

APPENDIX II

COMMONWEALTH EDISON COMPANY

Load Forecast for Five-Year Planning Period June 2013 – May 2018

July 16, 2012

TABLE OF CONTENTS

	<u>Page</u>
I. INTRODUCTION AND SUMMARY	1
II. LOAD FORECAST	1
A. Purpose and Summary	1
B. Development of the Five-Year Load Forecast (June 1, 2013 – May 31, 2018)	2
1. Hourly Load Analysis	2
a. Multi-year historical analysis of hourly load	2
(i) Residential Single-Family Hourly Load Profile Analysis	5
b. Switching Trends and Competitive Retail Market Analysis	8
(i) Introduction and Brief Overview of Retail Development	8
(ii) RES Development	9
(iii) Future Trends.....	10
(iv) Forecasted Retail Usage	11
c. Known or Projected Changes to Future Load	13
d. Growth Forecast by Customer Class	13
(i) Introduction.....	13
(ii) ComEd Monthly Zone Model	16
(iii) ComEd Monthly Residential Model.....	17
(iv) ComEd Monthly Small C&I Model	18
(v) ComEd Monthly Street Light Model	19

	<u>Page</u>
(vi) Growth Forecast.....	19
2. Impact of Demand Side and Energy Efficiency Initiatives	20
a. Impact of Demand Response Programs, Current and Projected	20
(i) Background	20
(ii) Legislative Requirement.....	21
(iii) Implementation of Demand Response Measures.....	22
(iv) Impact of Demand Response Programs.....	22
b. Impact of Energy Efficiency Programs	22
(i) Section 8-103 Energy Efficiency Measures.....	22
(A) kWh Target.....	23
(B) Projected Overall Goals.....	23
(C) Impact on Forecasts.....	24
(ii) Energy Efficiency Building Codes and Appliance Standards.....	24
(iii) Section 16-111.5B Energy Efficiency Procurement	25
(A) Energy Efficiency Potential Study.....	26
(B) Identification of New or Expanded Measures...	26
(C) Cost Analysis.....	26
(D) Comparison to Cost of Comparable Study....	27
(E) Energy Savings Goals.....	27
c. Impact of Renewable Energy Resources	28
3. Five-Year Monthly Forecast	31
III. CONCLUSION	34

I. INTRODUCTION AND SUMMARY

The Public Utilities Act (“PUA”) provides that beginning in 2008 electric utilities in Illinois shall provide a range of load forecasts to the Illinois Power Agency (“IPA”) by July 15th of each year. The PUA further provides that these load forecasts shall cover the 5-year planning period for the next procurement plan and shall include hourly data representing high-load, low-load and expected-load scenarios for the load of eligible retail customers (“Eligible Retail Customers”). The electric utility is also to provide supporting data and assumptions (220 ILCS 5/16-111.5(d)(2)). This document presents Commonwealth Edison Company’s (“ComEd”) load forecast for the planning period of June 2013 through May 2018. ComEd will provide the supporting data and assumptions in a separate package of materials.

ComEd’s 5-year hourly load forecast (“Forecast”) is based on the PUA’s definition of Eligible Retail Customers. Eligible Retail Customers include residential and non-residential customers who purchase power and energy from ComEd under fixed-price bundled service (“Blended Service”) tariffs, other than those customers whose service has been declared competitive. Because service to certain classes of customers has been declared competitive either by statute or by the Illinois Commerce Commission (“ICC”), only residential and non-residential customers below 100 kW in size are eligible for Blended Service.¹

The Forecast includes the effects of energy efficiency, demand response and renewable energy resources programs. The Forecast anticipates that these programs will be observed in full compliance with the PUA’s requirements, subject to the defined rate impact test.

II. LOAD FORECAST

A. Purpose and Summary

This section of the Forecast provides forecasted energy usage for the Eligible Retail Customers within ComEd’s service territory for the 5-year procurement planning period beginning on June 1, 2013. In accordance with Section 16-111.5(b) of the PUA, the Forecast includes a multi-year historical analysis of hourly loads, a review of switching trends and competitive retail market development, a discussion of known and projected changes to future loads and growth forecasts by customer classes. The Forecast also addresses the impacts of demand response and energy efficiency programs on the forecast. Lastly, this Forecast discusses any supply side needs that are projected to be offset by the purchase of renewable energy resources.

¹ There is one exception to this statement. The common area accounts for the condominium associations are exempted from this competitive declaration (see Section 16-103.1 of the PUA).

B. Development of the Five-Year Load Forecast (June 1, 2013 – May 31, 2018)

The hourly load analysis provides the means to determine the on-peak and off-peak quantities needed in the procurement process. In presenting the Forecast, this document focuses on average usage or load during the 12 monthly on-peak and off-peak periods during a year. For the purposes of this Forecast, the definitions of the on-peak and off-peak periods are consistent with those commonly used in the wholesale power markets, and on trading platforms such as the New York Mercantile Exchange (“NYMEX”) and the Intercontinental Exchange, Inc. (“ICE”). The on-peak period consists of the week day period from 6 a.m. to 10 p.m. CPT excluding NERC holidays (this is referred to as the 5X16 peak period). The off-peak period consists of all other hours (this is referred to as the off-peak “wrap” period). The Forecast therefore has been summarized as load requirements using the 24 different time periods covered by these standard products. This is the same approach that was presented in past forecasts and approved by the ICC. The hourly load data is being supplied with the supporting data and assumptions materials.

1. Hourly Load Analysis

a. Multi-year historical analysis of hourly load

The 2012 multi-year historical analysis of hourly load is very similar to the approach used in the 2011 procurement filing. Essentially, the hourly models that were developed last year were updated with another year of customer data and reviewed for fit. The results this year are similar to the previous filing.

The 2012 multi-year historical analysis of load during the 24 monthly on-peak and off-peak periods is based on hourly profile data for the period from January 2004 to December 2011. The profiles are based on statistically significant samples from ComEd’s residential customer population along with customers applicable to the non-residential watt-hour and 0 to 100 kW delivery classes. These samples provide the only basis for an analysis of actual historical hourly usage of Eligible Retail Customers because the standard meters currently used for these customers do not record usage on an hourly basis. As discussed in greater detail below, the profiles show clear and stable weather-related usage patterns that are indicative of how residential and the small non-residential customers use electricity. Thus, the customer load profiles provide reliable information on the historical hourly usage of customers.

Using the hourly load profiles and actual customer aggregate usage, Table II-1 depicts the historical on-peak and off-peak hourly usage of the major customer groups within the Eligible Retail Customers for the period from January 2009 to December 2011.

Table II-1
Load Forecast Table (Historical Detail 2009-2011)

