COMMONWEALTH EDISON COMPANY

Load Forecast for Five-Year Planning Period
June 2012 – May 2017

July 15, 2011

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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 2012 through May 2017. 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 beginning in June 2012.[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, 2012. 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, 2012 – May 31, 2017)

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. CST 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"). 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 2011 multi-year historical analysis of hourly load is very similar to the approach used in the 2010 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 2011 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 2010. The profiles are based on statistically significant samples from ComEd's residential and small commercial and industrial ("C&I") customer population. 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 small C&I 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 2008 to December 2010.

Table II-1

Load Forecast Table (Historical Detail 2008-2010)

ComEd Historical Actual Sales

Historical Energy Sales in MWh for Eligible Retail Customers (Line Loss Adjusted)

		Residential Load		Watthour		Small Load (0 to 100kW)		Street Lighting Load		Total Load (MWh)	
Year	Month	On-Peak	Off-Peak	On-Peak	Off-Peak	On-Peak	Off-Peak	On-Peak	Off-Peak	On-Peak	Off-Peak
2008	1	1,411,279	1,483,772	29,148	23,056	466,843	361,907	6,297	10,557	1,913,567	1,879,292
2008	2	1,318,731	1,342,790	26,989	21,401	443,650	337,946	5,615	9,295	1,794,986	1,711,432
2008	3	1,092,187	1,305,371	23,682	21,257	409,987	350,785	4,030	6,004	1,529,885	1,683,417
2008	4	1,011,328	1,006,047	21,714	16,003	427,661	300,578	4,163	8,288	1,464,865	1,330,916
2008	5	886,256	1,047,507	17,377	14,660	392,652	317,448	2,424	3,392	1,298,709	1,383,007
2008	6	1,319,145	1,400,770	21,381	16,263	481,461	364,433	692	7,997	1,822,679	1,789,463
2008	7	1,832,155	1,649,107	24,545	16,852	553,938	391,569	392	2,338	2,411,030	2,059,866
2008	8	1,489,004	1,620,019	23,926	18,615	507,114	406,990	890	4,645	2,020,934	2,050,269
2008	9	1,088,190	1,166,101	19,823	15,684	457,734	341,009	1,268	4,339	1,567,015	1,527,133
2008	10	1,081,333	1,003,909	23,739	16,888	426,681	295,683	1,773	4,603	1,533,526	1,321,083
2008	11	1,021,535	1,335,393	26,766	25,996	381,408	366,260	1,905	4,363	1,431,614	1,732,012
2008	12	1,504,635	1,541,136	31,715	26,073	469,006	382,791	1,848	3,530	2,007,204	1,953,531
Totals		**15,055,778**	**15,901,921**	**290,805**	**232,748**	**5,418,134**	**4,217,399**	**31,296**	**69,352**	**20,796,014**	**20,421,420**
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**

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 2008-2010)

ComEd Historical Actual Sales
Historical Energy Sales for Eligible Retail Customers
(Line Loss Adjusted)

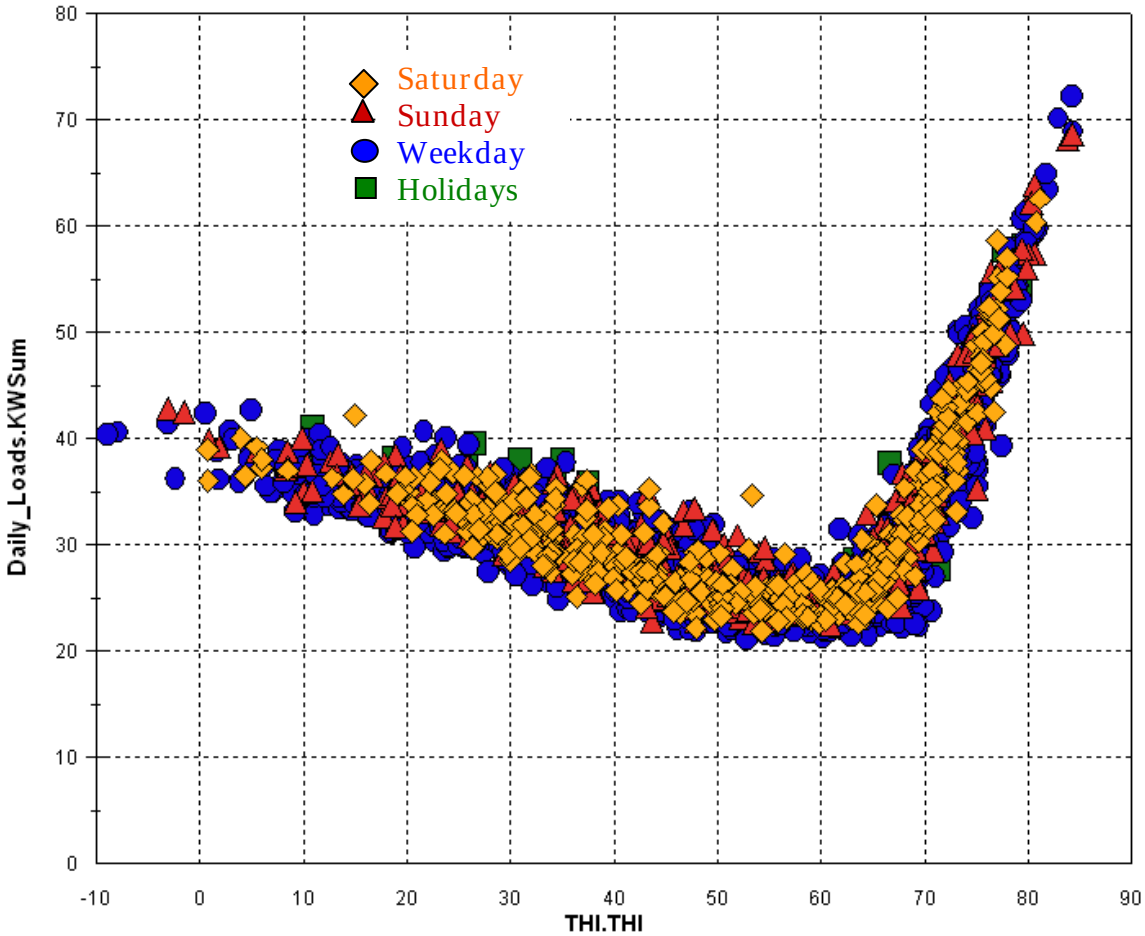
Year	Month	Total Load (MWh)		Average Load (MW)	
		On-Peak	Off-Peak	On-Peak	Off-Peak
2008	1	1,913,567	1,879,292	5,436	4,794
2008	2	1,794,986	1,711,432	5,342	4,754
2008	3	1,529,885	1,683,417	4,553	4,126
2008	4	1,464,865	1,330,916	4,162	3,617
2008	5	1,298,709	1,383,007	3,865	3,390
2008	6	1,822,679	1,789,463	5,425	4,660
2008	7	2,411,030	2,059,866	6,850	5,255
2008	8	2,020,934	2,050,269	6,015	5,025
2008	9	1,567,015	1,527,133	4,664	3,977
2008	10	1,533,526	1,321,083	4,167	3,514
2008	11	1,431,614	1,732,012	4,709	4,163
2008	12	2,007,204	1,953,531	5,702	4,983
Totals		**20,796,014**	**20,421,420**		
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**		

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 sales 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 sales 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 sales 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.

Chart II-1
Single Family Non-Space Heating Daily Usage vs. Temperature/Humidity



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 2010 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.

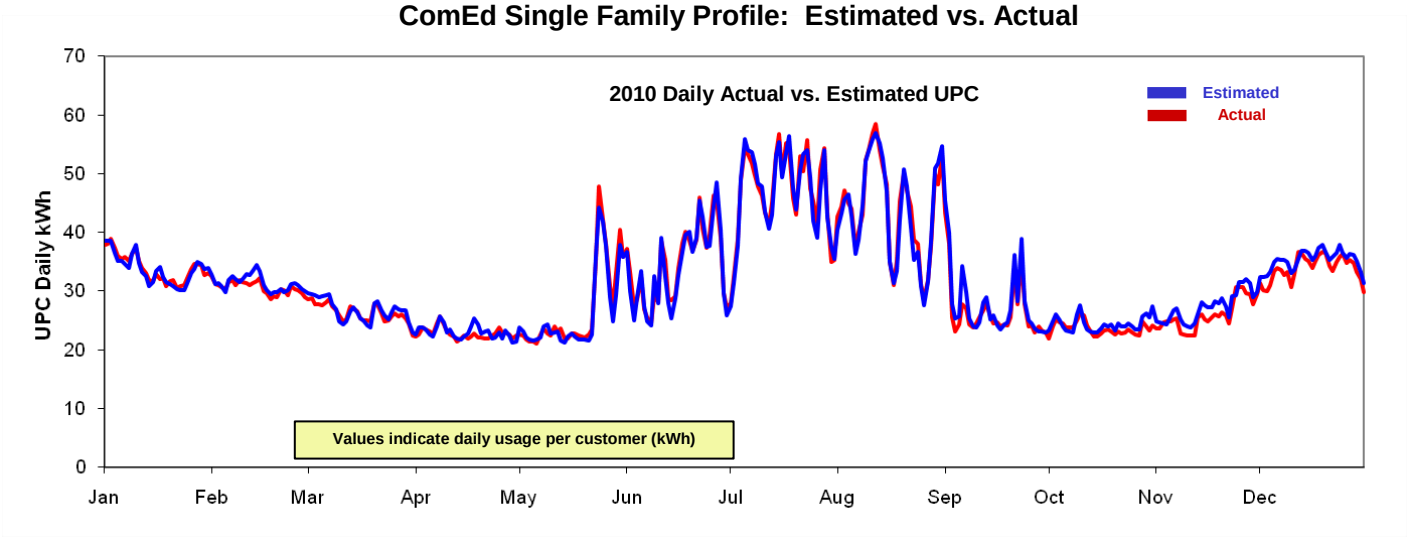
The scatter plot is very useful in understanding the relationship between customer usage and weather. If there were no relationship between usage and weather, then the graph would not display a clear pattern. However, it is apparent that there is a clear pattern. The right side of the graph at the high 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.

