STATE OF NEW YORK PUBLIC SERVICE COMMISSION

Proceeding on Motion of the Commission to Consider Demand Response Initiatives

Petition of Consolidated Edison Company of New York, Inc. for Approval of Direct Load Control Program

Tariff Amendments to Make Various Revisions to Rider U – Distribution Load Relief Program (DLRP) in Compliance with Commission Order Issued April 8, 2009 in this Case Case No. 09-E-0115

Case No. 10-E-0229

Case No. 08-E-1463

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC. REPORT ON PROGRAM PERFORMANCE AND COST EFFECTIVENESS OF DEMAND RESPONSE PROGRAMS

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1. INTRODUCTION

Consolidated Edison Company of New York, Inc. ("Con Edison" or the "Company") submits this evaluation of its Demand Response ("DR") programs pursuant to the New York Public Service Commission's ("Commission" or "PSC") October 23, 2009 Order Adopting in Part and Modifying in Part Con Edison's Proposed Demand Response Programs ("October Order"). The October Order requires that the Company submit a report to the Commission by December 1 of each year assessing the four DR programs approved in the October Order.¹

The programs are the Commercial System Relief Program ("Rider S" or "CSRP"), Residential Smart Appliance Program ("RSAP"), Critical Peak Rebate Program ("Rider T" or "CPRP") and Network Relief Program ("NRP").² The report also includes the Rider U – Distributed Load Relief Program ("Rider U Program" or "DLRP") and the Rider L - Direct Load Control Program ("DLC" or "DLC Program").³ In addition, the report addresses reporting requirements pertaining to meter data access during all tests and DR events.⁴ As directed by the Commission in its March 13, 2014 *Order Adopting Tariff Revisions with Modifications* (March Order"), the report also includes an analysis of the effect of the increased payment rates on

¹ Case 09-E-0115, Proceeding on Motion of the Commission to Consider Demand Response Initiatives, *Order Adopting in Part and Modifying in Part Con Edison's Proposed Demand Response Programs*, issued and effective October 23, 2009, pp. 25-26.

² CPRP is not discussed in this evaluation because in a subsequent order in this proceeding the Commission allowed the Company to eliminate the CPRP and to create a voluntary participation option in the CSRP program to accommodate existing CPRP large customer participants. *Order Adopting with Modifications Tariff Amendments Related to Demand Response Programs*, issued and effective March 15, 2012, p. 9.

³ The Commission directed that the DLC evaluation be included as part of the Company's evaluation of its demand response programs in Case 10-E-0229, Petition of Consolidated Edison Company of New York, Inc. for Approval of Direct Load Control Program, *Staff Recommends Approval of the Continuation of the Company's Direct Load Control Program as Described in this Memorandum – Approved as Recommended and So Ordered*, issued and effective September 22, 2010, p. 10. While not required to do so, the Company has included DLRP in this report in order to provide the Commission with a comprehensive assessment of its demand response programs.

⁴ The Commission directed that the Company file a report on the status of its meter access plan implementation each year as part of its demand response program assessment report in Case 08-E-1463, Plan for Providing Rider U Data Access in a Manner that Supports Market Requirements and Customer Needs, *Staff Recommends that the*

Company's Proposed Plan Be Approved – Approved as Recommended and So Ordered, issued and effective July 14, 2011, p. 4.

enrollment for Rider S and Rider U.⁵ The report covers the cost components and program performance associated with the Company's DR programs for the 2014 program year, January 1, 2014 through December 31, 2014.

Con Edison offers two types of DR programs, contingency and peak shaving, which focus on supporting reliability and reducing costs of operating the electric distribution system. The programs operate during the summer period May 1 through September 30 and are summarized in the table below.

Program	Acronym	General Information	Incentive
Distribution Load Relief Program – (NYC and Westchester County)	DLRP	Activated by Con Edison in response to system critical situations (Condition Yellow or voltage reduction). Events last for 4 or more hours. Premium paid for customers who pre-commit load.	Customers in the Reservation Payment Option receive a reservation payment of \$6.00 or \$15.00 per kW-month pledged and performed, depending on location, and Performance Payments equal to \$1.00 per kWh reduced. Customers in the Voluntary program are paid only a Performance Payment equal to \$3.00 per kWh reduced. Reservation Payment Option customer can receive an additional \$5 per kW for participation in the Three-Year Incentive.
Direct Load Control – (NYC and Westchester County)	DLC	Activated by Con Edison in system critical situations. Participation limited to Con Edison residential, religious and small business (demand less than 100 kW) customers with central air-conditioning. Allows Con Edison to remotely adjust thermostat settings. Also called for peak shaving events.	Customers receive a free programmable thermostat and an incentive payment of \$25 for residential customers per unique address, and \$50 for small commercial customers per unique building site. Customers also have the option to enroll through a Service Provider whereby they can receive a sign-up payment of \$85 and an annual incentive payment of \$25.