ComEd Historical Actual Usage											
Historical Energy Usage in MWh for Eligible Retail Customers (Line Loss Adjusted)											
Year	Month	Residential Load		Watt-hour		Small Load (0 to 100kW)		Street Lighting Load		Total Load (MWh)	
		On-Peak	Off-Peak	On-Peak	Off-Peak	On-Peak	Off-Peak	On-Peak	Off-Peak	On-Peak	Off-Peak
2009	1	1,457,595	1,620,040	32,711	28,467	456,843	398,061	1,776	3,985	1,948,926	2,050,553
2009	2	1,283,975	1,299,737	30,536	23,728	445,544	347,452	1,511	3,561	1,761,565	1,674,478
2009	3	1,046,850	1,098,294	27,024	21,590	402,786	313,589	1,491	4,207	1,478,151	1,437,679
2009	4	992,489	943,062	24,850	17,767	392,072	279,008	1,165	4,379	1,410,576	1,244,217
2009	5	906,711	1,072,505	23,205	20,883	387,856	334,825	822	4,809	1,318,595	1,433,023
2009	6	1,355,202	1,195,758	24,426	16,273	432,494	295,880	716	4,499	1,812,839	1,512,411
2009	7	1,388,217	1,184,043	27,392	18,030	479,595	314,531	749	4,530	1,895,952	1,521,134
2009	8	1,435,413	1,474,624	26,223	20,498	445,149	353,246	931	4,568	1,907,716	1,852,936
2009	9	1,070,334	1,053,646	23,477	17,827	410,966	303,821	1,194	4,095	1,505,972	1,379,389
2009	10	1,035,954	1,030,812	23,691	18,380	374,658	279,925	1,574	4,063	1,435,876	1,333,179
2009	11	1,050,767	1,162,536	24,791	20,983	347,561	296,046	1,757	3,987	1,424,876	1,483,552
2009	12	1,438,365	1,407,180	28,993	22,673	423,983	338,741	2,027	3,867	1,893,367	1,772,461
Totals		14,461,872	14,542,239	317,318	247,099	4,999,506	3,855,124	15,714	50,549	19,794,410	18,695,010
2010	1	1,404,757	1,717,737	31,413	29,865	394,710	379,688	1,788	3,991	1,832,667	2,131,281
2010	2	1,286,133	1,277,782	29,465	23,330	372,304	295,291	1,619	3,809	1,689,522	1,600,212
2010	3	963,208	913,012	25,448	18,550	373,592	269,198	1,490	4,225	1,363,739	1,204,986
2010	4	946,120	885,498	23,413	16,808	367,770	259,600	1,134	4,203	1,338,438	1,166,109
2010	5	1,031,288	1,213,285	23,074	20,893	369,598	334,528	868	5,285	1,424,828	1,573,992
2010	6	1,576,774	1,388,093	25,980	17,951	448,417	309,681	193	1,043	2,051,363	1,716,769
2010	7	2,129,095	2,108,142	30,188	22,581	472,460	380,518	456	2,342	2,632,199	2,513,583
2010	8	1,969,934	1,818,869	29,621	20,526	470,662	353,644	391	1,730	2,470,608	2,194,769
2010	9	1,114,031	1,041,725	22,093	16,078	374,281	273,692	550	1,792	1,510,955	1,333,287
2010	10	888,085	960,659	20,918	17,188	316,503	260,706	776	1,918	1,226,282	1,240,471
2010	11	1,049,053	1,098,253	26,069	20,560	359,348	285,012	900	1,965	1,435,369	1,405,790
2010	12	1,528,240	1,418,867	29,071	20,653	363,802	273,574	893	1,643	1,922,006	1,714,736
Totals		15,886,718	15,841,923	316,753	244,983	4,683,448	3,675,132	11,057	33,947	20,897,976	19,795,985
2011	1	1,368,678	1,521,717	27,834	23,594	368,850	325,727	785	1,716	1,766,147	1,872,754
2011	2	1,206,062	1,186,929	25,623	20,068	347,348	280,764	774	1,749	1,579,807	1,489,511
2011	3	1,159,167	1,136,895	24,281	17,635	347,838	255,457	709	1,949	1,531,996	1,411,935
2011	4	969,437	983,804	21,379	16,775	308,747	248,293	556	1,937	1,300,120	1,250,809
2011	5	1,019,568	1,094,005	21,641	16,868	322,611	259,005	389	2,140	1,364,208	1,372,018
2011	6	1,470,860	1,238,235	22,653	14,935	372,637	254,261	324	1,938	1,866,474	1,509,369
2011	7	1,975,570	2,222,529	21,480	17,785	377,078	340,216	375	2,009	2,374,503	2,582,539
2011	8	1,735,218	1,390,515	25,114	15,491	409,079	276,763	368	1,810	2,169,779	1,684,580
2011	9	1,099,125	1,079,116	16,169	11,730	268,504	206,113	578	1,861	1,384,376	1,298,820
2011	10	889,369	960,021	18,227	14,295	270,184	219,439	751	1,867	1,178,532	1,195,622
2011	11	1,006,338	1,012,818	19,001	14,450	273,852	215,951	770	1,689	1,299,960	1,244,908
2011	12	1,124,395	1,250,986	21,493	17,811	290,015	251,954	947	1,744	1,436,850	1,522,495
Totals		15,023,788	15,077,571	264,895	201,438	3,956,742	3,133,942	7,327	22,410	19,252,752	18,435,361

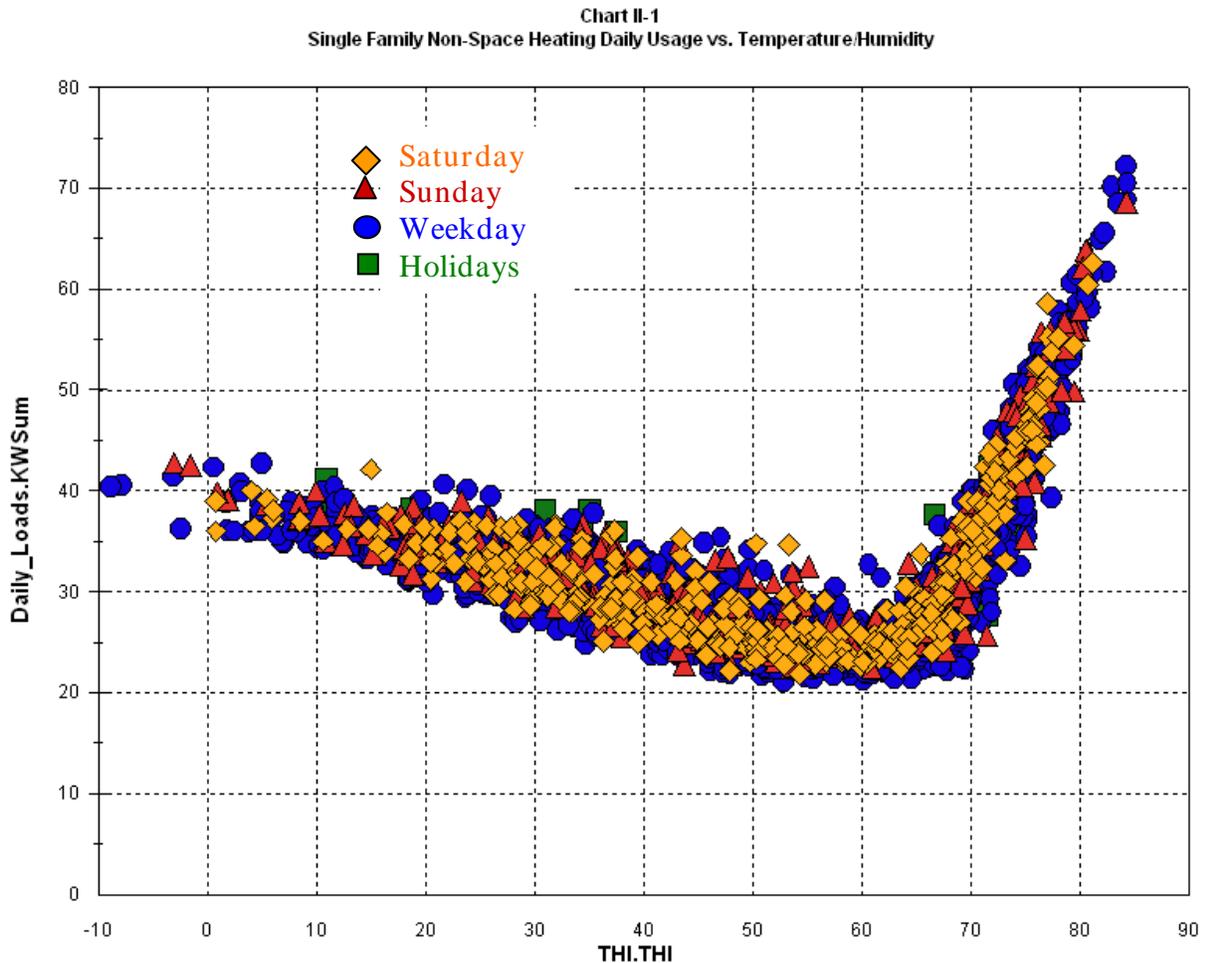
Table II-2 carries forward the total load in MWh from Table II-1 and then provides the average load for each period in MW, which is useful in determining the required volume of standard wholesale energy products.

Table II-2					
Load Forecast Table (Historical Summary 2009-2011)					
ComEd Historical Actual Usage					
Historical Energy Usage for Eligible Retail Customers					
(Line Loss Adjusted)					
Year	Month	Total Load (MWh)		Average Load (MW)	
		On-Peak	Off-Peak	On-Peak	Off-Peak
2009	1	1,948,926	2,050,553	5,800	5,026
2009	2	1,761,565	1,674,478	5,505	4,757
2009	3	1,478,151	1,437,679	4,199	3,668
2009	4	1,410,576	1,244,217	4,007	3,381
2009	5	1,318,595	1,433,023	4,121	3,380
2009	6	1,812,839	1,512,411	5,150	4,110
2009	7	1,895,952	1,521,134	5,152	4,046
2009	8	1,907,716	1,852,936	5,678	4,542
2009	9	1,505,972	1,379,389	4,482	3,592
2009	10	1,435,876	1,333,179	4,079	3,401
2009	11	1,424,876	1,483,552	4,453	3,709
2009	12	1,893,367	1,772,461	5,379	4,522
Totals		19,794,410	18,695,010		
2010	1	1,832,667	2,131,281	5,727	5,027
2010	2	1,689,522	1,600,212	5,280	4,546
2010	3	1,363,739	1,204,986	3,706	3,205
2010	4	1,338,438	1,166,109	3,802	3,169
2010	5	1,424,828	1,573,992	4,453	3,712
2010	6	2,051,363	1,716,769	5,828	4,665
2010	7	2,632,199	2,513,583	7,834	6,161
2010	8	2,470,608	2,194,769	7,019	5,599
2010	9	1,510,955	1,333,287	4,497	3,472
2010	10	1,226,282	1,240,471	3,650	3,040
2010	11	1,435,369	1,405,790	4,272	3,661
2010	12	1,922,006	1,714,736	5,223	4,560
Totals		20,897,976	19,795,985		
2011	1	1,766,147	1,872,754	5,256	4,590
2011	2	1,579,807	1,489,511	4,937	4,232
2011	3	1,531,996	1,411,935	4,163	3,755
2011	4	1,300,120	1,250,809	3,869	3,257
2011	5	1,364,208	1,372,018	4,060	3,363
2011	6	1,866,474	1,509,369	5,302	4,102
2011	7	2,374,503	2,582,539	7,420	6,091
2011	8	2,169,779	1,684,580	5,896	4,480
2011	9	1,384,376	1,298,820	4,120	3,382
2011	10	1,178,532	1,195,622	3,508	2,930
2011	11	1,299,960	1,244,908	3,869	3,242
2011	12	1,436,850	1,522,495	4,276	3,732
Totals		19,252,752	18,435,361		

ComEd analyzed the hourly load profiles for all the major customer groups within the Eligible Retail Customers. As a result of that analysis, ComEd developed hourly load models for those major customer groups that determined the average percentage of monthly usage that each customer group used in each hour of that month. Those hourly models were then used to develop the monthly on-peak and off-peak usage percentages for the planning periods. These percentages were applied to ComEd’s forecasted monthly usage to obtain the forecasted procurement quantities. In the following section, the hourly analysis of the residential single-family non-space heating customer segment is described. This class represents approximately half of the annual usage of the Eligible Retail Customer segment and provides a good example of how the hourly load profile data were analyzed and modeled.