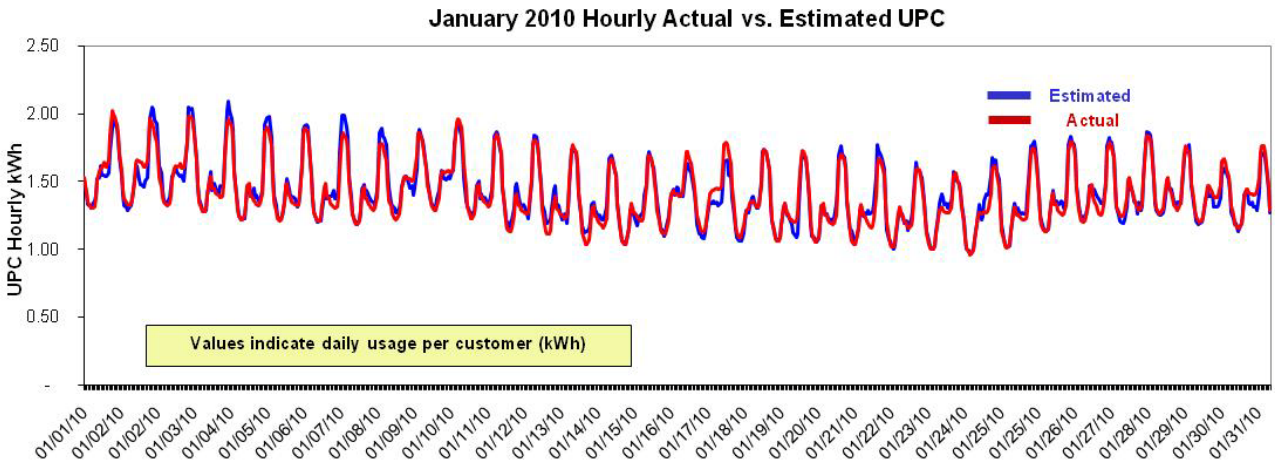
Hourly models were developed to account for the strong weather relationship shown in the graph and to account for numerous other factors that influence residential usage. The models explicitly account for the differing effects of energy use at various temperatures. Variables are included to allow for 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.

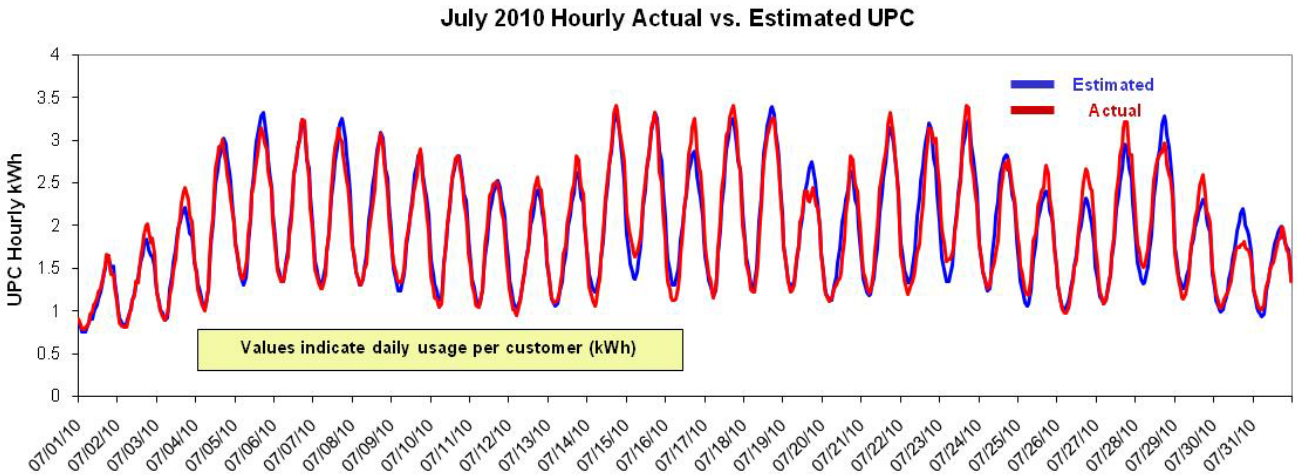
One way to visualize the model's performance is to look at plots of actual and estimated[2] values for the historical estimation period. The following chart demonstrates the performance of the model over the one-year period from January 2010 through December 2010 at the daily level and zooms in to show the hourly performance in January and July of 2010.

[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







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 alternative providers ("RES"). That issue is considered in the following discussion, which reviews retail development in ComEd's service territory, the entry of alternative suppliers, 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

The very robust non-residential retail market in northern Illinois has now been joined by meaningful activity pertaining to residential RES service. This increase in residential activity has been demonstrated in two ways: (i) RES directly enrolling residential customers and (ii) interest in municipal aggregation. Regarding the first activity, as of the middle of June 2011 ComEd had received approximately 74,000 residential RES enrollments in 2011. This represents approximately two percent of ComEd's total residential customers. Of more importance, there were under 2,000 residential RES customers as of the March 2011 ICC Switching Report. Thus, the number of residential RES customers has gone from essentially zero to two percent of total residential customer in a period of just over three months. RES have been heavily marketing to residential customers in 2011 via various outlets ranging from individual mailings to radio advertisements. In addition, there has been numerous news reports related to RES service for residential customers.

Regarding municipal aggregation, 19 communities have approved referendums authorizing the adoption of opt-out aggregation programs in conformance with the IPA Act[3]. As in the case of direct RES enrollment, almost all of these referendums were recent developments: all but one referendum occurred in April 2011[4]. The 19 communities represent approximately 90,000 residential customers. It is still uncertain as to what number of these municipalities will opt for municipal aggregation as the referendums were not binding and each community is in various stages of evaluating this option. Nonetheless, the number of approved referendum demonstrates a meaningful interest in municipal aggregation. There is clear and unmistakable evidence of growing residential RES service in northern Illinois.

[3] 20 ILCS 3855/1-92.

[4] The municipal aggregation provision of the IPA Act has only been in effect since January 1, 2010.

Not to be forgotten is the non-residential retail market which continues to experience customers opting for RES and Hourly service. As noted in the 2010 forecast[5], approximately 85% of ComEd's non-residential usage was taking either RES or Hourly service as of June 2010. That figure has increased to 88% as of the May 2011 ICC switching report. The retail markets for the smaller non-residential customers continue to grow. As of May 2011, approximately 42% of the 0 to 100 kW delivery service class usage was either RES or Hourly service. This compares to 34% in June 2010. The non-residential retail markets continue to grow, but at a slower pace than the residential market given its much more mature status.

In summary, retail choice is not only alive and well within the ComEd service territory, but evolving into new markets. A healthy retail market is anticipated for the forecast period.

(ii) RES Development

The success of retail market competition is the result of the concerted efforts of ComEd, numerous RESs and policy makers. A sign of that success is the continued 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
Number of Active RESs[6]	22	26	31
Number of RESs approved to serve Residential customers	6	9	16
Number of firms in the RES certification process as of May 2011	N.A.	N.A.	5

From January 2009 to May 2011 there has been a 40% increase in the number of active RES in the ComEd service territory. Further, the 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 increased by over 150% from January 2009 to May 2011. This growth in total RES along with more being eligible to serve residential customers is inherently a positive sign for the retail market as one would not expect new retailers to be entering a stagnant market.

[5] Page 8.

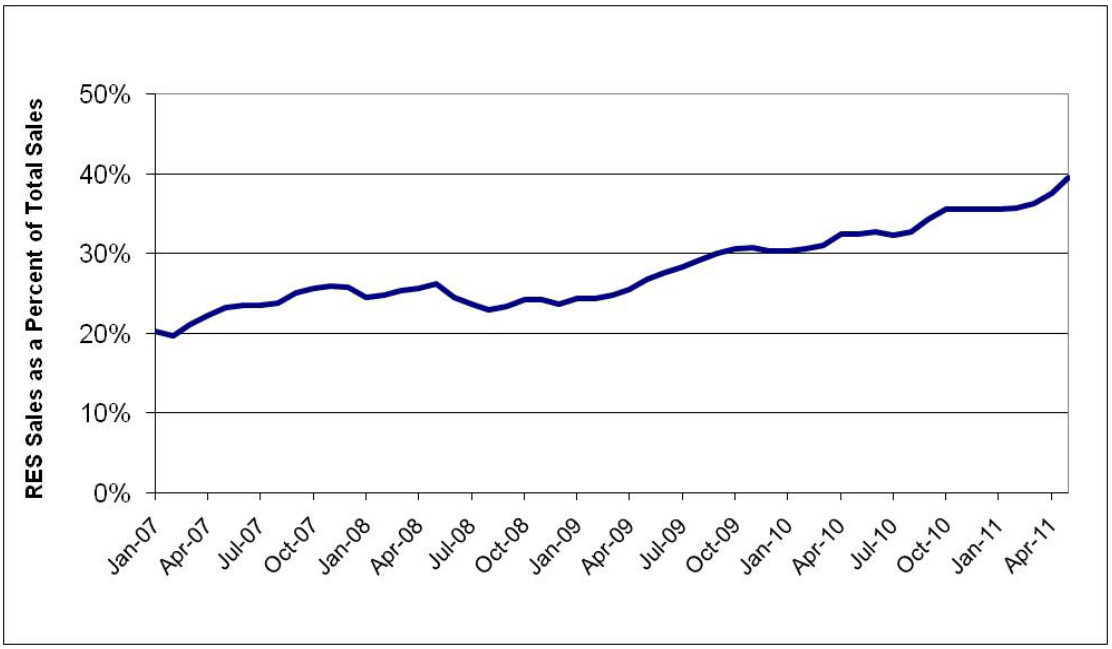
[6] An "Active RES" is defined as an ICC-approved RES that has passed ComEd's certification process.

(iii) Future Trends

The future trends are very positive for the retail markets. First, RES sales to the 0 to 100 kW customers have been gradually growing in the over the past two years. Chart II-3 contains monthly RES percentage of sales from January 2007 through May 2011. RES sales were 25.5% of 0 to 100 kW usage in April 2009 and increased by 14 percentage points to 39.5% (May 2011) over the following two years.

Second, the retail markets were further enhanced by the approval of Rider PORCB – Purchase of Receivables with Consolidated Billing ("Rider PORCB") in late December 2010. This tariff enhanced the ability of RES to obtain below 100 kW customers (including residential customers) in a cost effective manner.

Chart II-3



Third, the potential for municipal aggregation has taken root in the past several months. As of May 2011, there were approximately 19 communities representing approximately 90,000 residential customers that had passed municipal opt-out aggregation referendums. While the last two developments are relatively new events the effect of these two developments are anticipated to be significant going forward.

(iv) Forecasted Retail Sales

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

Table II-4
Percentage of Blended Service Sales

Month	Residential	Watthour	0-100 kW
Jun-08	99.9%	98.0%	75.2%
May-09	99.8%	98.0%	72.1%
Jun-10	99.9%	95.0%	65.8%
May-11	98.7%	92.9%	58.3%
Jun-12	87.6%	85.9%	49.7%
Jun-13	68.9%	62.5%	37.9%
Jun-14	67.1%	60.1%	37.7%
Jun-15	65.5%	60.3%	37.8%
Jun-16	64.8%	60.5%	37.8%
May-17	65.0%	60.6%	37.9%

The main drivers of this forecast are:

1. Residential RES service has clearly become evident with the implementation of Rider PORCB. Various RES are actively marketing to residential customers along with smaller non-residential customers. In Table II-5 (below) are enrollment snapshots for the past few months. Residential RES service is expected to continue to grow over time as RES continue their marketing efforts. The pace of residential RES enrollments is expected to continue at approximately 700 enrollments per calendar day for the remainder of the year. In analyzing the current residential enrollments, the majority of the residential customers opting for RES service have tended to be larger than average size customers. For example, the residential single-family non-space heating customers taking RES service (based on enrollments) had a 10% greater usage using May 2011 data than then system-wide single family customer. In addition, 73% of the residential RES enrollments are single-family customers vs. a system-wide percentage of 65% for single-family customers. Thus, there appears to be a tendency for those customers opting for RES service to do so because their usage is larger than the overall system average. On the surface this is logical as a larger absolute dollar savings makes this option worth their effort. The pace of residential RES enrollments is expected to slow in 2012 as there will be fewer above average sized customers that have yet to take RES service and the remaining time period

where the difference between the price for Blended Service and future market prices, i.e., "headroom," becomes shorter (see the following paragraph). As a result of these assumptions, it is expected that there will be approximately 290,000 residential RES customers by June 2012 (unrelated to municipal aggregation). This number of residential RES customers represents approximately 8.5% of all residential customers. It is also expected that residential RES service will continue to expand to a total of approximately 420,000 customers by June 2013 or approximately 12% of all residential customers. A note of caution is that it is very difficult to project the future pace of residential RES enrollment given that this activity only started in the past few months.

