PUCO approval	Supply Portfolio Projection
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)=(5)*(7)	(9)=(6)*(7)	(10)=(8)-(9)	(11)	(12)	(13)	(14)	(15)
2007	52,269,000	56,092,000	16,254,254	1.00%	0.03%	36,320,798	363,207	10,896	352,311	4,506	5,000	352,707	20,000	17,423,612
2008	52,972,000	56,898,000	16,478,820	1.50%	0.06%	26,003,993	390,060	15,601	374,459		6,000		20,000	17,637,180
2009	53,763,000	57,494,000	16,723,046	2.00%	0.09%	17,727,006	354,539	15,954	338,585		7,000		20,000	17,882,676
2010	54,657,000	58,420,000	16,990,322	2.50%	0.12%	16,485,373	412,134	19,782	392,352		8,000		20,000	18,159,232
2011	54,768,000	58,525,000	17,021,524	3.50%	0.15%	16,730,729	585,576	25,096	560,480		8,000		20,000	18,188,358
2012	54,564,000	58,298,000	16,358,288	4.50%	0.18%	16,911,631	761,023	30,441	730,582		8,000		20,000	18,117,980
2013	54,381,000	58,096,000	16,901,570	5.50%	0.22%	16,930,045	934,452	37,378	897,074		8,000		20,000	18,055,320
2014	54,126,000	57,816,000	16,822,200	6.50%	0.26%	16,960,461	1,102,430	44,097	1,058,333		8,000		20,000	17,966,228
2015	53,321,000	56,944,000	16,571,730	7.50%	0.30%	16,894,019	1,267,051	50,683	1,216,368		8,000		20,000	17,896,952
2016	52,473,000	56,023,000	16,307,758	8.50%	0.34%	16,765,187	1,426,041	57,001	1,368,040		8,000		20,000	17,810,222
2017	52,473,000	56,023,000	16,307,758	9.50%	0.35%	16,567,249	1,573,889	62,955	1,510,934		7,000		20,000	17,741,022

31.1% Percent of customer sales taking SSO service on 12/2010 (weighted average of PUCO Forms SE-1)

Column (2) and (3) PUCO Case No. 10-504-EL-FOR PUCO FORM FE4-D1 (2021 set to equal 2020)  
 Column (4) = 2007 through 2010 From PUCO Form(s) SE-1; Monthly Historical Electricity Data, Part A  
 = 2011 through 2021 From Column (2) Times percent of customer sales taking SSO service on 12/2010  
 Column (5) and (6) from OAC 4901:1-40-02 (A)  
 Column (7) Average of the three preceding calendar years of Column (4)  
 Column (8) and (9) from OAC 4901:1-40-02 (A) [Column (9) is not incremental to Column (8)]  
 Column (10) = Net renewable benchmark  
 Column (11) & (14) = Filed in Case 10-2891-EL-ACP, as stipulated to in 10-0388-EL-SSO.  
 Column (15) = Column (8) times the percent of customer sales taking SSO services on 12/2010 Service Offer percent of delivery retail electric sales.  
 SSO supplier is obligated to provide Standard Service Offer percent of delivery retail electric sales including distribution losses.

**This foregoing document was electronically filed with the Public Utilities**

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**Case No(s). 11-2491-EL-ACP**

Summary: Text Ohio Edison Company, The Cleveland Electric Illuminating Company and The Toledo Edison Company Alternative Energy Plan 2011 through 2021 electronically filed by Ms. Carrie M Dunn on behalf of Ohio Edison Company and The Cleveland Electric Illuminating Company and The Toledo Edison Company