(i) Residential Single-Family Hourly Load Profile Analysis

One of the most significant, and easily understood, determinants of residential energy usage is weather. The “scatter plot” shown below (Chart II-1) demonstrates the significant relationship that exists between weather and usage for the single-family non-space heating residential customer segment.



A scatter plot shows the relationship between two variables. Each point represents a single observation (a day in this case). In this chart, the values shown on the vertical or Y-axis are daily usage per customer (“UPC”). The values shown on the horizontal or X-axis are the daily average temperature-humidity index (“THI”). The graph shows daily UPC based on observations from January 2004 to December 2011 and the average THI on those days. THI, rather than temperature alone, is used because residential usage is sensitive to humidity. Different geometric shapes are used to distinguish points representing weekdays from those depicting Saturday, Sunday or holiday usage.

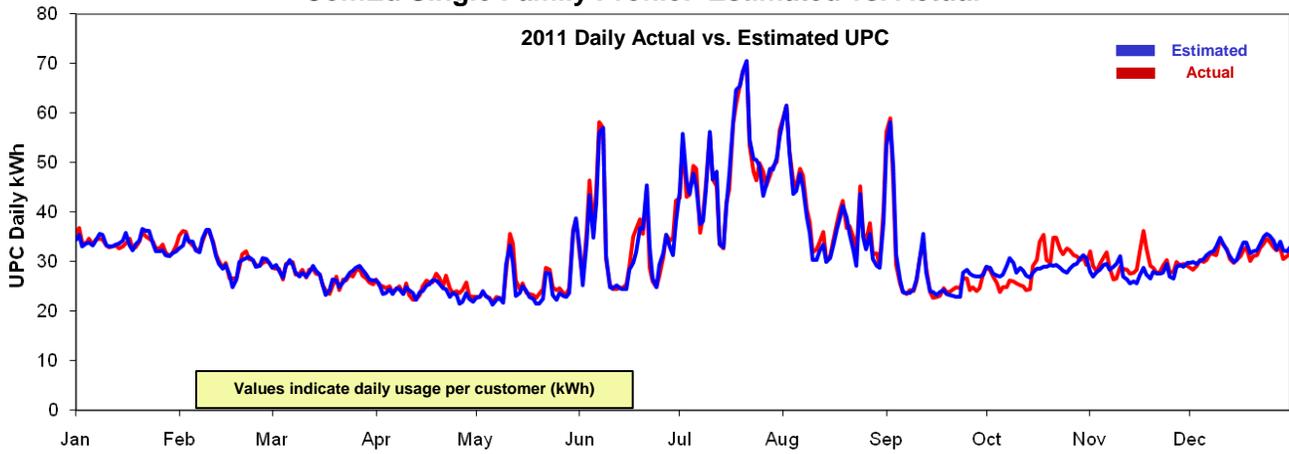
The scatter plot is very useful in understanding the relationship between customer usage and weather. If there were no relationship between usage and weather, then the graph would not display a clear pattern. However, it is apparent that there is a clear pattern. The right side of the graph at the high end of the horizontal axis shows the days on which THI was the highest. The points at that end of graph indicate that the highest UPC occurred when THI levels were at their peak -- 80 plus degrees. Moving to the left, the points show UPC declining rapidly as the THI decreases until the 60 degree level is reached at which a base usage appears. From that base level, UPC gradually increases as colder temperatures are experienced.

Hourly models were developed to account for the strong weather relationship shown in the graph and to account for numerous other factors that influence residential usage. The models explicitly account for the differing effects of energy use at various temperatures. Variables are included to allow for seasonal usage patterns in water heating, refrigeration and other seasonal uses. Weekend and holiday variables are included to allow for behavioral differences on those days relative to weekdays. The amount of daylight on each day is included to account for seasonal differences in lighting loads. Weather variables for prior days are included in the model to account for the dynamic effects of temperature buildup. The full list of variables included in the residential single-family model is shown in Appendix A-1.

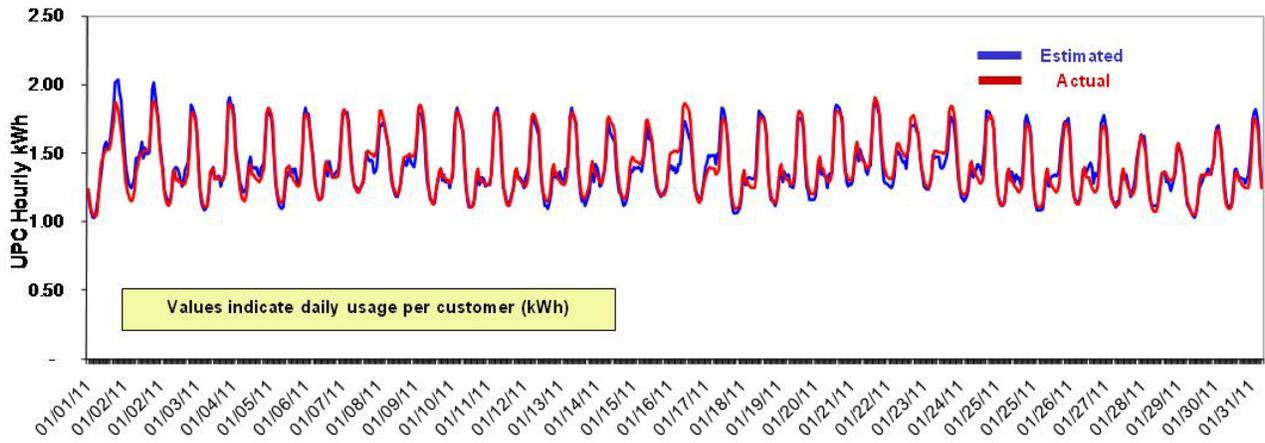
One way to visualize the model’s performance is to look at plots of actual and estimated² values for the historical estimation period. The following chart demonstrates the performance of the model over the one-year period from January 2011 through December 2011 at the daily level and zooms in to show the hourly performance in January and July of 2011.

² The estimated data in Chart II-2 is based on the actual weather experienced over the relevant period.

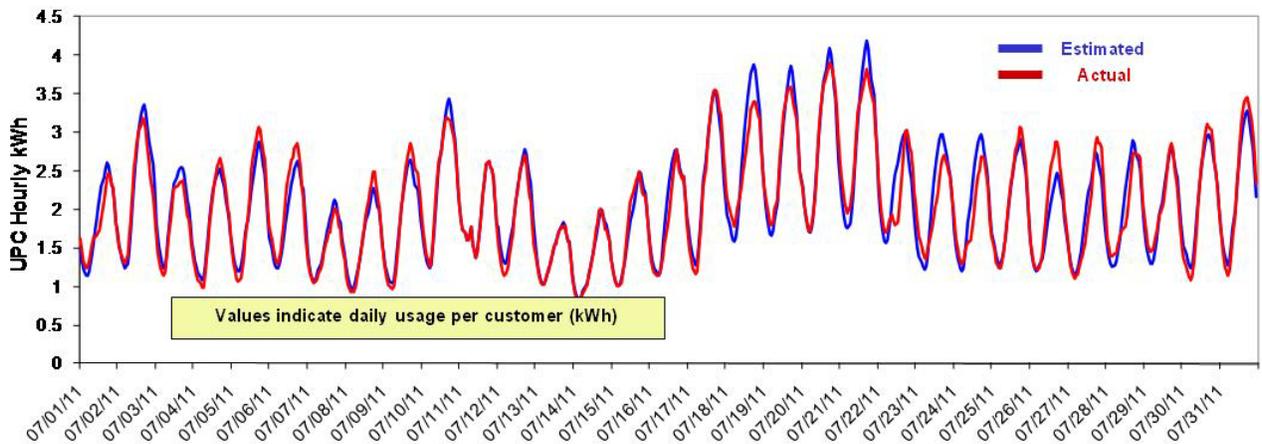
**Chart II-2
ComEd Single Family Profile: Estimated vs. Actual**



January 2011 Hourly Actual vs. Estimated UPC



July 2011 Hourly Actual vs. Estimated UPC



In all of the graphs above in Chart II-2, the red line indicates the “actual” load data and the blue line indicates the model’s estimated values, adjusted for actual weather. It is important to understand that the actual load data itself is an estimate based on a statistical sample of single family residential customers, and minor variations do occur in the sample. Despite these variations, the charts demonstrate that the model’s estimated usage is extremely close to the actual usage. The close alignment of the estimated and actual lines on the charts demonstrates that the model is very effective in estimating variations in electrical usage patterns that are significantly influenced by weather conditions.

b. Switching Trends and Competitive Retail Market Analysis

In determining the expected load requirements for which standard wholesale products will be procured, it is important to provide the best possible estimate of the number of Eligible Retail Customers that are likely to be served by Retail Electric Suppliers (“RES”). That issue is considered in the following discussion, which reviews retail development in ComEd’s service territory, the entry of RES, the rate of customer switching in the past, future trends affecting customer choice and ComEd’s 5-year forecast of the percentage of load from various customer segments that will continue to be served with supply procured by ComEd.