Table II-5
Residential Switching Statistics

Date	Total PORCB Enrollments	Residential PORCB Enrollments	Residential Enrollment Per Day
03/15/11	12,931	11,608	
03/28/11	20,595	18,845	557
04/11/11	29,620	27,226	599
04/25/11	31,335	28,912	120
05/04/11	35,756	32,887	442
05/20/11	46,113	42,567	605
06/01/11	60,292	55,591	1,085
06/10/11	66,596	60,922	592
06/17/11	80,182	73,707	1,826

2. The Blended Service supply cost will continue to reflect the pricing of long term agreements that were put into place when market prices were higher. These long term agreements expire in May 2013. The general assumption is for there to be sufficient headroom until these long term agreements expire. At that point, the headroom will be considerably reduced such that there will be much less of a difference between the price for Blended Service and future market prices. After May 2013, little headroom is expected to remain, which will significantly dampen further growth in RES service.

3. Municipal aggregation is expected to occur for the communities that have passed referendums, as well as to expand in 2012 to include additional communities. As previously noted there are 19 communities that have passed referendums related to municipal aggregation and are in various stages of evaluating this option. The forecast assumption is that these communities will opt for municipal aggregation

given the existing savings that is currently being offered by RES to residential customers. Further, it is assumed that 10% of the customers will opt-out of the municipal aggregation programs, based on insights from individuals with knowledge of municipal aggregation programs in other states. As increased media reports related to the implementation of municipal aggregation by these 19 communities occurs during 2011, additional communities will consider municipal aggregation in the spring of 2012 (i.e., the next opportunity for municipal referendums). It is assumed that the number of municipal aggregation communities that ultimately pass a municipal aggregation referendum in the spring of 2012 will be 60 municipalities. This is approximately triple the number of communities that passed a referendum in 2011. Also, the size of the 2012 municipal aggregation communities will increase (i.e., double in size) as most of the 2011 referendum-approved communities were smaller size communities. Municipal aggregation will also increase the number of below 100 kW non-residential customers opting for RES service as these smaller non-residential customers will likely participate in the municipal aggregation within each community.

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

1. The Blended Service portion of the 0 to 100 kW customer load is expected to decline from currently 58% to approximately 38% by June 2013. This reflects the on-going movement of these customers to RES service over the past couple of years coupled with the Rider PORCB and municipal aggregation dynamics. As noted in last year's report, many of the current Blended customers in this group are "watt-hour" like in size. After June 2013 there will be relatively less incentive for these remaining Blended customers to opt for RES service given the limited headroom and the small size of their electricity bill.

2. Watthour customers are similar in behavior to residential customers when viewed from a choice perspective and their participation in customer choice is expected to generally mimic the residential movement. However, there has been a larger movement to RES service for Watthour customers than for the residential customers. Currently, Blended Service represents approximately 93% of the total sales to Watthour customers and that percentage is expected to decrease to 62.5% by June 2013. Again, Rider PORCB and municipal aggregation is expected to bring about larger movements to RES service than in the past.

3. Residential RES service is expected to grow rapidly over time as a function of aggressive marketing to residential customers in 2011 and 2012. This movement to RES service is expected to be further enhanced by a meaningful increase in municipal aggregation in the spring of 2012. As a result, approximately 69% of the residential usage in June 2013 is expected to be taking RES service compared to 99% as of May 2011.

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.[7] ComEd currently has approximately 11,000 customers on RRTP and anticipates having approximately 12,500 RRTP customers by the end of 2011. The ICC is scheduled to review this program in 2011. Until the ICC completes its review of the program, ComEd will allow new customers to sign up for service but is discontinuing marketing and promoting the program. Given this uncertain state, it is assumed that approximately one thousand RRTP customers are added each year from 2012 to 2016. This increase of 5,000 RRTP customers in total over the five years, while large relative to the RRTP program, is small compared to the existing population of 3.4 million residential customers.

d. Growth Forecast by Customer Class

(i) Introduction

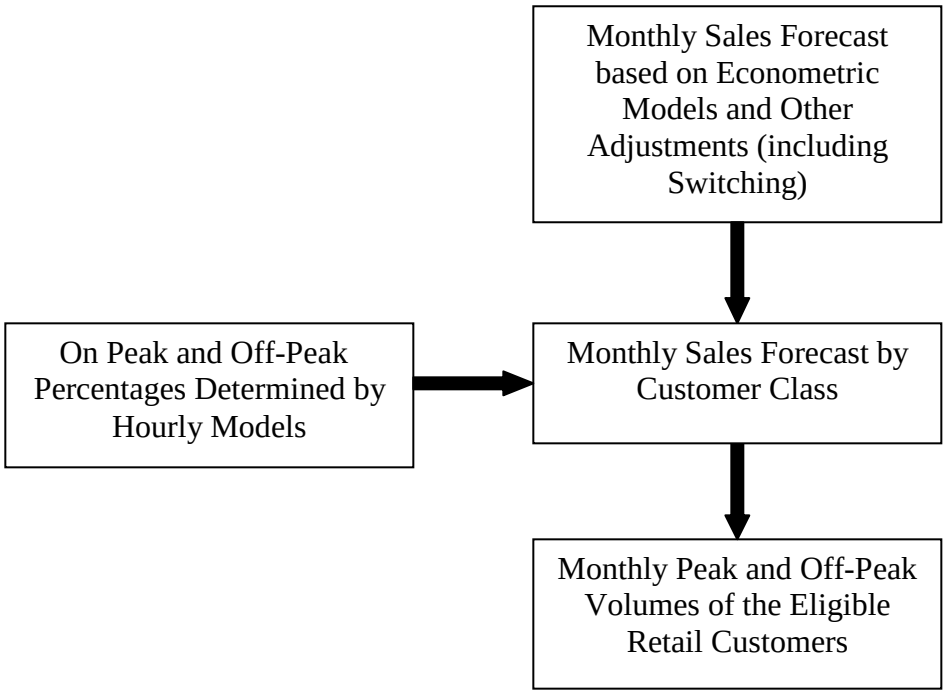
This section describes ComEd's growth forecast by customer class for the 5-year procurement planning period beginning on June 1, 2012. Section II(B)(1) discussed the hourly customer load profiles used by ComEd to develop models to present the historical load analysis required by the PUA and to predict 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 sales. 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.

[7] See ICC Order of December 20, 2006, in Docket No. 06-0617.

Chart II-5

ComEd Energy Sales Forecast Process

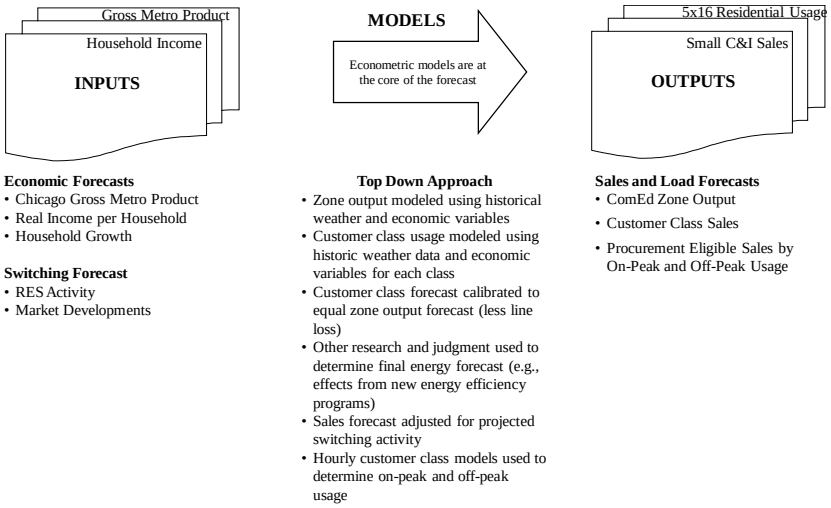


The forecasting process is model based subject to adjustments and judgment. A suite of econometric models is used to produce monthly sales forecasts for ComEd's revenue customer classes. The two major customer classes applicable to this Forecast are Residential and Small C&I. That monthly forecast is 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 sales are 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 sales for its service territory are based on a "top-down" approach. The top-down approach provides a forecast of total sales for the entire service territory and allocates the sales 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 (Feb11)

Economic Variables	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
Gross Metro Product (Billions)	$ 479	$ 474	$ 457	$ 463	$ 475	$ 488	$ 505	$ 524	$ 539	$ 552
Real Disposable Income (Millions)	$338,030	$341,143	$338,958	$339,627	$347,254	$348,084	$352,164	$362,173	$372,754	$384,073
# of Households (Thousands)	3,255	3,260	3,248	3,246	3,250	3,273	3,310	3,347	3,384	3,418
Real Income/HH	$103,836	$104,651	$104,365	$104,639	$106,833	$106,343	$106,396	$108,195	$110,164	$112,362
Total Employment (Thousands)	4,423	4,393	4,159	4,071	4,086	4,165	4,256	4,344	4,409	4,454
Non-Manufacturing	3,948	3,932	3,752	3,675	3,682	3,750	3,828	3,908	3,966	4,012
Manufacturing	475	461	407	396	404	415	428	436	443	442
Housing Starts	29,719	15,374	6,106	5,821	7,289	15,086	23,330	32,533	37,466	39,164
U.S. GDP	13,229	13,229	12,881	13,249	13,677	14,071	14,501	14,983	15,423	15,847
Growth Rate	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
Gross Metro Product	1.7%	(1.0%)	(3.6%)	1.4%	2.5%	2.8%	3.4%	3.7%	2.9%	2.3%
Real Disposable Income	1.8%	0.9%	(0.6%)	0.2%	2.2%	0.2%	1.2%	2.8%	2.9%	3.0%
# of Households	0.7%	0.1%	(0.4%)	(0.1%)	0.1%	0.7%	1.1%	1.1%	1.1%	1.0%
Real Income/HH	1.1%	0.8%	(0.3%)	0.3%	2.1%	(0.5%)	0.0%	1.7%	1.8%	2.0%
Total Employment	0.9%	(0.7%)	(5.3%)	(2.1%)	0.4%	1.9%	2.2%	2.1%	1.5%	1.0%
Non-Manufacturing	1.1%	(0.4%)	(4.6%)	(2.0%)	0.2%	1.9%	2.1%	2.1%	1.5%	1.1%
Manufacturing	(1.0%)	(3.0%)	(11.7%)	(2.7%)	2.0%	2.8%	3.1%	1.9%	1.5%	(0.1%)
Housing Starts	(33.3%)	(48.3%)	(60.3%)	(4.7%)	25.2%	107.0%	54.7%	39.4%	15.2%	4.5%
U.S. GDP	1.9%	0.0%	(2.6%)	2.9%	3.2%	2.9%	3.1%	3.3%	2.9%	2.7%

