

Smart Grid Advanced Metering Annual Implementation Progress Report

ATTACHMENT 1

Metrics and Milestones

Metric: 6C Continued

Metric Description: Number of customers who have accessed the web-based portal as of the last day of the calendar year as a percentage of customers with AMI Meters and as a percentage of ComEd customers in that delivery class.

Number of Accounts with AMI Meters by Delivery Class			
Delivery Class	# of Accounts with AMI Meters Viewed Web	# of Accounts With AMI Meters	Viewed Web Portal as % of # of Accounts With AMI
Single Family W/O Elec. Space Heat	8,311	413,359	2.01%
Multi Family W/O Elec. Space Heat	3,210	243,323	1.32%
Single Family With Elec. Space Heat	111	2,869	3.87%
Multi Family With Elec. Space Heat	530	22,609	2.34%

Number of Accounts by Delivery Class			
Delivery Class	# of Accounts Viewed Web	# of Accounts in Class	Viewed Web Portal as % of # of Accounts in Class
Single Family W/O Elec. Space Heat	27,664	2,216,541	1.25%
Multi Family W/O Elec. Space Heat	14,031	1,066,497	1.32%
Single Family With Elec. Space Heat	619	34,628	1.79%
Multi Family With Elec. Space Heat	3,423	161,251	2.12%

Metric: 6D Continued

Metric Description: Number of customers who can directly access their usage data as of the last day of the calendar year as a percentage of customers with AMI Meters and as a percentage of ComEd customers in that delivery class.

Number of Accounts with AMI Meters by Delivery Class			
Delivery Class	# of Accounts with AMI Meters and Can Directly Access Usage Data(1)	# of Accounts with AMI Meters	Accounts Can Directly Access Usage Data as % of # Accounts with AMI Meters(2)
Single Family W/O Elec. Space Heat	52,581	413,539	12.72%
Multi Family W/O Elec. Space Heat	39,660	243,323	16.30%
Single Family With Elec. Space Heat	454	2,869	15.82%
Multi Family With Elec. Space Heat	3,652	22,609	16.15%
Watt-Hour	763	11,811	6.46%
Small Load	453	4,916	9.21%
Medium Load	15	288	5.21%
Large Load	1	57	1.75%
Very Large Load	0	16	0.00%
Extra Large Load	0	1	0.00%
High Voltage	-	-	na
Railroad	-	-	na
Fixture-Included Lighting	0	2	0.00%
Dusk to Dawn Lighting	1	57	1.75%
General Lighting	1	20	5.00%

Number of Accounts by Delivery Class			
Delivery Class	# of Accounts Can Directly Access Usage Data(1)	# of Accounts in Class	Accounts Can Directly Access Usage Data as %
Single Family W/O Elec. Space Heat	276,947	2,216,541	12.49%
Multi Family W/O Elec. Space Heat	196,452	1,066,497	18.42%
Single Family With Elec. Space Heat	4,572	34,628	13.20%
Multi Family With Elec. Space Heat	28,941	161,251	17.95%
Watt-Hour	4,339	88,300	4.91%
Small Load	22,753	254,125	8.95%
Medium Load	1,176	16,392	7.17%
Large Load	138	3,981	3.47%

Very Large Load	67	1,727	3.88%
Extra Large Load	1	43	2.33%
High Voltage	1	61	1.64%
Railroad	0	14	0.00%
Fixture-Included Lighting	42	2,107	1.99%
Dusk to Dawn Lighting	84	4,892	1.72%
General Lighting	22	1,560	1.41%

Notes:

(1) These are numbers of accounts that created an account in ComEd.com in 2014.

(2) Although only these percentages of accounts created an account in ComEd.Com and have direct access to usage data, all accounts can directly access usage data by creating an account in ComEd.com.

Metric: 9

Metric Description: Reduction in Greenhouse Gas Emissions enabled by smart grid and the success of AMI deployment in enabling consumer benefits from the smart grid.

ComEd is working with CUB and EDF to develop a practical measure of Greenhouse Gas (GHG) emissions attributable to smart grid functions enabled by AMI deployment and AMI related investments by exploring the capability of calculating GHG emissions reductions realized through items such as the following:

- A. Enabling Energy Efficiency and conservation
- B. Reducing peak load and creating a flatter load profile
- C. Creating a more predictable load profile
- D. Enabling customer Demand-side management and Demand Response
- E. Enabling the integration of clean, renewable generation sources
- F. Reducing technical electricity losses

ComEd Proposed Changes to Metric

ComEd proposes to modify the metric described in prior Reports and would begin reporting this revised and updated metric in the 2016 AMI Implementation Progress Report (AIPR).

For vehicle GHG emissions, ComEd proposes to refine the calculation by creating a three (3) year average GHG vehicle emission associated with meter reading vehicles for use as a baseline. The definition and use of such a baseline will better reflect changes in the fleet over the meter deployment period. Under the new metric, ComEd will compute the previous year’s GHG emissions associated with meter reading vehicles at each fleet center that had AMI meter deployment that year or in a prior year. The metric will be based on a comparison of the most recent year’s value to its baseline value, with the emission factors from the Climate Registry used by Exelon Corporation.