Contingency programs:

⁵ The Commission directed Con Edison to include in this report an analysis of the effect of the increased payment rates on enrollment, including actual enrollment and performance statistics in Case 13-E-0573, Tariff Filing by Consolidated Edison Company of New York, Inc. to Make Revisions to its Demand Response Programs Rider S – Commercial System Relief Program and Rider U – Distribution Load Relief Program contained in P.S.C. No. 10 – Electricity, *Order Adopting Tariff Revisions with Modifications*, issued and effective March 13, 2014, p. 15.

D 1	C1 ·	
Peak	Shaving	programs;
I Cull	Dilla I III	programmo,

Program	Acronym	General Information	Incentive
Commercial System Relief Program – (NYC only)	CSRP	Event activated when day-ahead forecast is 96 percent or greater of forecasted summer system peak to relieve distribution network peak loads. Premium paid for customers who pre-commit load.	Customers in the Reservation Payment Option receive \$10/kW pledged and performed for months with fewer than 5 events and \$15/kW during and after a month with 5 or more events. Performance Payment is \$1.00 per kWh for each kW reduced during an event. Voluntary customers receive a Performance Payment equal to \$3.00 for each kWh reduced. Reservation Payment Option customers can receive an additional \$10 per kW for participation in the Three-Year Incentive
Residential Smart Appliance Program (NYC only) [Pilot program]	CoolNYC	Event activated when day-ahead forecast is 96 percent or greater of forecasted summer system peak to relieve system peak load. Con Edison has ability to remotely set back window or wall room air conditioner ("RAC") thermostat setpoints when an event is called. Available to Con Edison residential customers (Zone J) with window or wall RAC units and broadband connection.	Participants receive a free "SmartAC kit" or "Modlet" remote thermostat and internet connected device allowing control via a web portal and smartphones. Participation in event hours results in an annual incentive payment of \$25.
Direct Load Control – (NYC and Westchester County)	DLC	Activated by Con Edison in system critical situations. Con Edison residential, religious and small business (demand less than 100 kW) customers with central air-conditioning. Allows Con Edison to remotely adjust thermostat settings. Also called for peak shaving events.	Customers will receive a free programmable thermostat and an incentive payment of \$25 for residential customers per unique address, and \$50 for small commercial customers per unique building site. Customers also have the option to enroll through a Service Provider whereby they can receive a sign-up payment of \$85 and an annual incentive payment of \$25.

The DR programs are divided by application type, contingency or peak-shaving, and also by customer type. The CSRP and DLRP programs are designed for larger commercial customers who are able to achieve a pledged reduction amount through their own demand reduction strategies. The programs each have a mandatory (Reservation Payment) and voluntary (Voluntary Participation) enrollment option with separate obligations and incentive rates. DLC and RSAP are programs for smaller commercial and residential customers. The segmentation by customer type is important, as the programs require specific operational processes, equipment, communication and education. This report is structured to reflect the segmentation.

Performance evaluation for each program for summer 2014 is based upon test event data, since the 2014 summer had cooler than usual weather patterns and no actual events were called for any of the Company's DR programs. There were only eight days with temperatures over 90 degrees in 2014, while the average summer has 15 days. In addition, there were no heat waves

in 2014 compared to three heat waves in 2013.

2. COMMERCIAL DEMAND RESPONSE PROGRAMS CHANGES

Background on Program Incentive Changes

On December 18, 2013 Con Edison proposed changes to its commercial DR programs. The changes were designed to increase customer participation and encourage improved customer performance during DR events in both CSRP and DLRP. Con Edison proposed to shorten event call windows, shorten the Capability Period, increase incentives for Reservation Payment Option and Voluntary Participation Option customers, and added a small Three-Year Incentive for Reservation Payment Option customers aimed at encouraging long term commitment to DR and performance during events. In addition to the more substantial program changes, additional changes were proposed that altered how incentives are calculated so as to reward and encourage participants for their efforts during DR events. Further edits to the tariff language were submitted to streamline tariff language to more align program requirements in an effort to remove unnecessary complexities. In its March Order, the Commission adopted the majority of the program changes but altered the proposed incentive rate increases. In general, the Commission increased the monthly Reservation Payment from 2013 levels, and adopted the Three-Year Incentive payment for both programs with the intent of improving the forecast accuracy of DR resources.⁵

Incentive Category	2013 Incentive	2014 Incentive				
Rider S – CSRP Reservation Payment Option						
Reservation Payment– 4 or fewer events \$5.00/kW/month \$10.00/kW/mont						
Reservation Payment- 5 or more	\$10.00/kW/month	\$15.00/kW/month				
Performance Payment	\$0.50/kWh	\$1.00/kWh				
Unplanned Event	\$5.00/kW	\$6.00/kWh				
Three-Year Incentive None \$10.00/kW/month						
Rider S – CSRP Volunta	ry Participation Option					

Table 1: Incentive Changes by Program

⁵ The annual incentive levels adopted by the Commission were lower than what Con Edison had proposed in its December 18th petition, but the three-year incentive payments were increased.