Source: Global Insight

All of the variables used in each of the models in the forecasting process are identified in Appendix A-4.[8]

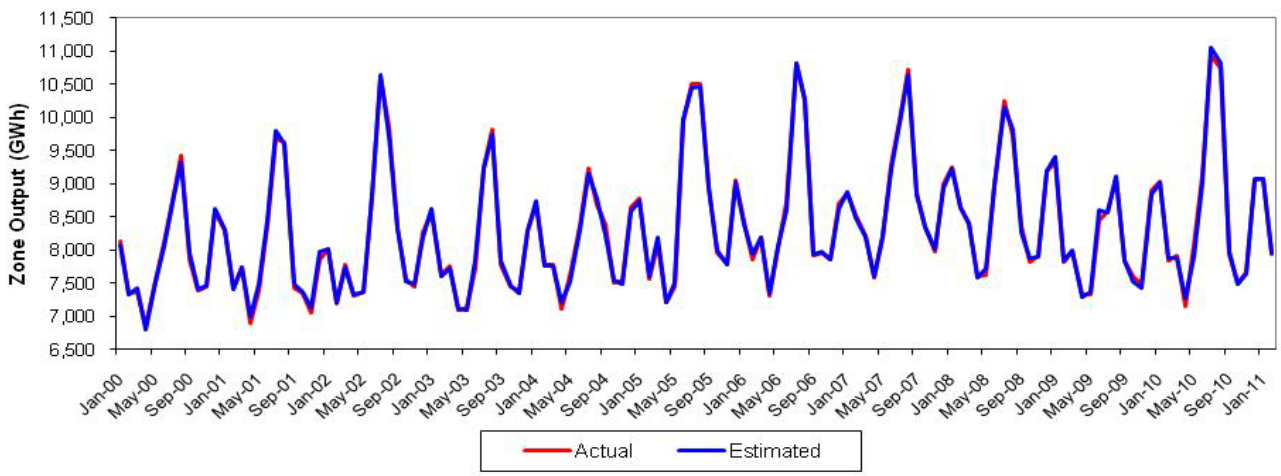
The remainder of this section will provide a brief description of the models, starting with the ComEd Monthly Zone energy usage model and proceeding to the three customer-level models for Monthly Residential bill-cycle energy usage, Monthly Small C&I bill-cycle energy usage and Monthly Street Lighting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

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

(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 estimates[9] from the model for each calendar month from January 2000 through February 2011.

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



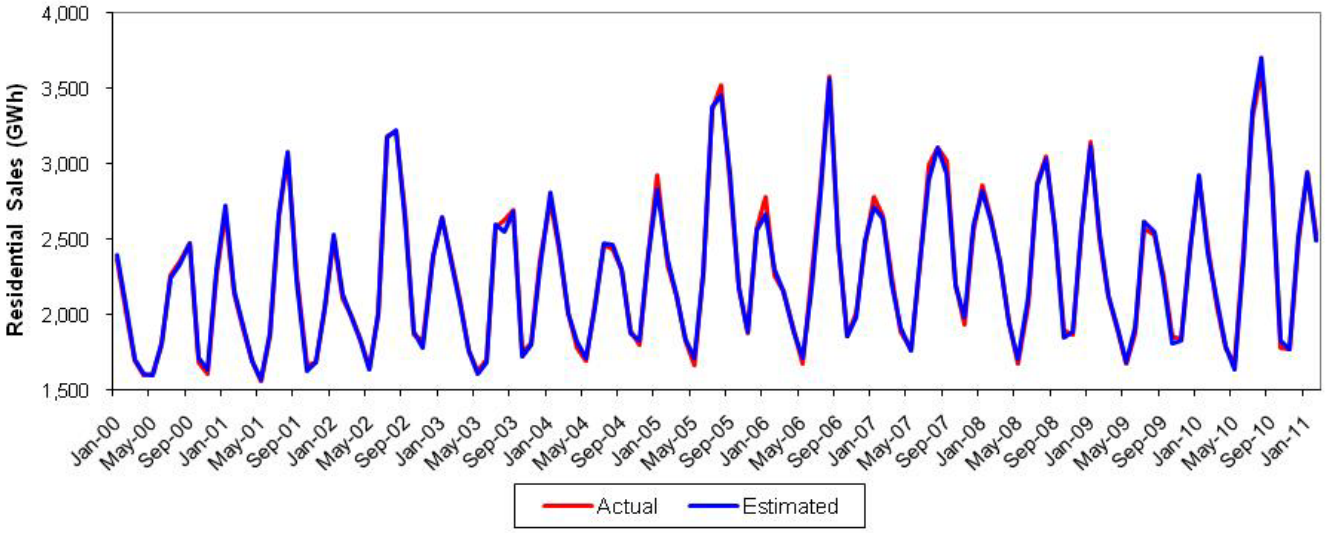
As with customer-level models discussed in Section II(B)(i)(a), the Monthly Zone model is highly useful in understanding energy usage. The graph line depicting the model's estimated usage (based on actual weather) and the line showing actual usage for the period are nearly identical.

(iii) ComEd Monthly Residential Model

The Monthly Residential model forecasts monthly residential bill-cycle sales 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 2000 to February 2011. The graph line depicting the model's estimated usage and the line with actual usage for the period are highly correlated

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

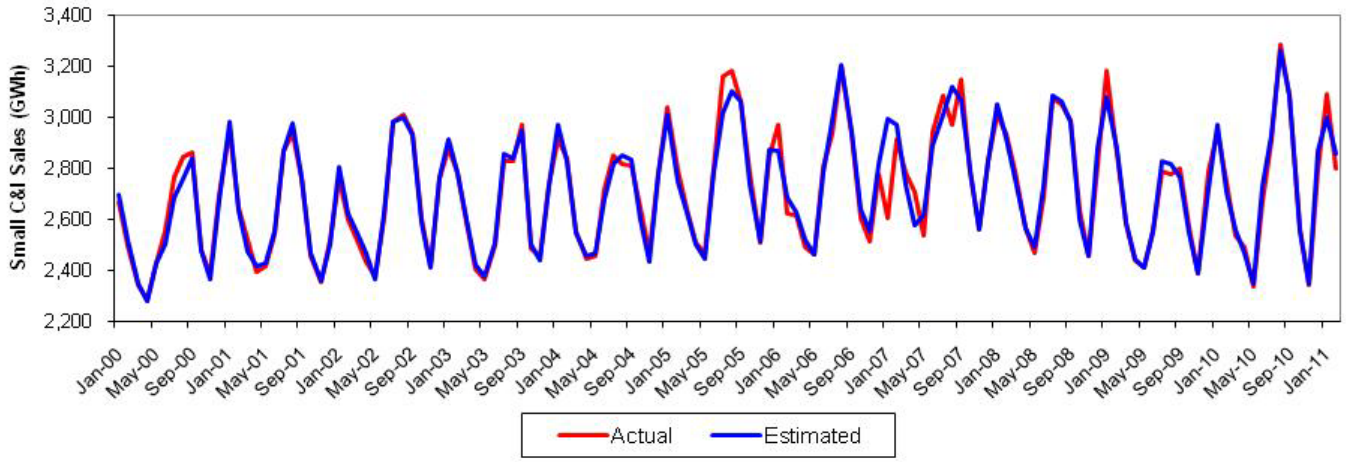
Chart II-8
ComEd Monthly Residential Model: Estimated vs. Actual



(iv) ComEd Monthly Small C&I Model

The Monthly Small C&I model forecasts monthly Small C&I bill-cycle sales. 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 sales related to street lighting. This final model estimates use per day in GWh.

(vi) Growth Forecast

ComEd's historical and forecasted weather-adjusted energy sales for the residential and small C&I customer classes are shown in Table II-7.

Table II-7

ComEd Weather Adjusted Annual Energy Sales				
	Residential		Small C&I	
Year	Sales (GWh)	Percent Growth	Sales (GWh)	Percent Growth
2002	26,162		31,425	
2003	27,079	3.5%	32,885	4.6%
2004	27,905	3.1%	32,733	(0.5%)
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	28,012	0.5%	32,349	(0.3%)
2012	28,260	0.9%	32,789	1.4%
2013	28,429	0.6%	32,979	0.6%
2014	28,707	1.0%	33,284	0.9%
2015	28,901	0.7%	33,485	0.6%
2016	29,221	1.1%	33,704	1.3%
2017	29,369	0.5%	33,674	0.6%

Residential sales growth averaged 1.5% per year from 2002 to 2008. The severe recession in 2009 contributed to a 1.1% decline in residential 2009 usage, after adjusting for the leap year in 2008. The forecasted annual residential growth rates in the years 2012 to 2017 are smaller than the growth rates from 2002 to 2008 because residential customer growth slowly increases over time as it recovers from the 2009 recession. 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, growth from the economic recovery is largely offset by the implementation of energy efficiency programs; in particular, those required by the PUA. The same is generally true of the Small C&I growth rates. The 2002 to 2008 average growth rate was 1.0% per year. A significant decline in Small C&I usage was experienced in 2009 because of the recession. Energy efficiency programs also influence future usage in this customer class.

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 2011-2013. ComEd believes these 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.

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 2014-2016, 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 current 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 906 MW of potential load reduction (ComEd Rider VLR).

- **Capacity-based Load Response (Rider CLR):** Businesses can participate on Rider CLR even if ComEd is not their energy provider. But Rider CLR is only for businesses that have firm methods for reducing their energy load. Participants willing to commit receive market-based compensation for energy they do not use. Non-performance penalties are assessed to participants not complying with requests for load reductions between June 1st and September 30th. With Rider CLR, participants can choose from two program plans: Firm Service Level (FSL) or Guaranteed Load

Drop (GLD). Under the FSL plan, load management is achieved by a customer reducing its load to a pre-determined level (the Firm Service Level) upon notification. Under the GLD plan, load management is achieved by a customer reducing its load by a pre-determined amount (the guaranteed load drop), upon notification. Rider CLR has 294 participates which provide approximately 308 MW of load reduction potential (ComEd Rider CLR).

- **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	8,324	10.7	54.0
2013	7,051	10.8	64.8
2014	7,022	7.0	71.8
2015	7,000	7.0	78.8
2016	7,054	7.1	85.9

The planning year goals in 2012 and 2013 are 10.7 MW and 10.8 MW, respectively, and are from ComEd's 2011 – 2013 Energy Efficiency and Demand Response Plan

dated October 1, 2010 (page 8). In subsequent years, it is assumed ComEd will meet the statutory goals.