For aggregate load GHG emissions, ComEd will calculate the estimated load differences between those customers with AMI meters and those without AMI meters and any associated impact on GHG emissions. ComEd will report the results of this analysis in the 2016 AIPR.

ComEd will also calculate the estimated load differences between those customers with AMI and without AMI meters by community where deployment has taken place. These load differences will include total load reduction, and to the extent data availability and reliability permits, load shifting and conservation effects. Based on these differences in load by geographic area or customer program, the associated change in GHG emissions will be estimated. ComEd will report the results of this analysis in the 2016 AIPR.

ComEd will continue to explore and analyze other elements identified as contributors to the GHG emissions for inclusion in future reporting including (a) other operational elements related to AMI deployment such as avoided vehicle emissions related to outage management and remote meter functionality and (b) GHG emissions related to reduction in line losses related to metric 20.

2014 AIPR Report of Vehicle Emissions

For 2014 reporting, ComEd has compared the 2014 vehicle emissions to the average of the 2007-2009 vehicle GHG emissions for the meter reading vehicles in the Maywood Operating Area due to Smart Meters being deployed in that operating area in 2010. ComEd then compared the 2014 vehicle emissions to the average of the 2011-2013 vehicle GHG emissions for the meter reading vehicles in the Glenbard and Chicago South Operating Areas due to Smart Meters being deployed in those operating areas in 2014.

Estimated GHG emissions are calculated by measuring fuel consumption and converting into fuel emissions via the Climate Registry emission factor.

Step 1: Obtained meter reader fuel gallons for the applicable years for the Maywood Operating Area. The meters were deployed in 2010, so the average of the fuel gallons used for three years prior (2007-2009) were used for the comparison against 2014 data.

04498 - Maywood Meter Reading	2007	2008	2009	2010	2011	2012	2013	2014
ComEd Miles Driven	125,209	141,452	197,591	145,847	113,582	106,338	56,568	56,848
ComEd Fuel Gallons	6,986	8,093	8,644	5,897	4,216	3,776	2,526	2,645

The meters were deployed in 2014 in Glenbard and Chicago South, so the average of the fuel gallons used for three years prior (2011-2013) were used for the comparison against 2014 data.

04499 - Glenbard Meter Reading	2007	2008	2009	2010	2011	2012	2013	2014
ComEd Miles Driven	-	-	-	-	115,881	145,165	129,903	110,902
ComEd Fuel Gallons	-	-	-	-	6,117	6,651	6,975	6,183

03423 - Chicago South Meter Reading	2007	2008	2009	2010	2011	2012	2013	2014
ComEd Miles Driven	-	-	-	-	252,087	291,215	202,220	217,581
ComEd Fuel Gallons	-	-	-	-	8,813	13,841	10,838	11,977

Step 2: Use the Climate Registry emission factor to convert fuel gallons into MTC02E

GHG Conversion Factor		
Fuel	Comparable Metric	Conversion Factor
Unleaded	Gallons	19.687
Gas	Pounds to metric tons	2,205.000

Step 3: Subtract 2014 vehicle emissions from the average vehicle emissions from 2007, 2008, and 2009 to obtain the reduction in greenhouse gas emissions enabled by Smart Grid for the Maywood Operating Area.

Meter Reading Vehicles - Maywood		
Years	Annual Fuel Gallons	MTCO2E
2007	6,985.63	62.37
2008	8,092.70	72.25
2009	8,644.20	77.18
3 year average	7,907.51	70.60
Years	Annual Fuel Gallons	MTCO2E
2010	5,896.70	52.65
2012	3,776.01	33.71
2013	2,526.00	22.55
2014	2,645.00	23.62
	Gallons	MTCO2E
Delta from 2007-09 Ave to 2014 usage	5,262.51	46.99

Subtract 2014 vehicle emissions from the average vehicle emissions from 2011, 2012, and 2013 to obtain the reduction in greenhouse gas emissions enabled by Smart Grid for the Glenbard and Chicago South Operating Areas.

Meter Reading Vehicles - Glenbard			
Years		Annual Fuel Gallons	MTCO2E
	2011	6,117.00	54.61
	2012	6,651.00	59.38
	2013	6,975.00	62.28
3 year average		6,581.00	58.76
Years		Annual Fuel Gallons	MTCO2E
	2014	6,183.00	55.20
		Gallons	MTCO2E
Delta from 2011-13 Ave to 2014 usage		398.00	3.55

Meter Reading Vehicles – Chicago South			
Years		Annual Fuel Gallons	MTCO2E
	2011	8,813.00	78.69
	2012	13,841.00	123.58
	2013	10,838.00	96.77
3 year average		11,164.00	99.68
Years		Annual Fuel Gallons	MTCO2E
	2014	11,977.00	106.93
		Gallons	MTCO2E
Delta from 2011-13 Ave to 2014 usage		(813.00)	(7.26)

Metric: 13

Overview of US Utility Customer Programs Enabled by Smart Grids

As utility service territories with AMI expand around the country, the market for customer applications enabled by the smart grid and smart meters continues to expand. This document reviews the progress in AMI-enabled customer application industry, and highlights examples of how utilities across the US are employing emerging technologies to improve customer experience by enabling more control and saving them money.