(i) Introduction and Brief Overview of Retail Development

ComEd’s service territory is an extremely robust retail market, which is demonstrated in several ways:

1. Residential RES service is approximately 13% of ComEd’s total residential service as of May 2012 and this represents approximately 445,000 residential customers. In comparison, only 1% of ComEd’s residential usage was taking RES service in May 2011. Thus, residential RES service has been growing at approximately 1% per month in the past year with no indications of slowing down.
2. Municipal Aggregation (“Muni Agg”) is growing quickly. Approximately 170 communities (and one county) within ComEd’s service territory passed Muni Agg referendums in March 2012³. These government entities represent approximately one million residential customers, which is equivalent to approximately 30% of ComEd’s total number of residential customers. Additional information related to these government entities can be found at the following website (www.icc.illinois.gov/ORMD/Municipalaggregation.aspx).
3. The current number of active RES has more than doubled since January 2009 and the number of RES approved to serve residential customers has doubled in the past year alone.

³ This is in addition to the approximately 20 municipalities that passed referendums in March 2011.

4. Almost 90% of ComEd’s entire non-residential usage is either supplied through RES or Hourly service as of May 2012. There is no doubt that customer choice is alive and well within the non-residential segment. Plus, there are over 40 RES that are serving the needs of these non-residential customers.

In addition, this already robust retail market continues to evolve. The residential retail market has greatly expanded in the past 18 months and more developments are possible. RES and numerous consultants are continuing to seek customers and educate consumers. As in any competitive market place new developments should be expected – although the exact form of those developments is uncertain.

In summary, retail choice is very active within the ComEd service territory and continuing to develop. A healthy retail market is anticipated for the forecast period.

(ii) RES Development

There continues to be growth in the number of RESs within the ComEd service territory. This growth is shown in the table below:

**Table II-3
RES Development in the ComEd Service Territory**

RES Category	January 2009	May 2010	May 2011	May 2012
Number of Active RESs ⁴	22	26	31	48
Number of RESs approved to serve Residential customers	6	9	16	32
Number of entities in the RES certification process as of May 2012	N.A.	N.A.	N.A.	8

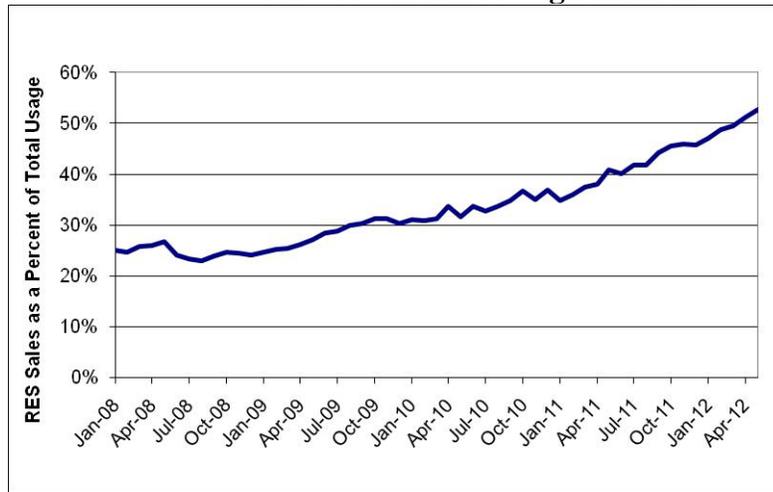
From January 2009 to May 2012 there has been a 118% increase in the number of active RES in the ComEd service territory. Further, RES growth continues with several RES in the certification process. The increase in RES approved to serve residential customers is even more remarkable. The number of RES approved to serve residential customers has doubled in the past year. This growth in the number of RES along with more being eligible to serve residential customers is a positive sign for the retail market.

⁴ An “Active RES” is defined as an ICC-approved RES that has passed ComEd’s certification process.

(iii) Future Trends

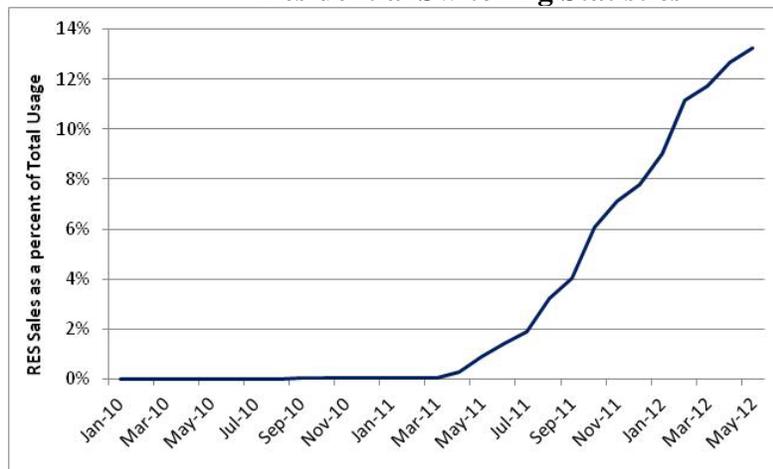
The future trends are very positive for the retail markets for several reasons. First, usage by RES customers in the 0 to 100 kW class have not only grown over time, but the rate of growth has increased in the last few years. Chart II-3 contains the monthly percentage of usage by RES customers from January 2007 through May 2012. While usage related to RES customers has been growing over time within the 0 to 100 kW delivery class, it has doubled in percentage terms from 26% as of April 2009 to 53% by May 2012.

**Chart II-3
0 to 100 kW Switching Statistics**



Second, the retail market for residential customers is a new market that the RES have entered into during the past 18 months in a rapid fashion. Chart II-4 contains the monthly percentage of usage by RES customers from January 2010 to May 2012. In just over 12 months residential RES usage has increased from being essentially non-existent to approximately 13% of total residential usage.

**Chart II-4
Residential Switching Statistics**



Third, Muni Agg has firmly taken hold in the ComEd service territory. As previously noted, approximately 170 government entities passed a Muni Agg referendum in March 2012. These communities represent approximately one million residential customers and are now in various stages of reacting to those referendums. As of early July 2012 ComEd had sent account number information to 57 communities totaling approximately 340,000 accounts. In turn, this information will be used by the RES to enroll these customers for RES service. Clearly, a meaningful amount of Muni Agg is currently under way.

For these reasons we expect retail markets to continue to expand during the Forecast period.

(iv) Forecasted Retail Usage

The forecast percentages of Blended Service usage are shown below, along with some historical perspective.

**Table II-4
Percentage of Blended Service Usage**

Month	Residential	Watthour	0-100 kW
Jun-04	100.0%	99.4%	87.8%
Jul-05	100.0%	99.4%	87.3%
Jul-06	100.0%	99.6%	90.7%
Jul-07	100.0%	97.4%	76.5%
Jun-08	99.9%	98.0%	75.2%
May-09	99.8%	98.0%	72.1%
Jun-10	99.9%	95.0%	65.8%
Jun-11	98.3%	92.3%	57.3%
Jun-12	84.4%	71.5%	44.9%
Jun-13	30.0%	25.3%	25.9%
Jun-14	27.4%	20.1%	19.3%
Jun-15	26.0%	17.7%	15.9%
Jun-16	25.1%	16.4%	14.2%
Jun-17	24.6%	15.7%	13.0%
Jun-18	24.1%	14.9%	11.9%

The main drivers of this forecast are:

1. Increases in Residential RES service is expected for several reasons. First, the Muni Agg associated with the approximately 170 Muni Agg communities is expected to be completed by the end of 2012. We anticipate the residential electric space-heating customers to also take RES service within these approximately 170 communities. Second, non-Muni Agg switching has been occurring at slightly over one percent per month for the non-space-heating customers and that trend is expected to continue for some time. Third, the potential for an additional round of Muni Agg is possible in November 2012. There is a great deal of uncertainty associated with any Muni Agg

referendums for November 2012 because the government entities have until late August to file their proposed November 2012 referendums. ComEd proposes to provide an updated switching forecast in November 2012 (which essentially has been the past practice) to reflect any November 2012 referendum results. In the meantime, based on recent events and public comments, the forecast assumes that load equivalent to that of the City of Chicago will pass Muni Agg referendums in November 2012 and begin taking RES service in early 2013.

2. The Blended Service supply cost is expected to be marginally higher than RES prices beginning in June 2013. This reflects a combination of three-year old contracts within the portfolio, the long-term renewable energy contracts signed in 2010 and the recent Rate Stability procurement, which covered a 4 ½ year period. These contracts should create a small amount of expected “headroom” between Blended Service and RES prices in June 2013. Thus, a continued movement of customers to RES service is expected after June 2013, but at a slower pace than in past years. Further, no additional Muni Agg is expected other than the potential for a November 2012 referendum because of the small expected headroom going forward.
3. The 0 to 100 kW customer class is expected to continue to migrate to RES service as Rider PORCB has enhanced RES’ ability to serve the smaller customers within this customer class.