(iii) Implementation of Demand Response Measures

As required by the PUA (220 ILCS 5/16-103), ComEd filed and energy efficiency and demand response plan for the three-year planning period June 2011 through May 2014 that was approved by the ICC on December 21, 2010. In that 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 the plan. Existing demand response participant levels from the first three-year plan will continue to be funded. Further details are provided in the plan that ComEd filed in that docket (ICC Docket 10-0570).

(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 requires ComEd to implement cost-effective energy efficiency measures beginning June 1st, 2008. The PUA 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.

(i) 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%

(ii) 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 most recent ICC-approved energy efficiency/demand response plan was approved in late 2010. For purposes of this Forecast, it is assumed that the rate impact criteria will not affect the achievement of the target for 2012. However, in 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. There is as of yet no ICC-approved plan for planning years 2014 – 2016. However, for the purposes of this Forecast we assume that the spending screen will similarly limit the annual percent reduction to approximately 1%. Also, for purposes of this Forecast only,[10] 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 GWh for Eligible Retail Customers that is impacted in each planning year will be somewhat less (as shown in Table II-10, below).

[10] 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.

(iii) 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 Type[11]

Planning Year	Residential Allocation (GWh)	Watt-Hour Allocation (GWh)	0-100 kW Allocation (GWh)
2012	662	7	87
2013	811	9	114
2014	957	11	149
2015	1,090	14	184
2016	1,236	16	219

C. Impact of Renewable Energy Resources

Section 1-75(c) of the IPA Act (20 ILCS 3855/1-75(c)) establishes the following goals and cost thresholds for cost effective renewable energy resources:

[11] These amounts are cumulative from 2008, when the statutory program began.

Table II-11
Renewable Energy Resource Requirements

Delivery Period	Minimum Percentage	Maximum Cost
2012-2013	7% of June 1, 2010 through May 31, 2011 Eligible Retail Customer load	No more than the greater of 2.015% of the amount paid per kilowatt hour by those customers during the year ending May 31, 2007 or the incremental amount per kilowatt hour paid for these resources in 2011.
2013-2014	8% of June 1, 2011 through May 31, 2012 Eligible Retail Customer load	No more than the greater of 2.015% of the amount paid per kilowatt hour by those customers during the year ending May 31, 2007 or the incremental amount per kilowatt hour paid for these resources in 2011.
2014-2015	9% of June 1, 2012 through May 31, 2013 Eligible Retail Customer load	No more than the greater of 2.015% of the amount paid per kilowatt hour by those customers during the year ending May 31, 2007 or the incremental amount per kilowatt hour paid for these resources in 2011.
2015-2016	10% of June 1, 2013 through May 31, 2014 Eligible Retail Customer load	No more than the greater of 2.015% of the amount paid per kilowatt hour by those customers during the year ending May 31, 2007 or the incremental amount per kilowatt hour paid for these resources in 2011.
2016-2017	11.5% of June 1, 2014 thought May 31, 2015 Eligible Retail Customer Load	No more than the greater of 2.015% of the amount paid per kilowatt hour by those customers during the year ending May 31, 2007 or the incremental amount per kilowatt hour paid for these resources in 2011.

Based on the above, Table II-11 shows the amount of renewable energy resources that need to be procured for planning year 2012 and the maximum amount that may be spent acquiring such resources:

Table II-12

2012-13 Delivery Period	Targeted REC Purchases (Mwh)	REC Budget ($)	Maximum ACP Rate ($/Mwh)
Per RPS Standard	2,597,398	$ 56,382,149	2.158
Less LT Rec Contract	1,261,725	$ 22,868,155	
Remaining RPS 2012-13	1,335,673	$ 33,513,994	2.158

Assumes entire long term REC budget was spent.

Since renewable energy resources do not affect demand or consumption, these targets will have no impact on the Forecast. The purchase of renewable energy resources could impact ComEd's supply side needs if physical renewable energy resources were procured. However, to date, ComEd has been approved by the ICC to procure only RECs or to enter into financial arrangements for the procurement of renewable energy resources. Neither of these procurement approaches affects ComEd's supply side needs for energy.

In accordance with Section 1-7(c)(5) of the IPA Act since June 1, 2010, ComEd has been collecting Alternative Compliance Payments ("ACP") from its Hourly Service Customers. Beginning in 2011, ComEd must include in its Forecast the amount of ACP that is collected in the prior year ending May 31. The IPA is then to increase it's spending for renewable energy resources for the next planning year by the amount collected. For the period June 1, 2010 through May 31, 2011 ComEd collected $1,499,113 in ACP.

3. Five-Year Monthly Load Forecast

Based on all of the factors discussed in this section, ComEd has developed the following forecast of projected energy sales to Eligible Retail Customers for the period from June 1, 2012 through May 31, 2013:

Table II-13

ComEd Procurement Period Load Forecast (Expected Load)
Projected Energy Sales and Average Demand For Eligible Retail Customers
(Weather Normal, Line Loss and DSM Adjusted)

Year	Month	Total Load (MWh)		Average Load (MW)	
		On-Peak	Off-Peak	On-Peak	Off-Peak
2012	6	1,568,749	1,451,317	4,669	3,779
2012	7	1,809,454	1,769,343	5,385	4,337
2012	8	1,688,548	1,389,427	4,588	3,695
2012	9	954,040	1,102,331	3,138	2,650
2012	10	999,814	859,223	2,717	2,285
2012	11	1,020,449	1,000,964	3,037	2,607
2012	12	1,129,692	1,310,674	3,530	3,091
2013	1	1,264,666	1,248,223	3,593	3,184
2013	2	1,058,886	1,041,153	3,309	2,958
2013	3	993,346	1,072,258	2,956	2,628
2013	4	930,291	841,665	2,643	2,287
2013	5	963,004	908,861	2,736	2,319
Totals		**14,380,939**	**13,995,439**		

The forecast set forth above shows ComEd's expected load for the 2012 planning year. The PUA requires that the forecast cover a 5-year planning period. The forecast for ComEd's expected load for the 5-year planning period is set forth in Appendix B-1. The PUA also requires ComEd to provide low-load and high-load scenarios. That information for the 2012

planning year is set forth in Tables II-14 and II-15. The low-load and high-load scenarios for the 5-year planning period are set forth in Appendix B-2 and Appendix B-3, respectively. In all of the forecasted sales tables, "line loss" refers only to distribution losses.

Table II-14

ComEd Procurement Period Load Forecast (Low Load)
Projected Energy Sales and Average Demand For Eligible Retail Customers
(Line Loss and DSM Adjusted)

Year	Month	Total Load (MWh)		Average Load (MW)	
		On-Peak	Off-Peak	On-Peak	Off-Peak
2012	6	1,316,905	1,242,582	3,919	3,236
2012	7	1,313,793	1,336,837	3,910	3,277
2012	8	1,127,088	912,222	3,063	2,426
2012	9	673,404	758,855	2,215	1,824
2012	10	677,831	564,901	1,842	1,502
2012	11	671,355	645,125	1,998	1,680
2012	12	752,604	871,860	2,352	2,056
2013	1	852,210	837,062	2,421	2,135
2013	2	693,373	682,500	2,167	1,939
2013	3	625,332	671,281	1,861	1,645
2013	4	602,578	534,135	1,712	1,451
2013	5	626,655	575,143	1,780	1,467
Totals		**9,933,128**	**9,632,503**		

Table II-15

ComEd Procurement Period Load Forecast (High Load)
Projected Energy Sales and Average Demand For Eligible Retail Customers
(Line Loss and DSM Adjusted)

Year	Month	Total Load (MWh)		Average Load (MW)	
		On-Peak	Off-Peak	On-Peak	Off-Peak
2012	6	1,862,369	1,658,432	5,543	4,319
2012	7	2,290,792	2,189,241	6,818	5,366
2012	8	2,540,077	2,091,416	6,902	5,562
2012	9	1,151,930	1,354,601	3,789	3,256
2012	10	1,211,829	1,067,375	3,293	2,839
2012	11	1,341,204	1,359,628	3,992	3,541
2012	12	1,425,986	1,670,281	4,456	3,939
2013	1	1,559,753	1,539,464	4,431	3,927
2013	2	1,380,442	1,327,388	4,314	3,771
2013	3	1,210,210	1,367,547	3,602	3,352
2013	4	1,204,610	1,098,813	3,422	2,986
2013	5	1,156,138	1,098,454	3,284	2,802
Totals		**18,335,340**	**17,822,640**		

The low-load and the high-load scenarios are based upon a change to three of the main variables impacting load: weather, switching and load growth.

The low-load scenario assumes that the summer weather is cooler than normal, that load growth occurs at a rate 2% less than the Expected Load Forecast and that a greater number of customers opt for RES service relative to the Expected Load Forecast shown in Table II-12. In this scenario 100 municipalities undertake municipal aggregation in 2012 instead of the 60 municipalities assumed in the Expected Load Forecast. In the low-load scenario 46.7% of the residential customers are expected to be taking Blended service in June 2013 compared to 70.6% in the Expected Load Forecast. Further, the movement of non-residential customers to RES service is greater than in the Expected Load Forecast with the percentage of 0 to 100 customers taking Blended service in June 2013 expected to be 47.1% in the low-load scenario compared to 54.9% in the Expected Load Forecast.

The high-load scenario assumes that the summer weather is much hotter than normal (the scenario uses data from 1995, which is the warmest summer in the last 30 years), that load growth occurs at a rate 2% more than is expected, and that switching decreases. The number of residential RES customers expected in the Expected Load Forecast peaks in early 2012 and stays at that level for the remainder of the forecast period. Also, 10 additional communities undertake municipal aggregation in 2012 instead of the 60 communities assumed in the Expected Load Forecast. In the high-load scenario 85.9% of the residential customers are expected to be taking Blended service in June 2013 compared to 70.6% in the Expected Load Forecast. The percentage of 0 to 100 customers taking Blended service in June 2013 is expected to be 61.7% in the high-load scenario compared to 54.9% in the Expected Load Forecast, reflecting a lower movement of non-residential customers to RES service in the high-load scenario compared to the Expected Load Forecast.

The +/- 2% load growth assumption in both scenarios reflects, in part, the economic uncertainty that currently exists. That uncertainty is succinctly described by Global Insight in its U.S. Executive Summary dated June 2011:

> "Not Just a Soft Patch" Scenario: In the pessimistic scenario, the temporary soft patch morphs into a more severe and more permanent slowdown, with the U.S. economy coming to a screeching halt in the second half of 2011. Domestically, the housing outlook deteriorates, as home prices and sales slip even further. Higher commodities and food prices squeeze incomes and force U.S. households to retrench once again.
>
> "The Recovery Reignites" Scenario: In the optimistic scenario, fears of another slowdown prove short-lived, and growth revives quickly. Falling food and gasoline prices take some of the pressures off consumers, and a revival in private-sector confidence leads to increases in both consumer spending and business investment (residential and nonresidential). The optimistic simulation also assumes stronger growth in total factor productivity, which supports lower inflation and stronger income gains over the long term.

ComEd's intention is to keep the IPA informed of significant changes in its forecast during the procurement proceeding.

III. CONCLUSION

For all of the reasons described here, ComEd believes that its Forecast for the period June 1, 2012 through May 31, 2017 is consistent with the requirements of the PUA and provides an appropriate approach to develop the procurement plan to acquire supply for the Eligible Retail Customers.