Web Presentment of Interval Usage

One of the most promising areas of growth in this industry is work utilities have done to enable customers to view their hourly (or sub-hourly) electricity consumption through web portals (in addition to paper and mailed energy reports). A leading vendor in this space, OPOWER, has enabled interval presentment for AMI customers at utilities across the U.S., including CenterPoint Energy, Consumers Energy, Pepco, San Diego Gas & Electric, National Grid, Xcel Energy, Exelon Utilities ComEd and BGE, and many others. Other leading vendors in the web present space include AutoGrid, Aclara, Tendril, and C3. Tendril, for example, released a new Energy Services Management (ESM) platform in mid-2014, which contains highly-accurate home modeling capabilities based on utility customer energy data (from monthly meter reads to 15-minute smart meter intervals). In early 2014, Google acquired Nest Labs, which has already deployed more than a million smart thermostats, providing ample energy data for Google to potentially analyze.

Bidgely, an energy disaggregator that breaks down usage information down to the appliance level is working with several utilities to provide customers energy consumption data, historical and real time understanding of their usage and bill rate information, and customized, personalized energy savings tips. As AMI system upgrades continue throughout the US, it is likely that utilities will continue to enable web presentment of interval usage shortly after the AMI hardware is deployed.

Dynamic Rates

AMI system upgrades also enable a wider range of dynamic rate structures to be implemented by utilities and Retail Electric Suppliers (RESs). These dynamic rates offer customers the ability to shift electricity consumption to lower system demand periods, and thus to save money on their bill, help relieve T&D system congestion, and lower emissions from power generation. The most prevalent types of dynamic rates include Time of Use rates that have variable tiers of pricing depending on the time of day and day of week. Utilities have rolled out many varieties of these rates in order to incentivize off-peak consumption, including PG&E, SCE, and WE Energies offering two-tier programs, and TXU Energy's "free nights" or "free weekends" rate plans offered to customers in Texas.

Other utilities have piloted and launched a number of other dynamic rates. For example, Critical Peak Pricing (CPP) programs have been offered in to reduce pressure on reserve margins on high demand days. Utilities such as San Diego Gas & Electric offer CPP rates to their customers. In addition to CPP rates, some utilities – such as NV Energy - have started offering off-peak charging rates for Electric Vehicle (EV) owners.

Electric Vehicle Public Charging Infrastructure

Many utilities have pursued various business models to invest and install charging stations in their service territories: partnership models involve charging station installers, automakers such as Nissan, Tesla, BMW, as well as host location retailers such as movie theaters, malls, restaurants, etc.

Georgia Power, for instance, launched a \$12 million program to improve EV charging infrastructure and drive EV sales through 2016 via cash incentives (\$250 installation incentive for residential customers) and 50 new public charging locations. Partnership includes Nissan and Tesla Motors, commercial building landlords and network providers in adding charging stations. PG&E plans to invest \$654 million to build 25,000 EV charging stations. If approved, the program will be the largest deployment of EV chargers in the US. About 10 percent of the chargers would be installed to support disadvantaged communities. PG&E also would provide tools and educational materials for site hosts and customers to learn about the benefits of EVs

Home Area Network Technologies

Another major area of development in customer applications enabled by the smart grid includes “smart home” technologies also referred to as HAN technologies. Collectively, this suite of technologies promises to help customers gain insight into and control over appliances throughout their house in order to operate them more efficiently and cost effectively. One of the most popular pieces of technology is the Nest Learning Thermostat. The Nest PCT touts a “smart” demand response capability caused “Rush Hour Rewards.” Other advances include DLC switches that operate off of the AMI network, such as the Cooper Power Systems LCR-6600-S. Additionally, AMI systems are offering new opportunities for “smart” appliances from manufacturers such as Whirlpool that help customers optimize energy consumption.

Metric: 16 A Continued

Metric Description: ComEd’s response time to a distributed resource project application, and time from receipt of application until energy flows from project to grid (distribution.)