The effects of those drivers by customer group are as follows:

1. The Blended Service portion of the 0 to 100 kW customer class is expected to decline from 44.8% (May 2012) to approximately 19.3% by June 2014. This reflects a combination of Muni Agg developments and the enhanced ability of RES to serve the smaller customers within this customer class.
2. The Blended Service portion of the Watthour customer class is expected to decline from 76.8% (May 2012) to approximately 20.1% by June 2014. This is mostly the result of the Muni Agg assumptions in the forecast.
3. The Blended Service portion of the Residential customer class is expected to decline from 86.3% (May 2012) to approximately 27.4% by June 2014. This decline results from a combination of Muni Agg and non-Muni Agg activities.

By June 2014 Blended Service is expected to be less than one-third of the usage by customers in the Eligible Retail Customer customer classes; specifically 25.9%.

c. Known or Projected Changes to Future Load

Typically, when ComEd forecasts future loads, it considers whether there are any known major customer decisions, such as the relocation of part or all of a business that would impact load. For the Eligible Retail Customers, other than the factors we have discussed elsewhere, e.g. switching, energy efficiency measures, growth, etc., there is only one known or projected change that ComEd is aware of that is different from past conditions and could affect future loads for this group of customers. This is the residential real-time pricing program (“RRTP”).

In compliance with Section 16-107(b-5) of the PUA, ComEd received ICC approval to implement an RRTP program for a four-year period,⁵ and, more recently, to continue the program for another three to five years.⁶ ComEd plans to expand marketing to residential customers related to RRTP. As a result, approximately 7,500 additional customers per year are expected to migrate to RRTP service over the next five years because of those marketing programs. This forecasted increase is reasonable as ComEd has worked to reduce the marketing and acquisition costs for RRTP customers. The expected target of 50,000 RRTP customers by the end of 2017 is a small percent of the existing 3.4 million residential customers.

d. Growth Forecast by Customer Class

(i) Introduction

This section describes ComEd’s growth forecast by customer class for the 5-year procurement planning period beginning on June 1, 2013. Section II(B)(1) discussed the hourly customer load profiles used by ComEd to develop models to present the historical load analysis required by the PUA and to predict UPC, or usage per customer. As indicated in this section, in arriving at a growth forecast by customer class, there are additional models beyond those customer-level hourly models that are used to forecast future customer class usage. These other models play an important role in determining expected load during the 5-year planning period among the Eligible Retail Customer groups.

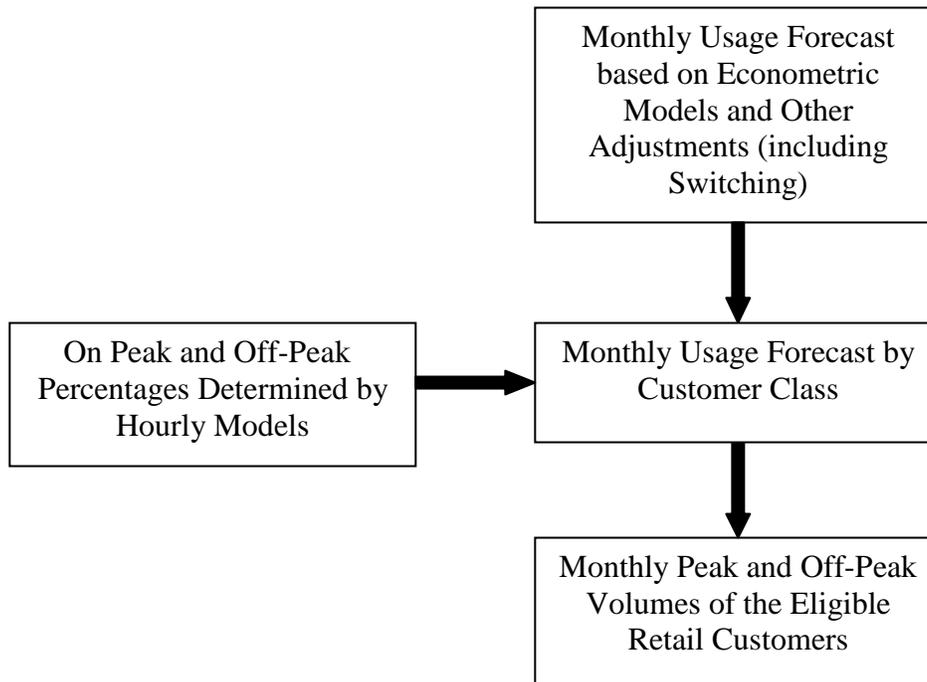
The following chart illustrates the steps in the ComEd load forecasting process.

Chart II-5

⁵ See ICC Order of December 20, 2006, in Docket No. 06-0617.

⁶ See ICC Order of May 29, 2012 in Docket No. 11-0546.

ComEd Energy Usage Forecast Process



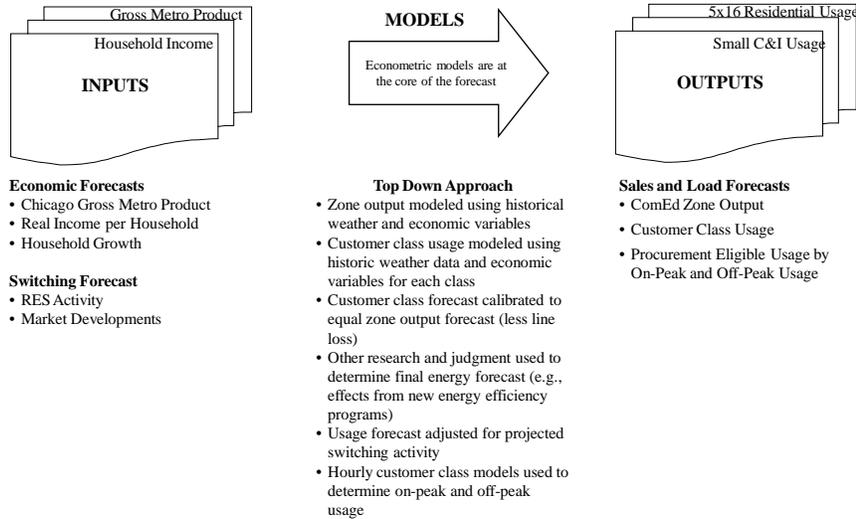
The forecasting process is model based subject to adjustments and judgment. A suite of econometric models is used to produce monthly usage forecasts for ComEd's revenue customer classes. The two major customer classes applicable to this Forecast are Residential and Small C&I. That monthly forecast is adjusted for other considerations (e.g., switching activity) and allocated to more granular delivery service classes (e.g., the residential customer class is composed of four delivery services classes). The forecast usage is combined with the input from the hourly models to obtain on-peak and off-peak quantities for each month and delivery service class.

The econometric modeling portion of the process is described in the following chart:

Chart

II-6

Econometric Modeling Process



As the chart indicates, ComEd’s forecasts of usage for its service territory are based on a “top-down” approach. The top-down approach provides a forecast of total usage for the entire service territory and allocates the usage to various customer classes using the models specific to each class. The “zone” forecast model takes into account a number of economic variables that affect electric energy use. For example, the gross metropolitan product (“GMP”) for the Chicago and Rockford areas is a good measure of economic activity in ComEd’s service territory. As GMP (which is expressed in billions of dollars) increases, use of electric energy rises as well. Section II (B)(1) describes the significant relationship between weather and energy usage, and the zone model contains sophisticated variables to reflect the effects of temperature and humidity, as well as seasonal usage patterns and other factors. The economic assumptions are contained in Table II-6.

Table II-6

Chicago Area Economic Forecasts - Global Insight (February12)

Economic Variables	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Gross Metro Product (Billions)	\$ 455	\$ 464	\$ 472	\$ 480	\$ 490	\$ 507	\$ 523	\$ 536	\$ 548	\$ 559
Real Disposable Income (Millions)	\$329,915	\$333,154	\$336,085	\$338,926	\$342,567	\$350,912	\$359,132	\$367,787	\$375,640	\$383,976
# of Households (Thousands)	3,320	3,320	3,314	3,324	3,346	3,370	3,395	3,417	3,431	3,442
Real Income/HH	\$ 99,375	\$100,336	\$101,426	\$101,954	\$102,372	\$104,116	\$105,779	\$107,626	\$109,473	\$111,569
Total Employment (Thousands)	4,160	4,118	4,149	4,198	4,262	4,333	4,412	4,476	4,522	4,556
Non-Manufacturing	3,753	3,724	3,748	3,787	3,842	3,905	3,975	4,036	4,082	4,118
Manufacturing	406	394	401	410	420	428	437	440	440	438
Housing Starts	5,501	5,397	6,982	10,753	13,856	18,770	22,694	23,687	24,274	27,061
U.S. GDP	12,703	13,088	13,313	13,597	13,908	14,369	14,825	15,232	15,623	16,004
Growth Rate	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Gross Metro Product	(3.2%)	1.9%	1.8%	1.6%	2.1%	3.4%	3.2%	2.4%	2.3%	2.1%
Real Disposable Income	(3.6%)	1.0%	0.9%	0.8%	1.1%	2.4%	2.3%	2.4%	2.1%	2.2%
# of Households	(0.1%)	0.0%	(0.2%)	0.3%	0.7%	0.7%	0.7%	0.7%	0.4%	0.3%
Real Income/HH	(3.5%)	1.0%	1.1%	0.5%	0.4%	1.7%	1.6%	1.7%	1.7%	1.9%
Total Employment	(5.3%)	(1.0%)	0.7%	1.2%	1.5%	1.7%	1.8%	1.5%	1.0%	0.8%
Non-Manufacturing	(4.6%)	(0.8%)	0.6%	1.0%	1.4%	1.6%	1.8%	1.5%	1.1%	0.9%
Manufacturing	(11.8%)	(3.1%)	1.7%	2.4%	2.4%	1.8%	2.2%	0.7%	(0.1%)	(0.4%)
Housing Starts	(61.7%)	(1.9%)	29.4%	54.0%	28.9%	35.5%	20.9%	4.4%	2.5%	11.5%
U.S. GDP	(3.5%)	3.0%	1.7%	2.1%	2.3%	3.3%	3.2%	2.7%	2.6%	2.4%