Energy Payment – Planned Event	\$1.50/kWh	\$3.00/kWh					
Energy Payment – Unplanned Event	\$5.00/kWh	\$10.00/kWh					
Rider U – DLRP Reserv	ation Payment Option						
Reservation Payment – Tier 1 Networks	Reservation Payment – Tier 1 Networks\$3.00/kW/month\$6.00/kW/month						
Reservation Payment – Tier 2 Networks	\$6.00/kW/month	\$15.00/kW/month					
Three-Year Incentive	None	\$5.00/kW/month					
Performance Payment	\$0.50/kWh	\$1.00/kWh					
Bonus Period Payment – 7-9 Load Relief	\$1.00/kW/month	\$2.00/kW/month					
Requests							
Bonus Period Payment – 10+ Load Relief	\$1.50/kW/month	\$3.00/kW/month					
Requests							
Bonus Hours Payment	\$1.00/kW (< 3 hours)	\$3.00/kWh					
Bonus nours Payment	\$1.50/kW (≥ 3 hours)	33.00/ ΚΝΠ					
Rider U – DLRP Volu	Intary Participation Optio	n					
Energy Payment	\$1.50/kWh	\$3.00/kWh					

The Commission ordered that:

• Event duration for both programs be shortened from five hours to four hours;

• The Capability Period for both programs end in September instead of October;

• DLRP possible event hours be increased from 6:00 AM through 11:00 PM to 6:00 AM to 12:00 AM;

• The number of CSRP call windows be increased from two to four to better provide load relief during network peaks (the CSRP call windows are designated by Con Edison and not defined by the tariff);

• The CSRP penalty be reduced from two times the capacity payment times the load reduction shortfall to only one times the capacity payment times the load reduction shortfall; and

• Incentive changes for the Reservation Payment Option and the Voluntary Participation Option for CSRP and DLRP be modified to those set forth in Table I, including the addition of a new Three-Year Incentive.

The Three-Year Incentive was modified in the Commission's June 27, 2014 Order Denying Petition for Rehearing But Granting Reconsideration in Part ("June Order") to allow Aggregators to group customers within a network into an Aggregator Network Resource ("ANR").⁶ This allows Aggregators some flexibility within the few Networks where they have multiple customers enrolled while adding multiple layers of complexity to the enrollment process and the calculation of incentives.

Adding the ANR settlement mechanism allows Aggregators the opportunity to create more optimal customer groupings within a network to increases their chances of satisfying the minimum eligibility criteria for the Three-Year Incentive. The introduction of the ANR concept has required further compliance edits to the tariff riders governing CSRP and DLRP. Grouping customers within a network for the purpose of measuring performance for the Three-Year Incentive and the Reservation Payment requires a separate process for all aspects of the DR programs.

Impact of Increased Incentives on Enrollments

Given the increase in incentive levels in both programs and a reduction in the penalty for CSRP, enrollments did grow in 2014. Based on feedback from the Aggregators, growth in 2014 was limited because the incentives were approved only two weeks prior to the first enrollment deadline of April 1, 2014, which left a short amount of time for the Aggregators to market the programs. The full growth potential of the increased incentives may be realized in 2015 if Aggregators are given time to learn and market the new versions of the programs. Several Aggregators hired, or moved into the New York City area, additional sales staff, so they can take advantage of cumulative incentives from the NYISO and Con Edison programs that are now more competitive with incentives in other parts of the overall increase in 2014 enrollment, focusing on the six subcomponents listed below and quantified in the charts in Sections 3 and 4.

 New to DR – these are enrollments that did not participate in any of the Company's commercial DR program in the previous year

⁶ Case 13-E-0573, Tariff Filing by Consolidated Edison Company of New York, Inc. to Make Revisions to its Demand Response Programs Rider S – Commercial System Relief Program and Rider U – Distribution Load Relief Program contained in P.S.C. No. 10 – Electricity, *Order Denying Petition for Rehearing But Granting Reconsideration in Part*, issued and effective March 13, 2014, p. 15.

- 2. New to a DR Program these are enrollments that only participated in one program, DLRP or CSRP, in the prior year and then enrolled in both CSRP and DLRP.
- 3. Enrollments transferred to the program these are enrollments that participated in one program in the prior year and in the following year enrolled in the other program. For example, if a customer participated in DLRP last year and this year enrolled in CSRP, that customer would be included in this category.
- 4. Enrollments that remained in the program these are enrollments that participated in the program in the previous year and re-enrolled this year.
- 5. Enrollments that transferred from program these are enrollments that participated in one program in the previous year, but enrolled only in the other program this year.
- 6. Dropped all DR these are enrollments that participated in one or both programs last year, but no longer participated in any program this year.
- 7. Dropped from a DR program enrollments from the prior year that participated in both programs but only enrolled in one program this year are in this category.

Other Program Developments in 2014

As part of the March 13, 2014 order adopting the changes to Con Edison's DR programs, the Company was ordered to conduct a participant willingness to accept study to determine the minimum amount a participant is willing to receive to reduce demand and to whether the performance window should be reduced. On October 1, 2014, the Company filed with the Commission the study *Analysis of Whether Demand Response Performance Windows Should be Reduced*. The study reviewed 92 DR enabling technologies to identify technologies that could operate with greater impact for performance windows less than four hours. The study concluded that only batteries satisfy this criterion. The Company is currently undertaking customer surveys to assess the willingness to accept participation in DR programs based on such variables as incentive levels and performance window durations. Following the completion of the survey report on January 30, 2015, the Company will have better information with which to comment on whether a shortened performance window could lead to an increase in the volume of DR participation or the adoption of newly emerging technologies.