Site ID	Date Initial Application Received	Prime Mover	Date Complete Application Received (1)	Date Commissioned (2)	Duration (3)
994	12/5/2014	Photovoltaic	12/17/2014	12/26/2014	9
975	11/18/2014	Photovoltaic	11/20/2014	12/9/2014	19
974	10/20/2014	Photovoltaic	11/17/2014	10/13/2014	-35
973	10/20/2014	Photovoltaic	11/17/2014	10/13/2014	-35
971	10/22/2014	Photovoltaic	11/7/2014	10/20/2014	-18
967	10/27/2014	Photovoltaic	11/10/2014	11/3/2014	-7
953	10/3/2014	Photovoltaic	10/27/2014	11/4/2014	8
952	10/13/2014	Photovoltaic	10/27/2014	11/21/2014	25
951	10/27/2014	Photovoltaic	10/27/2014	11/5/2014	9
945	10/1/2014	Solar + Wind	10/17/2014	12/12/2014	56
944	10/9/2014	Photovoltaic	10/16/2014	8/29/2014	-48
942	10/10/2014	Photovoltaic	10/16/2014	12/31/2014	76
939	9/18/2014	Photovoltaic	9/22/2014	10/30/2014	38
938	9/22/2014	Photovoltaic	9/26/2014	10/16/2014	20
936	9/22/2014	Photovoltaic	10/27/2014	11/14/2014	18
934	7/17/2014	Photovoltaic	9/24/2014	8/7/2014	-48
933	9/18/2014	Photovoltaic	11/21/2014	9/30/2014	-52
932	9/18/2014	Photovoltaic	9/24/2014	10/31/2014	37
931	9/18/2014	Photovoltaic	9/24/2014	10/11/2014	17
927	9/10/2014	Photovoltaic	9/10/2014	11/3/2014	54
926	9/10/2014	Photovoltaic	9/10/2014	9/23/2014	13
925	9/10/2014	Photovoltaic	9/10/2014	9/23/2014	13
924	9/10/2014	Photovoltaic	9/10/2014	9/15/2014	5
922	9/8/2014	Photovoltaic	9/15/2014	9/24/2014	9
921	9/9/2014	Photovoltaic	9/15/2014	9/15/2014	0
919	8/27/2014	Photovoltaic	8/27/2014	9/1/2014	5
914	8/27/2014	Photovoltaic	9/9/2014	11/1/2014	53
913	8/8/2014	Photovoltaic	8/22/2014	10/31/2014	70
911	8/11/2014	Photovoltaic	8/14/2014	9/18/2014	35
910	8/11/2014	Photovoltaic	8/14/2014	12/30/2014	138
909	8/11/2014	Photovoltaic	8/14/2014	12/30/2014	138
906	7/31/2014	Photovoltaic	8/4/2014	12/30/2014	148
904	7/22/2014	Photovoltaic	7/29/2014	8/12/2014	14
902	7/23/2014	Photovoltaic	7/28/2014	12/31/2014	156
901	7/23/2014	Photovoltaic	7/28/2014	12/30/2014	155
900	7/23/2014	Photovoltaic	7/28/2014	12/30/2014	155
899	7/23/2014	Photovoltaic	7/28/2014	12/30/2014	155

898	7/23/2014	Photovoltaic	7/29/2014	12/30/2014	154
896	7/6/2014	Photovoltaic	7/23/2014	7/27/2014	4
895	7/18/2014	Photovoltaic	7/21/2014	8/15/2014	25
894	7/16/2014	Photovoltaic	7/18/2014	8/11/2014	24
892	7/18/2014	Photovoltaic	7/18/2014	8/18/2014	31
885	7/8/2014	Photovoltaic	7/11/2014	11/3/2014	115
884	7/7/2014	Photovoltaic	7/11/2014	7/22/2014	11
882	6/10/2014	Photovoltaic	7/10/2014	7/15/2014	5
880	7/7/2014	Photovoltaic	7/8/2014	2/22/2014	-136
879	6/26/2014	Photovoltaic	7/7/2014	7/30/2014	23
878	5/12/2014	Photovoltaic	7/8/2014	6/2/2014	-36
877	6/20/2014	Photovoltaic	6/25/2014	11/6/2014	134
873	5/23/2014	Photovoltaic	6/17/2014	6/6/2014	-11
871	5/29/2014	Photovoltaic	6/12/2014	6/19/2014	7
870	5/21/2014	Photovoltaic	6/10/2014	6/11/2014	1
868	6/6/2014	Photovoltaic	6/17/2014	6/30/2014	13
866	6/9/2014	Photovoltaic	6/9/2014	6/19/2014	10
864	6/9/2014	Photovoltaic	6/9/2014	5/28/2014	-12
863	5/21/2014	Photovoltaic	5/23/2014	6/15/2014	23
862	5/14/2014	Photovoltaic	5/23/2014	7/24/2014	62
861	5/15/2014	Photovoltaic	5/23/2014	6/12/2014	20
860	5/15/2014	Photovoltaic	5/19/2014	6/3/2014	15
859	5/15/2014	Photovoltaic	5/19/2014	6/3/2014	15
858	4/29/2014	Photovoltaic	5/15/2014	6/20/2014	36
856	5/14/2014	Photovoltaic	5/14/2014	12/30/2014	230
855	5/14/2014	Photovoltaic	5/14/2014	7/31/2014	78
854	5/14/2014	Photovoltaic	5/14/2014	12/30/2014	230
853	5/8/2014	Photovoltaic	5/14/2014	7/1/2014	48
852	5/8/2014	Photovoltaic	5/19/2014	7/1/2014	43
851	5/8/2014	Photovoltaic	5/19/2014	7/1/2014	43
850	5/12/2014	Photovoltaic	6/3/2014	4/30/2014	-34
849	5/2/2014	Photovoltaic	5/2/2014	5/1/2014	-1
848	5/2/2014	Photovoltaic	5/2/2014	4/25/2014	-7
846	4/21/2014	Photovoltaic	6/2/2014	5/21/2014	-12
845	4/17/2014	Photovoltaic	4/28/2014	5/8/2014	10
844	4/12/2014	Photovoltaic	4/28/2014	5/16/2014	18
842	4/10/2014	Photovoltaic	4/28/2014	6/1/2014	34
841	4/10/2014	Photovoltaic	4/28/2014	6/1/2014	34
840	4/21/2014	Photovoltaic	4/28/2014	6/1/2014	34
839	4/21/2014	Photovoltaic	4/28/2014	6/1/2014	34
838	4/24/2014	Photovoltaic	4/28/2014	5/2/2014	4
836	4/17/2014	Photovoltaic	4/17/2014	3/17/2014	-31
834	3/31/2014	Photovoltaic	4/10/2014	4/21/2014	11
832	3/28/2014	Photovoltaic	4/4/2014	5/15/2014	41