Source: Global Insight

All of the variables used in each of the models in the forecasting process are identified in Appendix A-4.⁷

The remainder of this section will provide a brief description of the models, starting with the ComEd’s Monthly Zone energy usage model (“Monthly Zone Model”) and proceeding to the three customer-level models for Monthly Residential bill-cycle energy usage (“Monthly Residential Model”), Monthly Small C&I bill-cycle energy usage (“Monthly Small C&I Model”) and Monthly Street Lighting bill-cycle energy usage (Monthly Street Lighting Model”).

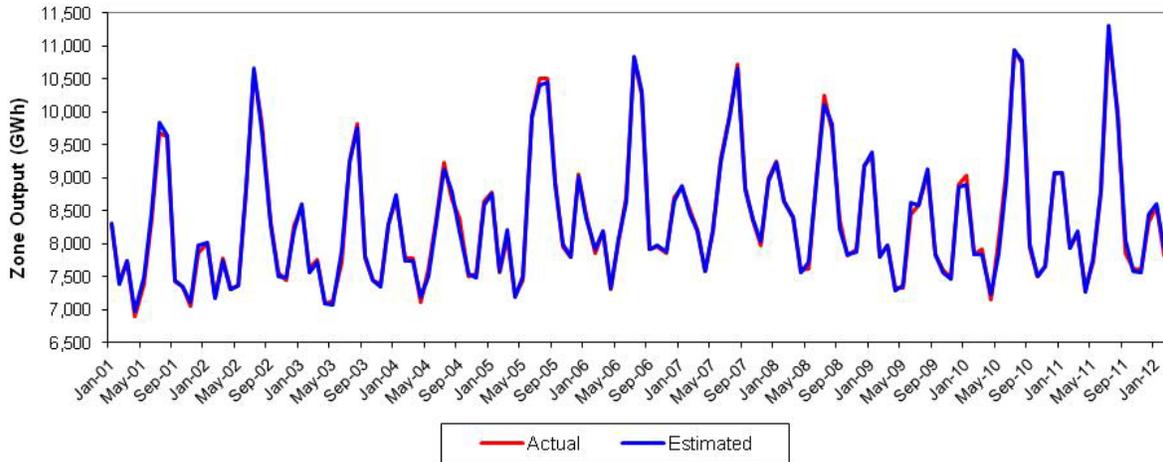
(ii) ComEd Monthly Zone Model

The Monthly Zone Model forecasts energy usage in gigawatt hours (GWh) for the entire ComEd service territory. The following chart shows the performance of the ComEd Monthly Zone Model by comparing actual zone output to the estimates⁸ from that model for each calendar month from January 2001 through February 2012.

⁷ Technical information about the model coefficients and regression statistics are included in Appendix A-2 and A-3.

⁸ Once again, for purposes of this Forecast, the estimates used in Charts II-7, II-8 and II-9 are based on actual weather.

**Chart II-7
ComEd Monthly Zone Model: Estimated vs. Actual**

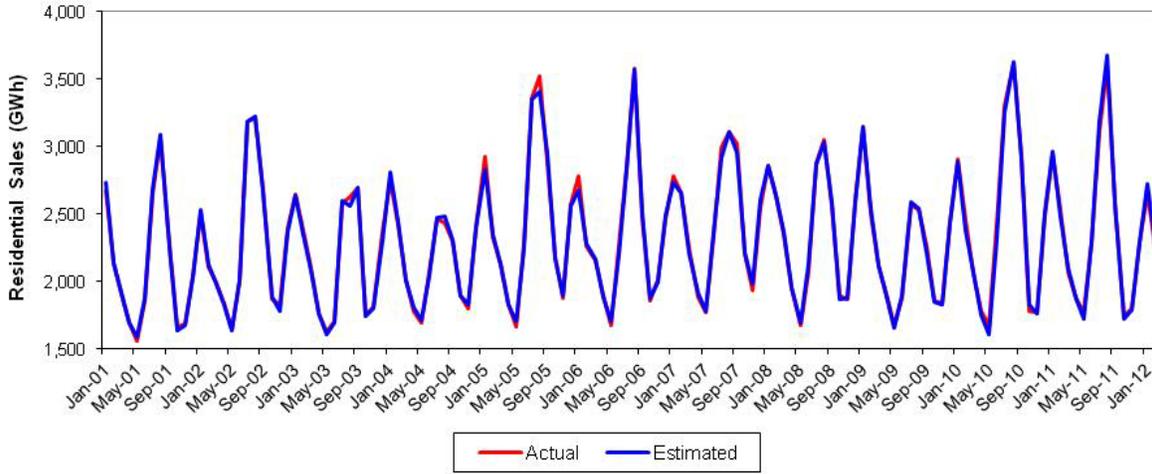


As with customer-level models discussed in Section II(B)(i)(a), the Monthly Zone Model is highly useful in understanding energy usage. The graph line depicting the model’s estimated usage (based on actual weather) and the line showing actual usage for the period are nearly identical.

(iii) ComEd Monthly Residential Model

The Monthly Residential Model forecasts monthly residential bill-cycle usage expressed in kWh per customer per day. The Monthly Residential Model is also very useful in understanding energy usage for this customer segment. The following chart compares the monthly energy usage for residential customers estimated by the Monthly Residential Model to the actual residential usage for the time period of January 2001 to February 2012. The graph line depicting the model’s estimated usage and the line with actual usage for the period are highly correlated.

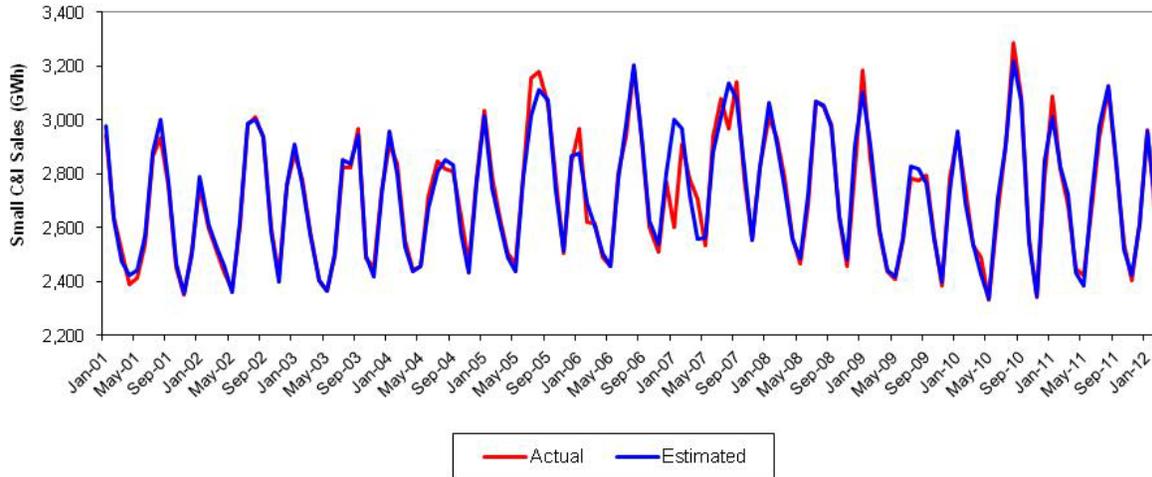
**Chart II-8
ComEd Monthly Residential Model: Estimated vs. Actual**



(iv) ComEd Monthly Small C&I Model

The Monthly Small C&I Model forecasts monthly Small C&I bill-cycle usage. Chart II-9 shows an estimated versus actual comparison demonstrating the model's effectiveness.

**Chart II-9
ComEd Monthly Small C&I Model: Estimated vs. Actual**



(v) ComEd Monthly Street Light Model

The Monthly Street Lighting Model forecasts monthly bill-cycle usage related to street lighting. This final model estimates use per day in GWh.

(vi) Growth Forecast

ComEd’s historical and forecasted weather-adjusted energy usage for the Residential and Small C&I customer classes are shown in Table II-7.