In addition, the Company has retained Alstom to develop a Demand Response

Management System ("DRMS"). The DRMS is being developed with funding from the U.S. Department of Energy to increase automation of DR program operations. The initial project was developed using the program design at the time of the project's inception, which was prior to incorporation of the ANR concept into the Company's tariffs. The multiple changes to the enrollment and settlement processes needed to incorporate ANRs have required further work to make corresponding changes to DRMS.

3. DISTRIBUTION LOAD RELIEF PROGRAM ("DLRP")

DLRP is a network contingency DR program applicable to individual customers who contract to reduce 50 kW or more during an event and Aggregators who contract to reduce 100 kW or greater of demand reduction. DLRP may be called by the Company to reduce strain on local distribution lines within specific networks and load areas when contingencies occur.

The incentive for the Reservation Payment is \$6.00 per kW-month in Tier One networks and load areas and \$15.00 per kW-month in Tier Two networks. The majority of the Company's networks and load areas are Tier One; Tier Two areas are those identified as higher priority and in need of additional demand reduction resources. Performance Payments for Reservation Option customers are \$1.00 per kWh in both Tier One and Tier Two networks. Mandatory participants can receive both Reservation Payments and Performance Payments. As described in Section 2 above, Mandatory Customers can also receive a Three-Year Incentive payment if they successfully complete three years of participation. Voluntary participants only receive Performance Payments.

DLRP Program Costs

Table 2 summarizes the costs, by component, associated with DLRP in 2014.

Table 2: DLRP Cost Components for 2014 Program Year⁷

Component	Cost	Percentage
Customer Incentives	\$4,484,149	86%
Program Operation - Con Ed	\$222,915	4%
Program Operation - Vendor	\$325,878	6%
Program Equipment	\$69,699	1%
Program Marketing	\$120,928	2%
M&V	\$1,667	0%
Total Program Costs		100

DLRP Cost Summary

Total costs for DLRP during the 2014 program year were \$5,225,236, an increase of 58 percent over the 2013 cost of \$3,313,573. Costs increased due to the increased incentive rates and the 26 percent increase in the Reservation Payment Option customers in 2014 compared to 2013.

Customer Incentives

Customer incentives consist of Performance and Reservation Payments paid to customers for their participation and performance in events and tests. This year there was a test event, but there were no actual events. The voluntary customers enrolled in DLRP are not tested. Table 3 below provides information about the DLRP test called in 2014. The cumulative total of customer incentives (Performance Payment plus Reservation Payments) amounted to \$4,484,149 (92 percent of the total program cost). In addition to Reservation payments, the Company is anticipating paying out the first Three-Year Incentive payment at the end 2016. For the 2014 year, approximately \$2,000,000⁸ has been accrued for this purpose.

<u>Program Operation – Con Edison</u>

⁷ Costs for November and December have been estimated.

⁸ This figure was determined by taking the product of the kW reductions realized by customers (limited to kW amount that was approved for enrollment), the Three Year Incentive rate of \$5/kW per month and five months of participation. Customers whose performance factor was less than 80% were excluded. Since some customers may get disqualified from getting paid the Three Year Incentive in 2015 or in 2016, the estimated 2014 accrual may be drastically different by the time it is paid out in 2016. As such, the 2014 accrual has been rounded off to the nearest million dollars.

Costs in this category include Con Edison staff salary and overhead associated with DLRP management and support. This includes (but is not limited to) work performed by program managers, specialists, marketing staff, and legal support. Program staff salaries are recovered through the operating and maintenance ("O&M") budget while other operation costs are recovered via the monthly adjustment clause ("MAC"). The costs associated with program operation were \$222,915 (four percent of the total program cost), calculated using a percentage of time allocation for staff and support personnel to DLRP activities, with their associated salaries, overhead, and Administrative and Supervisory ("A&S") costs.

Program Operation - Vendor

Costs in this category include expenses related to operating functions performed by Con Edison vendors to manage meter data and payment calculation. For DLRP, the Program Operation costs of the vendor totaled \$325,878 (six percent of the total program costs).

Program Equipment

Program equipment costs incurred include software licenses, such as the software associated with real time meter data reporting during events, required to operate DR programs. Total equipment costs were \$69,699 (one percent of the total program costs). Going forward any maintenance or enhancements costs associated with the DRMS will be included in this category.

Program Marketing

Marketing costs include all costs associated with the marketing initiatives required to inform and involve customers in the programs. The costs associated with program marketing were \$120,928 (two percent of the total program cost). This program's marketing cost component does not include Con Edison staff salary associated with time spent on marketing events and marketing material design, which is included in the Program Operation – Con Edison category.

Third-party market Aggregators execute the vast majority of program marketing to attract DR program participants. The Company will continue to provide "background" customer education on the DR concept to support the third-party sales process.