831	3/28/2014	Photovoltaic	4/3/2014	4/21/2014	18
830	3/5/2014	Photovoltaic	4/28/2014	5/1/2014	3
829	1/29/2014	Photovoltaic	5/14/2014	7/1/2014	48
828	1/24/2014	Photovoltaic	4/28/2014	5/1/2014	3
827	1/24/2014	Photovoltaic	4/28/2014	5/1/2014	3
825	3/21/2014	Wind	4/4/2014	3/26/2014	-9
824	3/21/2014	Photovoltaic	3/26/2014	4/30/2014	35
823	3/21/2014	Photovoltaic	4/14/2014	6/2/2014	49
822	3/13/2014	Photovoltaic	3/17/2014	6/9/2014	84
821	3/10/2014	Photovoltaic	3/11/2014	6/1/2014	82
820	3/4/2014	Photovoltaic	3/6/2014	3/10/2014	4
818	1/16/2014	Photovoltaic	2/26/2014	2/6/2014	-20
817	2/17/2014	Photovoltaic	2/26/2014	3/9/2014	11
816	2/19/2014	Photovoltaic	2/21/2014	3/12/2014	19
811	2/6/2014	Photovoltaic	2/7/2014	2/28/2014	21
810	2/4/2014	Photovoltaic	2/10/2014	2/14/2014	4
806	1/16/2014	Photovoltaic	2/7/2014	2/17/2014	10
805	1/16/2014	Photovoltaic	1/29/2014	5/14/2014	105
803	1/2/2014	Photovoltaic	1/24/2013	1/23/2014	364
800	1/13/2014	Photovoltaic	1/24/2013	2/3/2014	375
799	1/8/2014	Photovoltaic	1/15/2014	1/8/2014	-7
			Average Days w/Negative #s		57.71
			Average Days w/out Negative #s		74.95

Note 1 - Date complete application sent to engineering

Note 2 - Date on Appendix B returned to ComEd (site commissioned)

Note 3 - Duration, in days, from complete application to generation of energy

Negative #s - Application submitted after start of construction and/or Appendix B submitted long after project done

Metric: 22

Metric Description: Bill impacts associated with the costs for implementation of ComEd’s AMI Plan for low, average, and higher usage level customers pursuant to approved rates and surcharges.⁴⁵ The usage level calculations will be values for a “typical” customer at the 25th, 50th, and 75th percentile of total usage for each applicable delivery service class.

Change from January 2014 to January 2015 for Typical Customer			
Customer Class or Type	Monthly	Annual	Percent
Single Family Residential Without Electric Space Heat	\$20.07	\$240.85	23.78%
Multi-Family Residential Without Electric Space Heat	\$10.42	\$125.08	23.28%
Single Family Residential With Electric Space Heat	\$49.43	\$593.19	30.58%
Multi-Family Residential With Electric Space Heat	\$23.19	\$278.23	27.98%
Non-Residential Watt hour	\$7.11	\$85.29	13.31%
Non-Residential Small Load (0-100 kW)	\$80.80	\$969.64	22.20%

Change from January 2014 to January 2015 at Percentile (Low/Median/High Usage)				
Customer Class or Type	Percentile	Monthly	Annual	Percent
Single Family Residential Without Electric Space Heat (low usage)	25%	\$10.73	\$128.81	18.37%
Single Family Residential Without Electric Space Heat (median usage)	50%	\$17.14	\$205.69	22.48%
Single Family Residential Without Electric Space Heat (high usage)	75%	\$25.47	\$305.69	25.62%
Multi-Family Residential Without Electric Space Heat (low usage)	25%	\$6.29	\$75.51	21.34%
Multi-Family Residential Without Electric Space Heat (median usage)	50%	\$8.97	\$107.67	22.77%
Multi-Family Residential Without Electric Space Heat (high usage)	75%	\$12.72	\$152.65	23.89%
Single Family Residential With Electric Space Heat (low usage)	25%	\$28.18	\$338.18	26.54%
Single Family Residential With Electric Space Heat (median usage)	50%	\$45.06	\$540.76	29.99%
Single Family Residential With Electric Space	75%	\$62.82	\$753.78	31.95%

⁴⁵ The customer rate impacts reflect a comparison of ComEd’s total bill year-to-year for the rates in effect for January 2014 to January 2015 (including energy supply and delivery, of which, AMI is a component). This is the same manner in which ComEd has been responding to this metric in previous submissions, as agreed upon by stakeholders.