Table II-7

ComEd Weather Adjusted Annual Energy Usage				
Year	Residential		Small C&I	
	Usage (GWh)	Percent Growth	Usage (GWh)	Percent Growth
2004	27,905		32,733	
2005	28,290	1.4%	33,057	1.0%
2006	28,516	0.8%	32,958	(0.3%)
2007	28,459	(0.2%)	33,508	1.7%
2008	28,599	0.5%	33,391	(0.3%)
2009	28,202	(1.4%)	32,644	(2.2%)
2010	27,865	(1.2%)	32,445	(0.6%)
2011	27,514	(1.3%)	32,182	(0.8%)
2012	27,272	(0.9%)	32,184	0.0%
2013	27,266	(0.0%)	32,325	0.4%
2014	27,395	0.5%	32,544	0.7%
2015	27,564	0.6%	32,833	0.9%
2016	27,918	1.3%	33,125	1.8%
2017	28,056	0.5%	33,107	0.8%
2018	28,293	0.8%	33,125	(0.0%)

Residential customer class usage declined by an average of 0.5% per year from 2005 to 2011. This decline is attributed to a combination of the 2009 recession and the growing energy efficiency programs. As noted last year, the year 2009 was the first time since 1954 (which is the extent of our records) that ComEd experienced a decline in the average number of residential customers from the prior year. In addition, the implementation of energy efficiency programs has worked to reduce residential usage. Looking forward, the growth is forecasted to be slightly positive at 0.3% per year from 2011 to 2017 as the economy picks up steam. However, residential usage does not exceed the usage levels of 2008 in the Forecast period. In a similar manner, Small C&I usage declined 0.4% per year from 2005 to 2011. Small C&I is ComEd’s revenue class related to commercial and industrial customers below 1,000 kW in size. Again, a significant decline in Small C&I usage was experienced in 2009 because of the recession. The forecasted growth rate from 2011 to 2017 is also a small 0.5% per year. Small C&I usage does not exceed 2007 levels during the Forecast period.

2. Impact of Demand Side and Energy Efficiency Initiatives

The PUA sets out annual targets for the implementation of cost-effective demand side and energy efficiency measures. The most recent, ICC-approved energy efficiency and demand response plan covered the planning years (“Planning Year”)⁹ 2011-2013 (“2011-2013 EE/DR Plan”).¹⁰ ComEd believes these statutory targets are achievable and plans to meet them in Planning Year 2012. For Planning Year 2013, ComEd agreed to an overall portfolio target of 1.0% pursuant to a settlement agreement with intervening parties. This target is lower than the 1.4% statutory target, and reflects the impacts of spending screen limitations imposed by the PUA.¹¹

The demand-side and energy efficiency plans for subsequent years have not yet been developed by ComEd or approved by the ICC. While Planning Year targets have not been established for Planning Years 2014-2017, it is expected that spending screen limits will similarly affect the total amounts of energy efficiency that can be achieved as the screens limited the amount for Planning Year 2013.

a. Impact of demand response programs, current and projected

(i) Background

ComEd is a strong supporter of the use of demand response to actively manage peak demands. Use of demand response resources grew in the mid to late 1990s, and ComEd has maintained a large portfolio of demand response resources, with participation from residential, commercial, and industrial customers. ComEd is leader in the development and management of demand response resources, and will increase participation in appropriate programs to meet the requirements of the PUA.

The 2012 portfolio of ComEd programs includes the following:

- **Direct Load Control (“DLC”):** ComEd’s residential central air conditioning cycling program is a DLC program with over 73,000 customers with a load reduction potential of 112 MW (ComEd Rider AC).
- **Voluntary Load Reduction (“VLR”) Program:** VLR is an energy-based demand response program, providing compensation based on the value of energy as determined by the real-time hourly market run by PJM. This program also provides for transmission and distribution (“T&D”) compensation, based on the local conditions of the T&D network. This portion of the portfolio has roughly 1,225 MW of potential load reduction (ComEd Rider VLR).

⁹ A Planning Year runs from June 1 of one year through May 31 of the next year.

¹⁰ See Order of December 21, 2010 in Docket No. 10-0570.

¹¹ Order, p. 18.

- **Capacity-based Load Response (Rider CLR) – Suspended June 2012:** As a result of PJM terminating the Interruptible Load for Reliability (ILR) program, which is the basis of ComEd’s Capacity-based Load Response (CLR) Program, ComEd will not be offering the Capacity-based Load Response Program to its business customers during the 2012/13 Delivery Year which begins June 1, 2012 and extends through May 31, 2013.
- **Residential Real-Time Pricing (RRTP) Program:** All of ComEd’s residential customers have an option to elect an hourly, wholesale market-based rate. The program uses ComEd’s Rate BESH to determine the monthly electricity bills for each RRTP participant. This program has roughly 5 MW of price response potential.

(ii) Legislative Requirement

Section 8-103(c) of the PUA establishes a goal to implement demand response measures, providing that:

(c) Electric utilities shall implement cost-effective demand response measures to reduce peak demand by 0.1% over the prior year for eligible retail customers, as defined in Section 16-111.5 of this Act, and for customers that elect hourly service from the utility pursuant to Section 16-107 of this Act, provided those customers have not been declared competitive. This requirement commences June 1, 2008 and continues for 10 years.

Section 1-10 of the Illinois Power Agency Act defines demand response as “measures that decrease peak demand or shifts demand from peak to off-peak periods.”

Table II-8 shows the estimated annual MWs of demand response measures that will need to be implemented over the Five-year Forecast period to meet the goals set forth in the PUA:

**Table II-8
Estimated Annual Level of Demand Response Measures**

Planning Year	Peak Load at Meter (Prior Year) (MW)	Annual Goal (0.1%) (MW)	Cumulative Goal (MW)
2012	8,795	10.7	54.0
2013	3,193	10.8	64.8
2014	2,834	2.8	67.6
2015	2,675	2.7	70.3
2016	2,603	2.6	72.9
2017	2,563	2.6	75.5

The Planning Year goals in 2012 and 2013 are 10.7 MW and 10.8 MW, respectively, and are from ComEd's 2011 – 2013 EE/DR Plan (page 8). In subsequent years, it is assumed ComEd will meet the statutory goals.

(iii) Implementation of Demand Response Measures

In the 2011-2013 EE/DR Plan, ComEd demonstrated that the demand response targets mandated by the PUA are satisfied by the demand reductions achieved from the implementation of energy efficiency measures. As such, no additional demand response acquisition is provided in that plan. Existing demand response participant levels from the first three-year plan will continue to be funded. Further details are provided in the 2011-2013 EE/DR Plan.¹²

(iv) Impact of Demand Response Programs

Demand response programs do not impact ComEd's load forecasts. Load forecasts are made on a weather normalized, unrestricted basis. Since demand response measures are called on days when the temperature is hotter than "normal", the avoided capacity and energy associated with these resources is incremental to the weather normal forecast, and thus is not factored into the load forecasts. In fact, when developing forecasts, any impact on energy usage from actually implementing a demand response measure in a prior year is added back into that prior year's usage data and then weather normalized before being used to assist in the forecasting process. This assures that the forecast represents a complete picture of the unrestricted demands on the system.

b. Impact of Energy Efficiency Programs

The PUA has a number of provisions regarding various types of energy efficiency programs. This section discusses the impact of each on these programs on the Forecast.

(i) Section 8-103 Energy Efficiency Measures

Section 8-103 of the PUA requires ComEd to implement cost-effective energy efficiency measures beginning June 1st, 2008. This provision provides annual kWh targets based on a projection of the upcoming years' energy usage for all delivery service customers. Additionally, there is a spending cap that limits the amount of expenditures on energy efficiency measures in any year.

¹² See p. 8.

(A) kWh Targets

The kWh target for energy efficiency is based on a projection of the amount of energy to be delivered by ComEd to all of its delivery service customers in the upcoming Planning Year. This percentage increases annually through the year 2015, subject to specified rate impact criteria. The table below shows the target percentages.

**Table II-9
Target Incremental Percentages to Meet Energy Efficiency Goals**

Year	Annual Percent Reduction in Energy Delivered
2008	0.2%
2009	0.4%
2010	0.6%
2011	0.8%
2012	1.0%
2013	1.4%
2014	1.8%
2015 and each year thereafter	2.0%

(B) Projected Overall Goals

The annual energy efficiency goals were determined based on the kWh targets and the rate impact criteria. As noted above, ComEd’s 2011-2013 EE/DR Plan was approved in late 2010. For 2013, the ICC approved an agreed upon 1% reduction instead of the statutory target of 1.4% due to the impacts of the spending screen limitations in the PUA.¹³ There is as of yet no ICC-approved plan for Planning Years 2014 – 2016. However, for the purposes of this Forecast ComEd assumes that the spending screen will similarly limit the annual percent reduction to approximately 1%. Also, for purposes of this Forecast only,¹⁴ the allocation of the energy (kWh) targets to the various customer classes (as shown in Table II-7) was based on several years of historical data and judgment.

The above percentages represent the incremental goal to be achieved by the end of each Planning Year for all delivery services customers. Since the various energy efficiency measures will be implemented and phased in over the course of each Planning Year and since Eligible Retail Customers are only a subset of delivery services customers, the actual amount of

¹³ See Order of December 21, 2010 in Docket No. 10-0570, p. 18.