Measurement and Verification

Costs included in this category are associated with the performance analysis conducted by outside consultants for the DLRP program. The Company has contracted with an outside vendor to calculate both individual and aggregate results for events and tests, and to generate various reports as necessary. These demand reduction results are used to determine appropriate payment for customers and the aggregate effect on the Con Edison system. The costs to the system amounted to \$1,667 (less than one percent of the program costs).

DLRP Test and Event Performance and Network Impacts

This section focuses on three major areas: evaluation of performance, evaluation of impacts by network, and an assessment of program growth.

The goal of DLRP is to reduce the impact of network and load area contingencies by inducing customer load reductions prior to or at the time of an event. The achieved performance is calculated by subtracting customer/aggregator actual load from customer/aggregator baseline load. The performance factor is the ratio of the achieved load reduction to the pledged load reduction. During the 2014 Capability Period, there were no DLRP events due to the mild summer weather experienced in 2014. Reservation Option customers were still required to participate in the one hour test event. The performance of participants during the test event is assessed in this section.

Customer load reductions are measured using a Customer Baseline Load ("CBL") methodology. A CBL is a representation of a customer's average hourly consumption based on the top five highest days of energy usage within a 10-weekday period selected from the 30 weekdays prior to an event. For weekend events, the CBL uses the top two highest weekend days from the past three weekends. The CBL is used to calculate a customer's performance during a test or event by taking the difference between the CBL and the customer's actual load on the event day. Customers have the choice of selecting an average day or weather adjusted CBL depending on how they believe their load is normally affected by changes in the weather (usually heat). If the customer does not make a choice, the customer is assigned a weather adjusted CBL.

Test Summary

Performance of each mandatory customer, a Reservation Payment option customer, is measured annually via event and/or test performance data. At least one test is conducted per Summer Capability Period. The mandatory component of DLRP represents approximately 97 percent of 2014 total DLRP load enrolled.

The performance factor on the June 26 DLRP test was 71 percent. There were no DLRP events in 2014 to allow measurement of performance for the full four-hour event window. Individual events would have shed light on characteristics of program performance under specific conditions.

Testing the entire DLRP portfolio provides the best insight possible at this time into how customers would perform over a large sample. The Performance data is summarized in Table 3 below and more detailed DLRP test data is included in Appendix II. The performance data shown in Table 3 is based on raw performance, which may differ from the load reductions used to calculate participant payments (which are capped at 100 percent or zero percent of individual pledged levels).

Test or Event	Date	Event/Test Hours	Customers Enrolled	MW Enrolled	MW Reduction Achieved	Performance Factor Achieved	Test Event Network or Zone
Test	June	4:00 PM –	671	187	133	71%	All Networks

Table 3: 2014 Summary of DLRP Test

The DLRP test was conducted on June 26, 2014 from 4:00 PM to 5:00 PM and included all Reservation Payment Option customers participating in the DLRP program at that time. Out of approximately 187 MW pledged at the time of the test, approximately 133 MW were curtailed, for a 71 percent performance factor. This is a decrease from the 2013 DLRP test performance factor of approximately 102 percent. The 2013 test event was preceded by two

weekdays with over ninety degree temperatures. The consistent high temperatures may have contributed to more curtailable cooling load, helping customers to achieve greater performance in 2013 than in 2014. Although the total MW amount pledge in 2014 increased, the lower test performance factor resulted in less actual available reduction for events.

As a result of tariff modifications changing the program terms in July, 2014, the Commission allowed an additional enrollment deadline of August 1 for participation beginning September 1 for the 2014 Capability Period only. While this has little operational benefit, the extension was to support aggregator enrollment. Only 2.4 MW of Reservation Option resources enrolled at that time. These resources were not tested because there were no sufficiently hot days in September to perform the test.

The test provides slightly different insights than CSRP, because mandatory DLRP customers are not penalized for non-performance. In DLRP only de-rating is applied. This means that in subsequent months after the test or event, customers with less than 100 percent performance will be paid a capacity payment based on actual performance. While this will result in reduced capacity income for the customer, it does not result is penalties, which may be experienced by CSRP customers. As the Company continues the integration of DR into operational planning, understanding and expectations of resource performance based on different incentives gains greater importance.

DLRP Measurement and Methodology

Only 22 percent of customers enrolled in the Reservation portion of DLRP elected to have their performance measured with the average day CBL compared to 23 percent last year, the remaining customer performance was measured using the weather adjustment calculation for the test event. The weather adjustment allows for a variation range of up to 20 percent in either direction (increase or decrease) from that of an average day assumption.

DLRP Network Impacts

To assess the potential impacts of DLRP at the network level, the Company analyzed the Reservation and Voluntary enrollment in each network to determine the potential impact in individual networks where the reductions were needed. Reservation performance was analyzed using the DLRP test.⁹ "Enrolled" is defined as the total pledged MWs in a network, without adjusting for performance factor. "Achieved reductions" were calculated using performance adjusted Reservation enrollments. Appendix I shows full performance data for the test event.