Heat (high usage)				
Multi-Family Residential With Electric Space Heat (low usage)	25%	\$14.11	\$169.30	25.95 %
Multi-Family Residential With Electric Space Heat (median usage)	50%	\$20.85	\$250.25	27.60 %
Multi-Family Residential With Electric Space Heat (high usage)	75%	\$29.01	\$348.11	28.67 %
Nonresidential Watt hour (low usage)	25%	\$4.73	\$56.79	16.02%
Nonresidential Watt hour (median usage)	50%	\$6.43	\$77.13	13.81 %
Nonresidential Watt hour (high usage)	75%	\$8.61	\$103.34	12.58 %
Nonresidential Small Load (0-100 kW) (low usage)	25%	\$17.68	\$212.11	16.96 %
Nonresidential Small Load (0-100 kW) (median usage)	50%	\$38.39	\$460.63	19.97%
Nonresidential Small Load (0-100 kW) (high usage)	75%	\$92.77	\$1,113.28	22.12%

Metric: 23

Metric Description: Number of customers that have created and viewed an account on ComEd.com – by usage levels, customer class, and low income customers. An account on ComEd.com is necessary for viewing the web portal.

Number of Accounts by Delivery Class	
Delivery Class	Total Number of Accounts
Single Family W/O Elec. Space Heat	276,847
Multi Family W/O Elec. Space Heat	196,452
Single Family With Elec. Space Heat	4,572
Multi Family With Elec. Space Heat	28,941
Watt-Hour	4,339
Small Load	22,753
Medium Load	1,176
Large Load	138
Very Large Load	67
Extra Large Load	1
High Voltage	1
Railroad	-
Fixture-Included Lighting	42
Dusk to Dawn Lighting	84
General Lighting	22

Number of Accounts by Usage Level for Residential, Watt-hour, and Small Load Delivery Classes						
		Number of Accounts by Usage Level				
Delivery Class	Total	Quartile 1	Quartile 2	Quartile 3	Quartile 4	NA(1)
Single Family w/o Elec. Space Heat	276,847	38,904	47,523	53,219	59,294	77,907
Multi Family w/o Elec. Space Heat	196,452	18,155	21,252	23,270	26,219	107,556
Single Family With Elec. Space Heat	4,572	668	845	869	794	1,396
Multi Family With Elec. Space Heat	28,941	2,776	3,241	3,534	3,527	15,863
Watt-Hour	4,339	785	793	750	984	1,027
Small Load	22,753	4,117	4,001	4,057	4,389	6,189

Number of Low Income Accounts by Usage Level for Residential Delivery Classes(2)						
		Number of Accounts by Usage Level				
Delivery Class	Total	Quartile 1	Quartile 2	Quartile 3	Quartile 4	NA(1)
Single Family Without Space Heat	13,514	2,788	3,151	3,148	2,683	1,744
Multi Family Without Space Heat	8,003	826	1,392	1,807	2,417	1,561
Single Family With Space Heat	265	42	59	71	41	52
Multi Family With Space Heat	1,510	187	284	355	398	286

Accounts on Life Support and Medical Condition by Usage Level for Residential Delivery Classes(3)						
		Number of Accounts by Usage Level				
Delivery Class	Total	Quartile 1	Quartile 2	Quartile 3	Quartile 4	NA(1)
Single Family Without Space Heat	796	60	125	191	281	139
Multi Family Without Space Heat	403	13	41	82	167	100
Single Family With Space Heat	18	1	4	7	6	0
Multi Family With Space Heat	77	2	11	9	27	28

Notes:

- (1) These accounts did not have bills for all 12 months of 2014 to determine their usage quartile.
- (2) Low income accounts are those accounts that participated in the Low Income Home Energy Assistance Program (LIHEAP), Percentage of Income Payment Program (PIPP), All Clear or Residential Special Hardship Program during 2014 and were billed in December 2014.
- (3) Customers on Medical Condition or Medical Certificate are based on data for 2014 and customers on Life Support are determined based on accounts on Life Support in January 2015. Some accounts in the Life Support and Medical Condition or Medical Certificate group may also be in the low income group.

Metric: 24

Metric Description: Number of customers with ComEd.com accounts that have viewed the web portal - by usage levels, customer class, and low income customers.

Number of Accounts by Usage Level for Residential Delivery Classes						
Number of Accounts by Usage Level						
Delivery Class	Total	Quartile 1	Quartile 2	Quartile 3	Quartile 4	NA(1)
Single Family W/O Elec. Space Heat	27,664	3,983	5,439	6,183	6,855	5,204
Multi Family W/O Elec. Space Heat	14,031	1,052	1,661	2,150	2,908	6,260
Single Family With Elec. Space Heat	619	87	118	145	125	144
Multi Family With Elec. Space Heat	3,423	286	477	614	571	1,475