¹⁴ The PUA does not prescribe how the kWh targets are to be apportioned among the customer classes, and the energy efficiency plan did not set goals on a customer class basis.

GWh for Eligible Retail Customers that is impacted in each Planning Year will be somewhat less (as shown in Table II-10, below).

(C) Impact on Forecasts

Energy efficiency measures directly impact the amount of energy used by customers throughout the year. As such, they will directly impact the forecasts of future load. The following chart depicts the cumulative impacts of these measures on the Forecast:

**Table II-10
Cumulative Impacts of EE on Load Forecast by Customer Type¹⁵**

Planning Year	Residential Allocation (GWh)	Watt-Hour Allocation (GWh)	0-100 kW Allocation (GWh)
2013	374	2	46
2014	426	3	54
2015	475	4	62
2016	520	4	67
2017	572	4	70

(ii) Energy Efficiency Building Codes and Appliance Standards

Section 16-111.5B(a)(1) of the PUA requires procurement plans to include a discussion of the impact of energy efficiency building codes and appliance standards on the Forecast. This section describes how building codes and appliance standards are considered in and impact the Forecast.

The load forecasting models and process described herein takes into account all current and projected building codes and appliance standards. This is accomplished by making energy efficiency adjustments to the forecast beyond what is entailed in the mandated energy efficiency adjustments described herein. Also, the econometric models use actual historical usage data and that data, in turn, reflects the changes to these standards over time.

To demonstrate the impact of these codes and standards on the ComEd Forecast, ComEd conducted an analysis using its Statistical Adjusted End-Use (SAE) models and performing a simulation using different energy efficiency assumptions. The SAE models are econometric models that along with inputs related to economics and weather also include attributes related to end-use applications. For example, there are assumptions pertaining to dishwasher appliance energy efficiency standards and saturation that feed into this model based on the U.S. Energy Information Agency regional data and prior ComEd end-use surveys.

¹⁵ These amounts are cumulative from 2008, when the statutory program began.

Since future energy efficiency standards are already reflected in the Forecast, ComEd conducted the simulation by projected energy under 2007 energy efficiency assumptions and comparing the results to projections using current energy efficiency assumptions. Simply put, ComEd uses the current SAE model, but input energy efficiency standards reflecting 2007 assumptions for the following end-uses:

<u>Residential Customers</u>	<u>Small C&I Customers</u>
1 Heating	1 Heating
2 Cooling	2 Cooling
3 Electric water-heating	3 Ventilation
4 Electric cooking	4 Electric Water Heating
5 First refrigerator	5 Refrigeration
6 Second refrigerator	6 Cooking
7 Freezer	7 Office
8 Dishwasher	8 Miscellaneous
9 Clothes Washer	
10 Electric Dryer	
11 Television	
12 Miscellaneous	

The results of this simulation are shown in Appendix D. The results show that the projected energy usage for 2013 – 2017 in the residential class based on current appliance standards is 0.1% lower than the projected energy usage using 2007 appliance standards. In other words, the changes in appliance standards are not creating a large change in residential usage during the forecast period. For Small C&I the equivalent percent change was also 0.1%.

The results for the building codes similarly show a small reduction of 0.03% for residential. A similar simulation is not possible for Small C&I. Nonetheless, the change to the overall Forecast from the building codes is likely very little given that the below 100 kW usage is approximately 17% of the quantities being procured in the forecast time period.

(iii) Section 16-111.5B Energy Efficiency Procurement

Section 16-111.5B of the PUA requires procurement plans to include an assessment of opportunities to expand the section 8-103 energy efficiency measures or to implement additional cost-effective energy efficiency measures. This assessment is to include a wide range of information for consideration by the IPA and the ICC. This section provides that information.

One issue that has arisen in the implementation of this program is determining to whom these programs may be offered. The PUA provides that the programs would be offered to Eligible Retail Customers. By definition, this group is limited to customers who actually take fixed price bundled service from ComEd. However, the PUA does not specify the period of time that should be considered for determining which customers qualify as Eligible Retail Customers.

This is important because each of these programs is offered over a relatively long period of time and the cost and energy savings analyses consider a multi-year period. Moreover, it is simply not practical, or even possible, to limit the offering of some of the programs to certain customers. Some programs, such as the light bulb program, are mass marketed to all customers. Given the nature of the programs and the multi-year period required to offer and analyze these programs, it is more appropriate to consider the group of customers who qualify over a longer period of time. Over such a reasonable period, all residential and Small C&I would be eligible to take energy from ComEd under fixed price bundled service. Therefore, ComEd believes this is the appropriate group of customers to whom these programs should be offered.¹⁶ However, in recognition of the uncertainty surrounding this issue, ComEd is providing information assuming both that the programs are offered to the broader set of Eligible Retail Customers or to only those customers who are currently taking fixed price bundled service from ComEd.

(A) Energy Efficiency Potential Study

Section 16-111.5B(a)(3)(A) requires the inclusion of a comprehensive energy efficiency potential study for the utility's service territory that was completed within the past 3 years. Such a study is attached to this Forecast as Appendix C-1. The study identifies technical, economic and achievable energy efficiency potential. Technical potential assumes that all energy efficiency measures are implemented by all of ComEd's customers, irrespective of cost or other barriers. Economic potential screens the technical potential to include only those measures that pass the statutory Total Resource Cost ("TRC") test. Achievable potential further filters these measures to reflect a variety of non-cost, or market barriers, that cause customers to not implement energy-saving measures.

This study was completed in 2009 and as such used the higher avoided energy costs in effect at that time to determine economic potential. This may have the effect of overstating economic potential when considered against the backdrop of current energy supply prices.

(B) Identification of New or Expanded Measures

Section 16-111.5B(a)(3)(C)¹⁷ requires the listing of new or expanded cost-effective energy efficiency programs or measures that could be offered to eligible retail customers. Such a listing is provided in Appendix C-2 - Energy Efficiency Analysis Summary. The programs or vendor names are listed in column A of Appendix C-2, with a short description of the program modification or concept in column J.

(C) Cost Analysis

Section 16-111.5B(a)(3)(D) requires an analysis showing that the new or expanded cost-effective energy efficiency programs or measures would lead to a reduction in the overall cost of electric service. Such an analysis is included in Appendix C-2. "Cost-effective", as used in

¹⁶ SB3811, which passed both houses of the Illinois General Assembly on May 30, 2012, amends the PUA to make this clear.

¹⁷ Section 16-111.5B(a)(3)(B) does not require the inclusion of any additional information until 2014.

Section 16-111.5B, has the same meaning as set forth in Section 8-103(a) of the PUA.¹⁸ As defined in that section, “cost-effective” is determined using the Total Resource Cost (“TRC”) test, with a TRC result greater than 1.0 being considered cost-effective. In addition, ComEd conducted an analysis of each program to show that the programs would each lead to a reduction in the overall cost of electric service. ComEd used the Utility Cost Test (“UCT”), as defined by the California Standard Practice Manual¹⁹. The UCT compares the avoided costs realized by implementing energy efficient measures to the utility’s costs to acquire those measures. Since the language in 16-111.5B(a)(3)(D) does not address the time value of money, ComEd has adopted a position preferred by the Stakeholder Advisory Group which adopts a discount rate of zero for this test only. The TRC and UCT results are listed in columns G and H of Appendix C-2.

In addition, Column I shows the Cost to Conserve Energy (“CCE”), which is expressed in dollars per lifetime kWh saved. The CCE allocates the total cost of each program to the lifetime energy savings associated with that program, and it provides a useful comparison between the cost of saving a kWh of energy to supply alternatives.

(D) Comparison to Cost of Comparable Supply

Section 16-111.5B(a)(3)(E) requires an analysis of how the cost of procuring additional energy efficiency measures compares over the life of the measures to the cost of comparable supply. This analysis is provided in Appendix C-2. Column I in that appendix shows the Cost to Conserve Energy (“CCE”), which is expressed in dollars per lifetime kWh saved. The CCE is determined by dividing the total cost of each program by the lifetime energy savings associated with that program. It provides a useful comparison between the cost of saving a kWh of energy to supply alternatives.

(E) Energy Savings Goal²⁰

Section 16-111.5B(a)(3)(F) requires the determination of energy savings goal for each of the measure to be implemented. Appendix C-3 shows the amount of energy that each of the new or expanded cost-effective energy efficiency programs or measure is expected to save each month over the five-year Forecast period.²¹ Appendix C-2, Columns D and E show the annualized MWh savings at the busbar and the meter, respectively, for each of the measures.

¹⁸ See section 16-111.5B(b)

¹⁹ http://www.calmac.org/events/SPM_9_20_02.pdf; Referred to as the Program Administrator Cost (“PAC”) test in California

²⁰ SB3811, which has passed both houses and is sitting on the Governor’s desk, revises Section 16-111.5B(a)(3) to add subsection (G) which requires an estimated amount that each new measure may reduce the need to procure supply. That information is also provided in Appendix C-3.

²¹ Pages 1 and 2 of Appendix C-3 show the energy savings goal associated with the usage of all residential and Small C&I customers who are eligible to receive fixed-price bundled service from ComEd. Pages 3 and 4 show the energy savings goal associated with the usage of the actual Eligible Retail Customers.