Appendices

A. Load Forecast Models

1. Residential Single Family Model (Hour 16)
2. ComEd Model Coefficients
3. ComEd Model Regression Statistics
4. Detailed Description of Variables Used In Forecast Models

B. Five-Year Load Forecast

1. Expected load
2. Low Load
3. High Load

Appendix A-1

Residential Single Family Model (Hour 16)			
Variable	**Coefficient**	**T-Stat**	**Notes**
CONSTANT	1.884	17.031	Constant term
Monday Binary	-0.091	-7.675	
Tuesday Binary	-0.115	-9.679	
Wednesday Binary	-0.130	-11.041	
Thursday Binary	-0.137	-11.584	
Friday Binary	-0.122	-10.283	
Saturday Binary	-0.025	-2.540	
MLK Binary	0.020	0.388	Martin Luther King's Day
PresDay Binary	0.061	1.203	President's Day
GoodFri Binary	0.045	0.872	Good Friday
MemDay Binary	0.102	1.964	Memorial Day
July4th Binary	-0.014	-0.249	July 4th.
LaborDay Binary	0.173	3.329	Labor Day
Thanks Binary	0.129	2.428	Thanksgiving Day
FriAThanks Binary	0.038	0.722	Friday after Thanksgiving Day
XMasWkB4 Binary	0.131	2.333	Week before Christmas
XMasEve Binary	0.391	5.604	Christmas Eve
XMasDay Binary	0.257	3.770	Christmas Day
XMasWk Binary	0.136	2.078	Christmas Week
NYEve Binary	0.143	1.961	New Year's Eve Day
NYDay Binary	0.156	2.598	New Year's Day
XMasLights Binary	0.0003	0.245	Christmas Lights
DLSav Binary	-0.483	-5.510	Day-Light Sayings
Sun.FracDark6	0.392	5.664	Fraction of hour 6 am that is dark
Sun.FracDark7	0.224	4.373	Fraction of hour 7 am that is dark
Sun.FracDark8	0.304	4.174	Fraction of hour ending 8 am that is dark
Sun.FracDark17	0.091	1.702	Fraction of hour ending 5 pm that is dark
Sun.FracDark18	-0.179	-2.985	Fraction of hour ending 6 pm that is dark
Sun.FracDark19	-0.245	-4.715	Fraction of hour ending 7 pm that is dark
Sun.FracDark20	-0.264	-4.742	Fraction of hour ending 8 pm that is dark
Sun.FracDark21	-0.663	-7.261	Fraction of hour ending 9 pm that is dark
Binary Feb	-0.051	-1.108	
Binary Mar	0.002	0.047	
Binary Apr	-0.022	-0.420	
Binary May	0.036	0.608	
Binary Jun	0.132	2.124	
Binary Jul	0.206	3.390	
Binary Aug	0.234	4.338	
Binary Sep	0.202	3.946	

Binary Oct	0.183	3.411	
Binary Nov	0.051	1.089	
Binary Dec	0.117	2.600	
Usage Trend	-0.024	-5.555	
Fall HDD Spline	0.005	2.558	HDD Spline for September and October
November HDD Spline	0.006	4.362	HDD Spline for November
December HDD Spline	0.004	3.760	HDD Spline for December
January HDD Spline	0.007	7.069	HDD Spline for January
February HDD Spline	0.008	7.392	HDD Spline for February
March HDD Spline	0.005	4.777	HDD Spline for March
Spring HDD Spline	0.007	5.310	HDD Spline for April and May
Day lag of HDD Spline	-0.001	-1.286	
Two day lag of HDD Spline	0.0003	0.462	
Weekend HDD Spline	0.001	1.262	
Trend HDD Spline	0.0004	3.552	
April THI Spline	0.037	1.634	THI (Temperature Humidity Index) Spline for April
May THI Spline	0.144	26.997	THI (Temperature Humidity Index) Spline for May
June THI Spline	0.153	47.941	THI (Temperature Humidity Index) Spline for June
July THI Spline	0.148	45.900	THI (Temperature Humidity Index) Spline for July
August THI Spline	0.154	46.186	THI (Temperature Humidity Index) Spline for August
September THI Spline	0.177	38.224	THI (Temperature Humidity Index) Spline for September
October THI Spline	0.163	20.550	THI (Temperature Humidity Index) Spline for October
Day lag of THI Spline	0.016	6.147	
Two day lag of THI Spline	0.013	6.466	
Weekend THI Spline	0.009	3.618	
THI Spline for Trend	-0.0002	-0.437	
2007 Plus Dummy	0.082	6.831	An End Shift to describe usage for 2007 and beyond
2009 Plus Dummy	-0.019	-1.822	An End Shift to describe usage for 2009 and beyond

The coefficients provide the effect that each variable has on the hourly usage for a single hour (Hour 16 which includes the load from 3 p.m. to 4 p.m. in the afternoon). The "T-Stat" provides the statistical significance of the variable, with a value generally greater than +/- two (2) indicating that the coefficient is significantly different from zero.

The hourly model for Hour 16 has an adjusted R-squared of 0.94, which means that 94% of the variance in the hourly data is being explained by the model. At the daily level, the mean average percent error ("MAPE") for the model is 3.2%. The 3.2% daily MAPE means that the average percentage difference on a daily basis between the usage predicted by the model and the actual usage for that period was very small. In other words, the model can explain usage with almost a 97% accuracy rate. Such a high accuracy rate is particularly noteworthy because the model is dealing with very short time frames in which many factors may come into play. The high accuracy rate, the low MAPE and the high R-squared indicate that the model captures the vast majority of factors that affect electrical usage.

Appendix A-2

ComEd Model Coefficients

ComEd Zone Model			
Variable	Coefficient	StdErr	T-Stat
CONST	-551.128	417.16	-1.321
CalVars.Jan	-106.424	22.58	-4.713
CalVars.Feb	-96.543	46.392	-2.081
CalVars.Mar	-293.93	33.047	-8.894
CalVars.Apr	-436.46	46.326	-9.421
CalVars.May	-420.644	55.026	-7.644
CalVars.Jun	-255.045	59.207	-4.308
CalVars.Jul	-257.596	68.358	-3.768
CalVars.Aug	-97.845	64.69	-1.513
CalVars.Sep	-118.677	53.896	-2.202
CalVars.Oct	-247.918	47.256	-5.246
CalVars.Nov	-129.461	37.954	-3.411
CalVars.Yr05Plus	99.83	34.461	2.897
CalVars.Yr07Plus	-69.914	31.885	-2.193
CalVars.Apr09Plus	-35.595	29.174	-1.22
CalHDD.HDDSpline	1.87	0.076	24.464
CalHDD.HDDSplineTrend	0.063	0.008	7.912
CalCDD.SpringTDD	12.258	0.806	15.211
CalCDD.SummerTDD	14.017	0.305	45.932
CalCDD.FallTDD	13.672	1.436	9.518
CalCDD.TDDTrend	0.333	0.043	7.784
CalCDD.Yr06Plus_TDDShift	-1.528	0.357	-4.282
Monthly.EconIndex4	4.256	0.22	19.303
AR(1)	0.408	0.078	5.23

Residential Customer Class Model			
Variable	Coefficient	StdErr	T-Stat
Monthly.Jan	13.925	1.676	8.307
Monthly.Feb	12.435	1.631	7.624
Monthly.Mar	11.57	1.594	7.259
Monthly.Apr	10.707	1.554	6.892
Monthly.May	10.262	1.542	6.654
Monthly.Jun	10.552	1.622	6.507
Monthly.Jul	12.189	1.772	6.879
Monthly.Aug	11.87	1.79	6.633
Monthly.Sep	11.641	1.735	6.709
Monthly.Oct	10.843	1.564	6.934
Monthly.Nov	11.347	1.556	7.291
Monthly.Dec	12.939	1.627	7.952
Monthly.Yr2004Plus	0.595	0.144	4.142
Monthly.July07Plus	-0.39	0.161	-2.414
Monthly.Oct09Plus	-0.401	0.181	-2.218
CycVars.IncPerHH	0.062	0.014	4.476
CycWthrT.ResHDD	0.2	0.011	18.03
CycWthrT.ResHDDTrend	0.003	0.001	3.6
CycWthrT.ResCDD_Spring	1.255	0.301	4.173
CycWthrT.ResCDD_Jun	2.246	0.117	19.17
CycWthrT.ResCDD_Jul	2.305	0.068	34
CycWthrT.ResCDD_Aug	2.467	0.052	47.02
CycWthrT.ResCDD_Sep	2.502	0.085	29.47
CycWthrT.ResCDD_Fall	2.616	0.155	16.83
CycWthrT.ResCDDTrend	0.067	0.005	13.36
CycWthrT.Yr06Plus_ResCDDShift	-0.368	0.049	-7.516
XVars.NewMonthlyBill	-0.031	0.012	-2.585
AR(1)	0.419	0.072	5.798

Small C&I Customer Class Model			
Variable	Coefficient	StdErr	T-Stat
Monthly.Jan	-41.956	6.625	-6.333
Monthly.Feb	-38.855	6.631	-5.86
Monthly.Mar	-39.268	6.568	-5.979
Monthly.Apr	-40.073	6.499	-6.166
Monthly.May	-40.862	6.435	-6.35
Monthly.Jun	-41.297	6.399	-6.453
Monthly.Jul	-41.019	6.399	-6.41
Monthly.Aug	-38.3	6.419	-5.967
Monthly.Sep	-38.2	6.405	-5.964
Monthly.Oct	-37.441	6.421	-5.831
Monthly.Nov	-39.724	6.465	-6.145
Monthly.Dec	-41.864	6.582	-6.36
Monthly.July07Plus	-2.025	0.522	-3.878
Monthly.Oct08Plus	-1.851	0.633	-2.924
CycVars.ResCust	0.031	0.003	11.968
CycWthrT.SCI_HDD	0.459	0.043	10.779
CycWthrT.SCI_HDDTrend	0.009	0.003	3.081
CycWthrT.SCI_CDD	1.916	0.11	17.403
CycWthrT.SCI_CDDTrend	0.024	0.007	3.266
XVars.Emp_NonManuf	0.004	0.002	2.485
SCI.DelayedBill2	-0.028	0.004	-6.786
AR(1)	0.293	0.075	3.893

StreetLighting Class Model			
Variable	Coefficient	StdErr	T-Stat
Monthly.Jan	-4.8	0.515	-9.316
Monthly.Feb	-4.79	0.514	-9.316
Monthly.Mar	-5.03	0.513	-9.808
Monthly.Apr	-5.135	0.515	-9.977
Monthly.May	-5.261	0.515	-10.22
Monthly.Jun	-5.295	0.514	-10.3
Monthly.Jul	-5.301	0.514	-10.31
Monthly.Aug	-5.208	0.514	-10.13
Monthly.Sep	-5.093	0.514	-9.905
Monthly.Oct	-5.003	0.513	-9.746
Monthly.Nov	-4.871	0.513	-9.488
Monthly.Dec	-4.798	0.515	-9.325
CycVars.ResCust	0.002	0.0002	13.32
Monthly.Oct09Plus	0.049	0.029	1.681
AR(1)	0.282	0.095	2.959