Number of Low Income Accounts by Usage Level for Residential Delivery Classes(2)						
Number of Accounts by Usage Level						
Delivery Class	Total	Quartile 1	Quartile 2	Quartile 3	Quartile 4	NA(1)
Single Family W/O Elec. Space Heat	1,156	198	267	270	301	120
Multi Family W/O Elec. Space Heat	539	50	83	132	185	89
Single Family With Elec. Space Heat	46	7	9	10	14	6
Multi Family With Elec. Space Heat	142	12	23	39	41	27

Accounts on Life Support and Medical Condition by Usage Level for Residential Delivery Classes(3)						
Delivery Class	Total	Number of Accounts by Usage Level				NA(1)
		Quartile 1	Quartile 2	Quartile 3	Quartile 4	
Single Family W/O Elec. Space Heat	70	4	8	25	23	10
Multi Family W/O Elec. Space Heat	29	0	3	6	12	8
Single Family With Elec. Space Heat	2	0	1	0	0	1
Multi Family With Elec. Space Heat	7	0	0	3	2	2

Notes:

(1) These accounts did not have bills for all 12 months of 2014 to determine their usage quartile.

(2) Low income accounts are those accounts that participated in the Low Income Home Energy Assistance Program (LIHEAP), Percentage of Income Payment Program (PIPP), All Clear or Residential Special Hardship Program during 2014 and were billed in December 2014.

(3) Customers on Medical Condition or Medical Certificate are based on data for 2014 and customers on Life Support are determined based on accounts on Life Support in January 2015. Some accounts in the Life Support and Medical Condition or Medical Certificate group may also be in the low income group.

Metric: 26

Metric Description: Number of customers enrolled in the RRTP program (ComEd’s hourly pricing program) by usage levels, customer class, and low income customers.

Number of Accounts by Usage Level for Residential Delivery Classes						
		Number of Accounts by Usage Level				
Delivery Class	Total	Quartile 1	Quartile 2	Quartile 3	Quartile 4	NA(1)
Single Family W/O Elec. Space Heat	8,541	902	1,511	2,214	3,117	707
Multi Family W/O Elec. Space Heat	605	53	73	160	270	49
Single Family With Elec. Space Heat	207	32	40	47	61	27
Multi Family With Elec. Space Heat	196	16	51	47	65	17

Number of Low Income Accounts by Usage Level for Residential Delivery Classes(2)						
		Number of Accounts by Usage Level				
Delivery Class	Total	Quartile 1	Quartile 2	Quartile 3	Quartile 4	NA(1)
Single Family W/O Elec. Space Heat	124	22	27	31	36	8
Multi Family W/O Elec. Space Heat	38	4	6	15	12	1
Single Family With Elec. Space Heat	7	2	3	2	0	0
Multi Family With Elec. Space Heat	14	1	5	4	3	1

Accounts on Life Support and Medical Condition by Usage Level for Residential Delivery Classes(3)						
		Number of Accounts by Usage Level				
Delivery Class	Total	Quartile 1	Quartile 2	Quartile 3	Quartile 4	NA(2)
Single Family W/O Elec. Space Heat	6	0	1	2	3	0
Multi Family W/O Elec. Space Heat	1	0	0	0	1	0
Single Family With Elec. Space Heat	1	0	0	1	0	0
Multi Family With Elec. Space Heat	1	0	0	1	0	0

Metric: 29

Metric Description: Number of deposits required, disconnection notices, and disconnections for nonpayment for all customers and, if applicable, by low income customers. Other “key indicia associated with credit and collection activities targeted to low income customers” may be incorporated in the project plan’s business process redesigns for future implementation.

Part 1: Number of Deposits Required in 2014 - by usage levels, customer class, and low income customers.	
Number of Accounts by Delivery Class	
Delivery Class	Total Number of Accounts
Single Family W/O Elec. Space Heat	23,791
Multi Family W/O Elec. Space Heat	43,828
Single Family With Elec. Space Heat	571
Multi Family With Elec. Space Heat	7,049
Watt-Hour	1,358
Small Load	8,253
Medium Load	215
Large Load	37
Very Large Load	17
Extra Large Load	-
High Voltage	2
Railroad	-
Fixture-Included Lighting	5
Dusk to Dawn Lighting	2
General Lighting	4

Number of Accounts by Usage Level for Residential, Watt-hour, and Small Load Delivery Classes						
Delivery Class	Total	Number of Accounts by Usage Level				
		Quartile 1	Quartile 2	Quartile 3	Quartile 4	NA(1)
Single Family W/O Elec. Space Heat	23,791	136	95	65	65	23,430
Multi Family W/O Elec. Space Heat	43,828	268	176	157	130	43,097
Single Family With Elec. Space Heat	571	4	5	-	1	561
Multi Family With Elec. Space Heat	7,049	16	17	18	12	6,986
Watt-Hour	1,358	12	16	20	20	1,290
Small Load	8,253	158	120	106	68	7,801

Number of Low Income Accounts by Usage Level for Residential Delivery Classes (2)						
Delivery Class	Total	Number of Accounts by Usage Level				
		Quartile 1	Quartile 2	Quartile 3	Quartile 4	NA(1)
Single Family W/O Elec. Space Heat	1,013	9	16	12	10	966
Multi Family W/O Elec. Space Heat	1,175	22	7	14	25	1,107
Single Family With Elec. Space Heat	16	-	-	-	-	16
Multi Family With Elec. Space Heat	188	2	2	4	3	177