Assessment of Network Impacts

Table 4 below summarizes performance data for Tier One, Tier Two, and system-wide. Appendix II details program performance and network impacts as a percentage of network peaks for enrolled, anticipated and achieved reductions. The average achieved load reduction of network peaks is approximately 0.99 percent, which indicates that DLRP currently has a limited impact. Greater MW enrollment volume is required to mitigate this limited impact.

-	Enroll	ment & Average		Total Average Impact		
	Enrolled DLRP Mandatory	DLRP Mandatory Impact	Enrolled DLRP Voluntary	DLRP Voluntary Impact	Enrolled Mandatory DLRP + Enrolled Voluntary DLRP	Achieved Mandatory DLRP + Achieved Voluntary DLRP
Tier One Networks	176	1.55%	6	0.05%	1.60%	1.05%
Tier Two Networks	17	0.80%	1	0.05%	.85%	0.68%
All Networks Load Areas	193	1.44%	7	0.05%	1.49%	.99%

Table 4: Summary of Enrolled, Anticipated, and Achieved Impact

Assessment of DLRP Program Growth

While DLRP experienced an increase in both the number of customers participating and the total kW enrolled compared to 2013, the overall customer performance decreased. This resulted in a decrease in the total MW available in 2014 as compared with 2013.

⁹

Since there were no events in the 2014 Capability Period, voluntary performance couldn't be analyzed.

Table 5 below summarizes the load enrolled in DLRP in 2014 compared to the load in 2013 for the mandatory Reservation Payment Option component of the program, while Table 6 includes both Reservation Payment Option and Voluntary Participation Option enrollment combined. The tables show enrollment by tier and system wide. As shown in Table 5, the majority of the growth in load occurred in Tier One networks for Reservation Payment Option customers.

Given the significant increase in DLRP incentives, enrollment growth in DLRP in 2014 has been limited. However, in conversations with the currently active Aggregators, most indicated that they expect additional growth in DLRP enrollments in 2015. Additionally, feedback received from customers indicates that the decision to participate in DR is driven by the annual reservation incentive rate and not the possibility of earning additional incentives in three years.

	2013 MW Enrolled	2013 MW with Derating*	2014 MW Enrolled	2014 MW with Derating*	Change in MW	2014 vs. 2013 Change in MW with Derating % Increase (Decrease)
Tier One Networks	135	123	176	119	30%	(3%)%
Tier Two Networks	22	18	17	14	(25%)%	(22%)%
All Networks/ Load Areas	157	141	193	133	23%	(6%)%

Table 5: DLRP Mandatory Enrollment by Tier and System-Wide

* Derating based on Performance Factor (Values 0 to 1.0) and Voluntary enrollees excluded from table

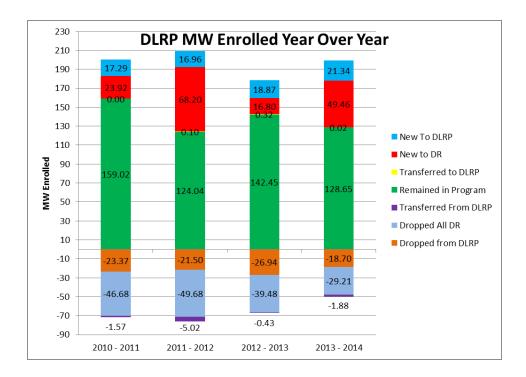
Table 6: DLRP Overall Enrollment by Tier and System-Wide

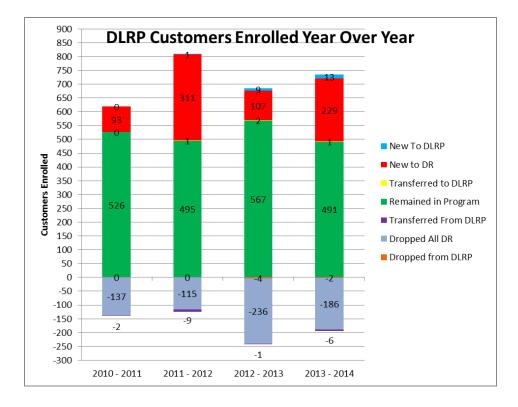
	2013 MW Enrolled	2013 MW with Derating *	MW	2014 MW with Derating *	Change in MW	2014 vs. 2013 Change in MW with Derating % Increase (Decrease)
Tier One Networks	153	123	182	125	19%	1%

Tier Two Networks	27	18	18	15	(-34%)	(-19%)
All Networks/ Load Areas	179	141	199	139	11%	(1%)

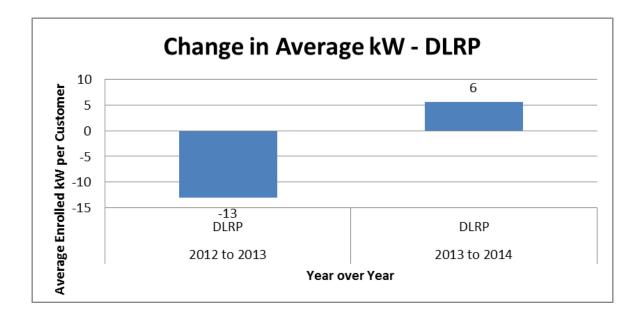
* Derating based on Performance Factor (Values 0 to 1.0). Voluntary enrollees are included in this table.