Appendix A-3

ComEd Model Regression Statistics

Regression Statistics	ZONE	Residential	Small C&I	StreetLighting
Iterations	14	16	12	10
Adjusted Observations	168	177	162	113
Deg. of Freedom for Error	144	149	140	98
R-Squared	0.996	0.994	0.973	0.925
Adjusted R-Squared	0.995	0.993	0.969	0.914
AIC	8.565	-1.882	0.635	-5.007
BIC	9.011	-1.379	1.055	-4.645
Log-Likelihood	-933.85	-56.61	-259.33	137.57
Model Sum of Squares	159,248,120.66	3,289.30	8,516.91	7.11
Sum of Squared Errors	662,180.87	19.65	233.05	0.58
Mean Squared Error	4,598.48	0.13	1.66	0.01
Std. Error of Regression	67.81	0.36	1.29	0.08
Mean Abs. Dev. (MAD)	48.91	0.26	0.92	0.05
Mean Abs. % Err. (MAPE)	0.60%	1.21%	1.06%	2.94%
Durbin-Watson Statistic	2.079	1.879	1.902	1.904
Ljung-Box Statistic	23.24	23.51	38.96	12.88
Prob (Ljung-Box)	0.5057	0.4896	0.0276	0.968
Prob (Jarque-Bera)	0.9472	0.019	0.0134	0.0293

Appendix A-4
Detailed Description Of Variables
Used In Forecast Models

The econometric models are statistical multi-variant regressions that determine the correlation between electrical usage (dependent variable) and weather, economic and monthly factors (independent variables). Consistent with its recent delivery services rate case filing, ComEd's weather normals are based on the 30-year time period of 1977 to 2006. The following models are used in producing the energy sales forecast (GWh) for the eligible customers:

Monthly Zone energy usage for the ComEd zone
Monthly Residential bill-cycle energy usage
Monthly Small C&I bill-cycle energy usage
Monthly Street Lighting bill-cycle energy usage

ComEd's Load Forecasting group with the input of industry experts developed the models. The following sections describe each model and its specifications. Appendices A-2 and A-3 contain the coefficients and other regression statistics for the models.

ComEd's Monthly Zone Model

The dependent variable in the zone model is monthly zone energy usage for the ComEd service territory. The monthly zone usage is in GWh units. The performance of the model is shown in the Chart II-7 in Section II B 1 d (ii) (estimated[12] vs. actual) for the January 2000 to March 2010 time period.

The independent variables within the model are:

- The monthly binary variables reflect monthly usage patterns. Customer electrical usage is a function of other items besides cooling and heating (e.g., lighting). This other usage is not constant per month and the monthly binary variables are used to account for this variability. December is excluded from the monthly binaries, as the constant term establishes December as the base from which the monthly binary variables are adjusted.

- The EconIndex4 variable is a composite economic variable that weights the contributions of GMP, total number of residential customers, and non-manufacturing employment in the ComEd service territory. GMP is the gross metropolitan product for the Chicago metropolitan area and also includes Rockford. This variable measures economic activity for the ComEd service territory. The GMP is adjusted for inflation and is obtained from Global Insight.

[12] As noted in the body of the Forecast, the estimated data used in Charts II-7, II-8 and II-9 is based on actual weather

Further, the variable is adjusted for the number of weekends (and holidays) and weekdays within a calendar month because overall energy usage for a given month is a function of those daily influences. The variable's units are billions of dollars. The residential customers component is the total number of residential customers within the ComEd service territory. This economic variable reflects the effect of a growing customer base on energy sales and is driven by household formations. This variable is also adjusted for the number of weekends, holidays and weekdays within a calendar month. The non-manufacturing employment is defined below in the Small C&I model. The three economic variables are weighted based on an exponential formula with each of the economic variable roughly receiving a one-third weighting.

- The temperature and humidity degree day ("TDD") variables are weather variables designed to capture the effect on usage from cooling equipment. The TDD variable is similar in design to a cooling degree day ("CDD") variable. A CDD weather variable is often used in energy models. The standard CDD measures the difference in the average daily temperature above a specific threshold (typically 65 degrees as that is a common point at which cooling activity begins). The TDD variable provides several enhancements to the typical CDD variable as delineated below:

  The average daily temperature is the 24-hour average instead of the average of the maximum and minimum temperatures for the day. This captures frontal movements within the day.

  Humidity is included in the TDD variable as humidity does influence electrical usage.

  The TDD variable uses multiple degree bases instead of just a 65 degree-base. This captures the change in the rate at which customers use electricity at different temperature levels.

  The TDD variable is interacted with seasonal binary variables (i.e., Spring, Summer and Fall) to reflect the seasonal usage pattern related to cooling equipment.

  The TDD variable is in degree-day units.

  The TDD trend variable is a weather variable that captures the changing relationship of cooling equipment over time. Simply put, the effect of a TDD changes over time as customers' usage patterns change over time. For example, as homes have become larger over time the amount of cooling load associated with a change in temperature will also change.

  The TDD trend variable essentially captures the growing influence of cooling equipment over time within the service territory. The TDD trend

variable is designed to capture this changing relationship by interacting the TDD variable with a linear time series variable. The TDD trend variable is in degree-day units.

The TDD shift variable is a weather variable akin to the TDD trend variable. This variable is interacted with a binary variable for all years greater than or equal to 2006. The negative sign in the variable's coefficient acknowledges the reduction in cooling effect over the past few years compared to years prior to 2006.

- The HDD Spline variable is a weather variable that measures the relationship on electrical usage from space heating equipment (e.g., natural gas furnace fans and electrical space-heating equipment). The HDD Spline variable is similar in concept to the industry-standard heating degree day ("HDD") weather variable. The HDD Spline provides a couple of enhancements to the HDD weather variable:

  The average daily temperature is the 24-hour average instead of the average of the maximum and minimum temperatures for the day. This captures frontal movements within the day.

  The HDD Spline uses multiple degree bases instead of just a 65 degree-base. This captures the change in the rate at which customers use electricity at different temperature levels.

  The HDD Spline variable is in degree-day units.

  The HDD Spline trend variable is a weather variable that reflects the changing relationship of heating equipment over time. This variable is conceptually similar to the TDD trend variable. The HDD spline variable is in degree-day units.

- The Year 2005, 2007 and April 2009 Shift Plus variables are binary variables designed to capture very recent usage activity within the model. For example, the 2005 Shift Plus variable is a binary variable with the unit one for all months beginning with January 2005 and thereafter. By forcing all of the residuals to sum to zero for the months January 2005 to present, the variable is causing the model to be closely aligned with recent usage activity. This variable is useful for forecasting purposes as it ensures that the forecasted usage is also closely aligned with the most recent pattern of electrical usage.

The coefficient values and the standard measurements of significance within the model (e.g., t-stats) and the overall model performance (e.g., R-squared and MAPE) are contained in Appendices A-2 and A-3. Chart II-7 contains a plot of the model's estimated monthly usage vs.

actual monthly usage from January 2000 to March 2010. The two curves are tightly aligned, which speaks to the accuracy of the model.

ComEd Residential Model

The dependent variable is residential use per customer per day and the units are kWh per customer per day. Chart II-7 shows the model's performance (estimated vs. actual monthly sales for the January 2000 to March 2010 time period), which reflects a close fit.

The independent variables are noted below. (Because many of the variables follow the same purpose and logic as in the Monthly Zone model, please see the Monthly Zone model description for additional information.)

- The monthly binary variables reflect monthly usage patterns.
- The Real Income per Household variable is the disposable personal income for the Chicago metropolitan area and Rockford (adjusted for inflation) divided by the number of households for the same area. The data is obtained from Global Insight. This variable captures the rising household incomes within ComEd's service territory and the correlation it has with consumer purchases of electronic equipment and housing stock. The variable is in dollars per household units.
- The Monthly Bill variable is a typical monthly residential electricity bill assuming historical tariff charges and weather normal customer usage for the year 2002 (adjusted for inflation). Specifically, the historical tariff charges for a single-family and multi-family (both non-space heat) were multiplied by the weather adjusted billing units from the year 2002 for both residential groups. The monthly bills for both residential groups were weighted, based on energy sales, to form a single monthly bill. The monthly bill was also adjusted for the Chicago CPI-U. This variable reflects the influence of electricity charges/prices over time related to consumer behavior.
- Weather variables used in the residential model are similar in concept to the weather variables described in the Monthly Zone model section and will not be repeated here.
- The Year 2004, July 2007 and October 2009 Plus binary variables are similar in concept to the same variables used in the Monthly Zone model.

ComEd Small C&I Model

The dependent variable is Small C&I use per day and the units are GWh per day. The independent variables within the model are:

- The monthly binary variables, weather variables and shift variables are similar in concept to the Monthly Zone model and will not be repeated here.

- The residential customer variable is the total number of residential customers within the ComEd service territory. This economic variable reflects the influence of a growing service territory (i.e., residential customers) on Small C&I energy usage. The units are in thousands of customers.

- The Employment variable is an economic variable that measures the total non-manufacturing employment in the Chicago area. Job growth is correlated to Small C&I development and growth.

- The July 2007 and October 2008 Shift Plus binary variable is similar in concept to the Monthly Zone model.

- The Delayed Bill variable is the month over month (current vs. one month prior) variance in the Small C&I's estimated usage (GWh) of bills that are delayed beginning in October 2009. This variable is used to inform the model about an increase in delayed bill activity primarily in 2010.

ComEd Street Light Model

The dependent variable is Street Lighting use per day and the units are GWh per day. The independent variables are:

- Monthly binary variables and a shift variable are similar in concept to the Monthly Zone model.

- The residential customer variable is the total number of residential customers within the ComEd service territory. This economic variable reflects the relationship of a growing service territory (measured by the number of residential customers) and street lighting sales.