Accounts on Life Support and Medical Condition by Usage Level for Residential Delivery Classes (3)						
Delivery Class	Total	Number of Accounts by Usage Level				
		Quartile 1	Quartile 2	Quartile 3	Quartile 4	NA(1)
Single Family W/O Elec. Space Heat	105	2	2	2	1	98
Multi Family W/O Elec. Space Heat	83	-	2	2	5	74
Single Family With Elec. Space Heat	2	-	-	-	-	2
Multi Family With Elec. Space Heat	6	-	-	-	-	6

Part 2: Number of Disconnection Notices in 2014 - by usage levels, customer class, and low income customers.	
Number of Accounts by Delivery Class	
Delivery Class	Total Number of Accounts
Single Family W/O Elec. Space Heat	252,044
Multi Family W/O Elec. Space Heat	132,905
Single Family With Elec. Space Heat	4,551
Multi Family With Elec. Space Heat	20,263
Watt-Hour	2,971
Small Load	25,235
Medium Load	1,290
Large Load	233
Very Large Load	106
Extra Large Load	2
High Voltage	10
Railroad	1
Fixture-Included Lighting	159
Dusk to Dawn Lighting	192
General Lighting	66

Number of Accounts by Usage Level for Residential, Watt-hour, and Small Load Delivery Classes						
		Number of Accounts by Usage Level				
Delivery Class	Total	Quartile 1	Quartile 2	Quartile 3	Quartile 4	NA(1)
Single Family W/O Elec. Space Heat	252,044	37,997	49,123	60,764	71,991	32,169
Multi Family W/O Elec. Space Heat	132,905	16,341	22,986	29,718	40,444	23,416
Single Family With Elec. Space Heat	4,551	729	1,071	1,124	1,032	595
Multi Family With Elec. Space Heat	20,263	1,835	3,565	5,282	5,705	3,876
Watt-Hour	2,971	294	517	618	1,026	516
Small Load	25,235	3,392	5,018	6,512	6,283	4,030

Number of Low Income Accounts by Usage Level for Residential Delivery Classes(2)						
		Number of Accounts by Usage Level				
Delivery Class	Total	Quartile 1	Quartile 2	Quartile 3	Quartile 4	NA(1)
Single Family W/O Elec. Space Heat	36,498	6,506	8,551	9,260	8,526	3,625
Multi Family W/O Elec. Space Heat	21,615	1,792	3,551	5,402	8,210	2,660
Single Family With Elec. Space Heat	646	104	160	156	129	97
Multi Family With Elec. Space Heat	3,596	231	624	1,024	1,194	523

Accounts on Life Support and Medical Condition by Usage Level for Residential Delivery Classes(3)						
		Number of Accounts by Usage Level				
Delivery Class	Total	Quartile 1	Quartile 2	Quartile 3	Quartile 4	NA(1)
Single Family W/O Elec. Space Heat	3,848	333	600	943	1,385	587
Multi Family W/O Elec. Space Heat	2,067	96	239	424	882	426
Single Family With Elec. Space Heat	83	10	19	19	25	10
Multi Family With Elec. Space Heat	398	22	48	86	174	68

Part 3: Number of Disconnections in 2013 - by usage levels, customer class, and low income customers						
Number of Accounts by Usage Level for Residential, Watt-hour, and Small Load Delivery Classes						
		Number of Accounts by Usage Level				
Delivery Class	Total	Quartile 1	Quartile 2	Quartile 3	Quartile 4	NA(1)
Single Family W/O Elec. Space Heat	21,910	2,747	4,061	5,358	6,631	3,113
Multi Family W/O Elec. Space Heat	10,124	868	1,504	2,263	3,689	1,800
Single Family With Elec. Space Heat	509	85	121	121	94	88
Multi Family With Elec. Space Heat	2,947	193	501	764	864	625
Watt-Hour	635	65	103	131	216	120
Small Load	3,267	704	824	767	369	603

Number of Low Income Accounts by Usage Level for Residential Delivery Classes(2)						
		Number of Accounts by Usage Level				
Delivery Class	Total	Quartile 1	Quartile 2	Quartile 3	Quartile 4	NA(1)
Single Family W/O Elec. Space Heat	4,396	556	935	1,150	1,145	610
Multi Family W/O Elec. Space Heat	2,115	135	258	480	887	355
Single Family With Elec. Space Heat	97	19	28	25	15	10
Multi Family With Elec. Space Heat	675	33	104	184	247	107

Accounts on Life Support and Medical Condition by Usage Level for Residential Delivery Classes(3)						
		Number of Accounts by Usage Level				
Delivery Class	Total	Quartile 1	Quartile 2	Quartile 3	Quartile 4	NA(1)
Single Family W/O Elec. Space Heat	939	71	159	236	309	164
Multi Family W/O Elec. Space Heat	463	14	44	101	201	103
Single Family With Elec. Space Heat	22	5	2	5	5	5
Multi Family With Elec. Space Heat	121	5	14	33	47	22