The following charts quantify the subcomponents of enrollments. Each subcomponent was described in Section 2 of the report. This information provides a general idea of the impacts of the incentive changes on the subcomponents of enrollments. Key findings are that in 2014 the Company experienced the fewest number of MWs leaving DLRP since 2011, and the number of newly enrolled MWs in DLRP was 96 percent larger than the previous year.





The following chart shows the year to year change in the average kW enrolled in DLRP per account. This chart reflects three years of pledged kW from accounts that participated for three consecutive years and may demonstrate that participants wanted to take advantage of the increased incentives and have developed greater ability to participate in, and consequently pledged more in 2014 compared to 2013.



4. COMMERCIAL SYSTEM RELIEF PROGRAM ("CSRP")

CSRP is open to participants in Zone J (predominantly the five boroughs of New York City) who can curtail load or bring on certain on-site generation to reduce their demand by a minimum of 50 kW individually, or to Aggregators/CSPs who aggregate greater than 100 kW of demand reduction with a minimum of 21 hour notice before a planned event. A Planned Event refers to the Company's request for Load Relief when the day-ahead forecasted load level is at least 96 percent of the Company's forecasted summer system peak. In 2012 the program was expanded to allow participation by SC11 customers who can increase export load to the system during events.¹⁰

Like the DLRP, the CSRP includes both a Reservation Payment Option and a Voluntary Participation Option. Participants enrolled in the Reservation Payment Option receive monthly reservation payments of \$10 per kW per month. During Summer Capability Periods that include five or more Planned Events, the reservation payment increases to \$15 per kW per month during

¹⁰ See Case 09-E-0115, Proceeding on Motion of the Commission to Consider Demand Response Initiatives, Order Adopting with Modifications Tariff Amendments Related to Demand Response Programs, issued and effective March 15, 2012, p. 8.

months in which by the end of the month there have five or more cumulative Planned Events in the network. Payment for participation during Unplanned Events is \$6 and is based on kWh reduced during the event. The customer is required to respond to a CSRP Planned Event for a four-hour period, with the time of the event dependent on the customer location.

In 2014 the number of call windows in CSRP increased from two to four. The increase in the number of windows allows the Company to better target network peaks, thereby improving the effectiveness of the program. In addition to the reservation payment, participants in the Reservation Payment Option receive a Performance Payment that is equal to \$1.00 per kWh reduced during an event. As described in Section 2, Reservation Payment Option customers Customers can also receive a Three-Year Incentive payment if they successfully complete three years of participation. The participants in the Voluntary Participation Option do not receive reservation payments, but they do receive a higher Performance Payment of \$3.00 per kWh reduced during a Planned event and \$10 per kWh reduced during an Unplanned event.

CSRP has environmental and performance requirements, including a 20 percent cap on the program resources enrolled via the use of on-site diesel or gas-turbine generation. Participating diesel electric generating equipment must have an engine of model year vintage 2000 or newer. Enrollment by such generators is accepted on a first-come, first-served basis. All other electric generating equipment is limited to the following: natural gas-fired rich burn electric generating equipment that incorporates three-way catalyst emission controls; natural gas lean-burn electric generating equipment with an engine of model year vintage 2000 or newer; or electric generating equipment that has a NOx emissions level of no more than 2.96 lb/MWh.

CSRP Program Costs

Table 7 summarizes the costs, by component, associated with CSRP in 2014.

Table 7: CSRP Program Costs

2014 CSRP Program Costs								
Component	Component Cost Percentage							
Customer Incentives	\$4,629,568	86%						
Program Operation Con Ed	\$223,607	4%						
Program Operation Vendor	\$326,225	6%						
Program Equipment	\$69,699	1%						
Program Marketing	\$161,194	3%						
M&V	\$1,667	0%						
Total Program Costs \$5,411,960 100%								

CSRP Cost Summary

Total costs for CSRP during the 2014 program year were \$5,411,960, which is more than the 2013 cost of \$3,665,173. Enrollment in 2014 increased by over 70% compared to 2013, largely due to the increased incentive rates and reduced penalties. The effective Reservation rate in 2013 happened to be the same as the 2014 rate due to the five events in July of 2013, which caused the Reservation Payment rate per kW to increase from \$5 to \$10 per kW for the remaining months of the 2013 Summer Capability Period.

Customer Incentives

Customer incentives consist of Performance and Reservation payments paid to customers for their participation and performance in events and tests. This year there was a test, but no actual events; voluntary customers are not tested. Table 7 below provides information about the CSRP test called in 2014. The cumulative total of customer incentives (Performance Payment plus Reservation Payments) amounted to \$4,629,568 (86 percent of the total program cost). In addition to Reservation payments, the Company is anticipating paying out the first Three-Year Incentive payment at the end 2016. For the 2014 year, approximately \$4,000,000¹² has been accrued for this purpose.