Appendix B-1

ComEd Procurement Period Load Forecast (Expected Load) Projected Energy Sales and Average Demand For Eligible Retail Customers (Weather Normal, Line Loss and DSM Adjusted)					
Year	Month	Total Load (MWh)		Average Load (MW)	
		On-Peak	Off-Peak	On-Peak	Off-Peak
2012	6	1,568,749	1,451,317	4,669	3,779
2012	7	1,809,454	1,769,343	5,385	4,337
2012	8	1,688,548	1,389,427	4,588	3,695
2012	9	954,040	1,102,331	3,138	2,650
2012	10	999,814	859,223	2,717	2,285
2012	11	1,020,449	1,000,964	3,037	2,607
2012	12	1,129,692	1,310,674	3,530	3,091
2013	1	1,264,666	1,248,223	3,593	3,184
2013	2	1,058,886	1,041,153	3,309	2,958
2013	3	993,346	1,072,258	2,956	2,628
2013	4	930,291	841,665	2,643	2,287
2013	5	963,004	908,861	2,736	2,319
2013	6	1,175,669	1,209,348	3,674	3,023
2013	7	1,612,265	1,439,343	4,580	3,672
2013	8	1,464,536	1,321,071	4,161	3,370
2013	9	986,577	1,029,132	3,083	2,573
2013	10	974,360	839,609	2,648	2,233
2013	11	943,983	1,026,497	2,950	2,566
2013	12	1,169,558	1,245,488	3,481	3,053
2014	1	1,242,992	1,231,654	3,531	3,142
2014	2	1,040,543	1,028,468	3,252	2,922
2014	3	976,649	1,060,475	2,907	2,599
2014	4	913,947	831,714	2,596	2,260
2014	5	898,386	936,775	2,674	2,296
2014	6	1,224,319	1,148,917	3,644	2,992
2014	7	1,605,164	1,428,456	4,560	3,644
2014	8	1,386,463	1,370,469	4,126	3,359
2014	9	1,033,636	972,772	3,076	2,533
2014	10	962,032	830,789	2,614	2,210
2014	11	880,123	1,055,230	2,895	2,537
2014	12	1,214,847	1,186,945	3,451	3,028
2015	1	1,167,389	1,266,297	3,474	3,104
2015	2	1,029,790	1,012,513	3,218	2,876
2015	3	1,014,723	1,006,474	2,883	2,568
2015	4	898,846	822,409	2,554	2,235
2015	5	838,075	964,569	2,619	2,275

ComEd Procurement Period Load Forecast (Expected Load) Projected Energy Sales and Average Demand For Eligible Retail Customers (Weather Normal, Line Loss and DSM Adjusted)					
Year	**Month**	**Total Load (MWh)**		**Average Load (MW)**	
		On-Peak	**Off-Peak**	**On-Peak**	**Off-Peak**
2015	6	1,272,873	1,089,016	3,616	2,959
2015	7	1,662,072	1,348,985	4,517	3,588
2015	8	1,370,446	1,361,287	4,079	3,336
2015	9	1,018,457	961,276	3,031	2,503
2015	10	899,208	855,142	2,555	2,181
2015	11	913,619	1,001,688	2,855	2,504
2015	12	1,198,469	1,169,529	3,405	2,983
2016	1	1,095,118	1,301,140	3,422	3,069
2016	2	1,077,081	1,026,585	3,206	2,852
2016	3	1,055,779	959,949	2,869	2,553
2016	4	845,734	853,640	2,517	2,223
2016	5	882,821	923,972	2,627	2,265
2016	6	1,285,803	1,081,400	3,653	2,939
2016	7	1,453,034	1,554,130	4,541	3,665
2016	8	1,531,791	1,244,092	4,162	3,309
2016	9	1,013,134	975,814	3,015	2,541
2016	10	857,070	894,726	2,551	2,193
2016	11	967,285	969,873	2,879	2,526
2016	12	1,147,959	1,230,352	3,417	3,016
2017	1	1,161,288	1,267,480	3,456	3,107
2017	2	1,025,104	1,012,630	3,203	2,877
2017	3	1,059,430	971,174	2,879	2,583
2017	4	806,349	893,995	2,520	2,235
2017	5	937,677	894,945	2,664	2,283
Totals		**67,573,412**	**66,103,673**		

Appendix B-2

ComEd Procurement Period Load Forecast (Low Load) Projected Energy Sales and Average Demand For Eligible Retail Customers (Line Loss and DSM Adjusted)					
Year	Month	Total Load (MWh)		Average Load (MW)	
		On-Peak	Off-Peak	On-Peak	Off-Peak
2012	6	1,316,905	1,242,582	3,919	3,236
2012	7	1,313,793	1,336,837	3,910	3,277
2012	8	1,127,088	912,222	3,063	2,426
2012	9	673,404	758,855	2,215	1,824
2012	10	677,831	564,901	1,842	1,502
2012	11	671,355	645,125	1,998	1,680
2012	12	752,604	871,860	2,352	2,056
2013	1	852,210	837,062	2,421	2,135
2013	2	693,373	682,500	2,167	1,939
2013	3	625,332	671,281	1,861	1,645
2013	4	602,578	534,135	1,712	1,451
2013	5	626,655	575,143	1,780	1,467
2013	6	677,507	743,692	2,117	1,859
2013	7	860,464	820,306	2,445	2,093
2013	8	773,103	720,248	2,196	1,837
2013	9	619,650	639,997	1,936	1,600
2013	10	592,036	503,064	1,609	1,338
2013	11	565,624	602,457	1,768	1,506
2013	12	711,123	766,440	2,116	1,879
2014	1	779,978	757,590	2,216	1,933
2014	2	627,842	631,847	1,962	1,795
2014	3	571,293	621,789	1,700	1,524
2014	4	544,573	505,441	1,547	1,373
2014	5	546,418	558,587	1,626	1,369
2014	6	675,255	658,940	2,010	1,716
2014	7	822,616	767,024	2,337	1,957
2014	8	685,593	726,735	2,040	1,781
2014	9	624,112	581,012	1,857	1,513
2014	10	559,857	483,001	1,521	1,285
2014	11	506,409	605,878	1,666	1,456
2014	12	719,754	712,242	2,045	1,817
2015	1	714,694	758,500	2,127	1,859
2015	2	607,669	603,713	1,899	1,715
2015	3	578,894	574,315	1,645	1,465
2015	4	518,824	489,938	1,474	1,331
2015	5	494,032	563,350	1,544	1,329

ComEd Procurement Period Load Forecast (Low Load) Projected Energy Sales and Average Demand For Eligible Retail Customers (Line Loss and DSM Adjusted)					
Year	**Month**	**Total Load (MWh)**		**Average Load (MW)**	
		On-Peak	**Off-Peak**	**On-Peak**	**Off-Peak**
2015	6	694,678	597,851	1,974	1,625
2015	7	850,295	684,448	2,311	1,820
2015	8	674,875	687,103	2,009	1,684
2015	9	597,338	560,643	1,778	1,460
2015	10	508,155	485,670	1,444	1,239
2015	11	506,940	564,677	1,584	1,412
2015	12	686,408	688,219	1,950	1,756
2016	1	651,873	761,556	2,037	1,796
2016	2	623,096	589,199	1,854	1,637
2016	3	591,940	530,000	1,609	1,410
2016	4	483,684	489,602	1,440	1,275
2016	5	515,465	521,462	1,534	1,278
2016	6	705,606	562,102	2,005	1,527
2016	7	742,093	758,574	2,319	1,789
2016	8	759,456	596,955	2,064	1,588
2016	9	583,052	559,497	1,735	1,457
2016	10	475,411	499,557	1,415	1,224
2016	11	531,502	534,196	1,582	1,391
2016	12	654,341	705,311	1,947	1,729
2017	1	673,996	736,678	2,006	1,806
2017	2	580,009	580,041	1,813	1,648
2017	3	581,170	530,816	1,579	1,412
2017	4	456,058	502,091	1,425	1,255
2017	5	524,800	510,461	1,491	1,302
Totals		**39,962,689**	**39,265,318**		

Appendix B-3

ComEd Procurement Period Load Forecast (High Load) Projected Energy Sales and Average Demand For Eligible Retail Customers (Line Loss and DSM Adjusted)					
Year	Month	Total Load (MWh)		Load (MW)	
		On-Peak	Off-Peak	On-Peak	Off-Peak
2012	6	1,862,369	1,658,432	5,543	4,319
2012	7	2,290,792	2,189,241	6,818	5,366
2012	8	2,540,077	2,091,416	6,902	5,562
2012	9	1,151,930	1,354,601	3,789	3,256
2012	10	1,211,829	1,067,375	3,293	2,839
2012	11	1,341,204	1,359,628	3,992	3,541
2012	12	1,425,986	1,670,281	4,456	3,939
2013	1	1,559,753	1,539,464	4,431	3,927
2013	2	1,380,442	1,327,388	4,314	3,771
2013	3	1,210,210	1,367,547	3,602	3,352
2013	4	1,204,610	1,098,813	3,422	2,986
2013	5	1,156,138	1,098,454	3,284	2,802
2013	6	1,689,843	1,677,522	5,281	4,194
2013	7	2,331,337	2,100,848	6,623	5,359
2013	8	2,472,636	2,152,423	7,025	5,491
2013	9	1,272,166	1,295,893	3,976	3,240
2013	10	1,245,567	1,071,797	3,385	2,851
2013	11	1,294,774	1,438,215	4,046	3,596
2013	12	1,529,723	1,637,897	4,553	4,014
2014	1	1,576,747	1,571,724	4,479	4,010
2014	2	1,392,434	1,356,502	4,351	3,854
2014	3	1,225,389	1,390,975	3,647	3,409
2014	4	1,212,303	1,124,132	3,444	3,055
2014	5	1,096,677	1,177,822	3,264	2,887
2014	6	1,781,706	1,657,742	5,303	4,317
2014	7	2,395,206	2,120,284	6,805	5,409
2014	8	2,437,669	2,249,256	7,255	5,513
2014	9	1,336,946	1,281,255	3,979	3,337
2014	10	1,266,716	1,076,000	3,442	2,862
2014	11	1,237,424	1,511,622	4,070	3,634
2014	12	1,614,952	1,603,966	4,588	4,092
2015	1	1,515,014	1,648,279	4,509	4,040
2015	2	1,384,802	1,388,211	4,328	3,944
2015	3	1,321,996	1,329,604	3,756	3,392
2015	4	1,210,615	1,144,239	3,439	3,109
2015	5	1,042,014	1,240,330	3,256	2,925

ComEd Procurement Period Load Forecast (High Load) Projected Energy Sales and Average Demand For Eligible Retail Customers (Line Loss and DSM Adjusted)					
Year	**Month**	**Total Load (MWh)**		**Load (MW)**	
		On-Peak	**Off-Peak**	**On-Peak**	**Off-Peak**
2015	6	1,884,856	1,614,008	5,355	4,386
2015	7	2,561,593	2,019,541	6,961	5,371
2015	8	2,476,451	2,271,562	7,370	5,568
2015	9	1,342,513	1,298,182	3,996	3,381
2015	10	1,205,334	1,137,271	3,424	2,901
2015	11	1,303,603	1,479,173	4,074	3,698
2015	12	1,626,171	1,617,992	4,620	4,128
2016	1	1,446,221	1,735,164	4,519	4,092
2016	2	1,467,169	1,455,971	4,367	4,044
2016	3	1,434,865	1,265,526	3,899	3,366
2016	4	1,172,091	1,202,680	3,488	3,132
2016	5	1,133,782	1,198,951	3,374	2,939
2016	6	1,954,465	1,624,439	5,552	4,414
2016	7	2,319,381	2,348,748	7,248	5,540
2016	8	2,719,664	2,207,409	7,390	5,871
2016	9	1,376,103	1,327,732	4,096	3,458
2016	10	1,155,349	1,227,765	3,439	3,009
2016	11	1,418,467	1,453,295	4,222	3,785
2016	12	1,590,596	1,728,011	4,734	4,235
2017	1	1,551,058	1,730,891	4,616	4,242
2017	2	1,423,650	1,455,936	4,449	4,136
2017	3	1,458,303	1,309,734	3,963	3,483
2017	4	1,135,146	1,286,486	3,547	3,216
2017	5	1,234,618	1,173,278	3,507	2,993
Totals		**93,611,445**	**91,238,923**		