¹¹ Costs for November and December have been estimated.

¹² This figure was determined by taking the product of the kW reductions realized by customers (limited to kW amount that was approved for enrollment), the Three Year Incentive rate of \$10/kW per month and five months of participation. Customers whose performance factor was less than 80% were excluded. Since some customers may get disqualified from getting paid the Three Year Incentive in 2015 or in 2016, the estimated 2014 accrual may

<u>Program Operation – Con Edison</u>

Costs in this category consist of Company staff salary and overhead associated with CSRP management and support. This includes (but is not limited to) work performed by program managers, specialists and marketing staff. Program staff salaries are recovered through O&M budget, while other costs are recovered via the MAC. The costs associated with Program Operation were \$223,607 (four percent of the total program cost) calculated using a percentage of time allocated by staff and support personnel to CSRP activities, with their associated salaries, overheads and A&S costs.

Program Operation - Vendor

Costs in this category include expenses related to administrative functions performed by Con Edison vendors to manage meter data and payment calculation. For CSRP, the Program Operation costs totaled \$326,225 (six percent of the total program costs).

Program Equipment

The equipment costs incurred are associated with internal functions such as software licenses required to operate DR programs. Program Equipment costs amounted to \$69,669 (one percent of the total program cost).

Program Marketing

Marketing costs include all costs associated with the marketing initiatives required to inform and involve customers in the programs. The costs associated with program marketing were \$161,194 (three percent of the total program cost). This program's marketing cost component does not include Con Edison staff salary associated with time spent on marketing events and marketing material design, which is included in the Program Operation – Con Edison category.

Program marketing is also executed by third parties not under the control of the

be drastically different by the time it is paid out in 2016. As such, the 2014 accrual has been rounded off to the nearest million dollars.

Company; however, the Company continues to provide "background" customer education of the concept to support the third-party sales process. Further, actively engages aggregators, other stakeholders and customers to educate them as to the benefits of participating in the Company's programs.

Measurement and Verification

Costs included in this category are associated with the performance analysis conducted by outside consultants for the CSRP program. The Company has contracted with an outside vendor to calculate both individual and aggregate results for events and tests, and to generate various reports as necessary. These demand reduction results are used to determine both appropriate payment for customers and the aggregate effect on the Con Edison system. The costs to the system were generally operation and maintenance and amounted to \$1,667 (less than one percent of the total program cost).

CSRP Test and Event Performance

The purpose of CSRP is to encourage/persuade customers to reduce their demand for energy when the day-ahead forecast exceeds 96 percent of the forecasted summer system-wide peak. Program participants are notified at least 21 hours before a peak load shaving event is scheduled to begin and are expected to reduce load, or increase export in the case of SC11 customers, based upon their pledged kW. Accordingly, one of the goals of the program evaluation is to determine whether participants are providing the pledged demand reductions or export increases. The CBL for the day of an event is the estimate of the customer's load level had there been no event. The difference between the CBL and the actual load is used to determine the achieved performance.

This year Con Edison introduced new call windows for CSRP to more closely align test and event reductions with historical network peaking times. The new call windows for 2014 were 11:00 AM to 3:00 PM, 2:00 P.M. to 6:00 P.M., 4:00 P.M. to 8:00 P.M., and 7:00 P.M. to 11:00 P.M. Customers enrolling as SC 11 participants are viewed as supply resources instead of DR resources and are now required to export load during the 2:00 P.M. to 6:00 P.M. call window regardless of their network's call window. The introduction of more varied call windows may present a barrier to enrollment for customers who also participate in the NYISO Special Case Resource (SCR) program. If call windows overlap between NYISO and Con Edison DR programs, customers and Aggregators are able to maximize the benefits from concurrent program activations. This is the time when the maximum benefit of DR is recognized, both generation and T&D benefit. An assumed challenge for customers is the event of consecutive call windows being activated by Con Edison and the NYISO. This would occur when a customer is located in a night-time peak distribution network but is also committed to respond to the day-time peaking NYISO call. Customers may be forced to decide on enrolling in either the SRC or the CSRP due to their limitations to reduce load for extended periods of time.

Test Summary

Con Edison called a test event on July 8, 2014 for all call windows. The test event duration for each call window was one hour starting with the first hour of the call window. Approximately 117 MW were enrolled at the time of the test event and over 128 MW were reduced, resulting in an overall program performance factor of 110 percent. In 2014, the Public Service Commission added one more deadline, August 1 to start participation on September 1 for the 2014 season only. Only .93 MW of Reservation Option resources enrolled at that time. These resources were not tested because there were no sufficiently hot days in September to perform the test.

A summary of the test event results is shown in Table 8 below. All call windows reduced above the total pledge amount resulting in each call window to have performance factors over one.

Call Window	Test Hour	Enrolled	Reduction
11 a.m. – 3 p.m.	11 a.m 12 p.m.	61	63
2 p.m. – 6 p.m.	2 p.m 6 p.m.	27	31
4 p.m. – 8 p.m.	4 p.m 5 p.m.	13	16
7 p.m. – 11 p.m.	7 p.m 8 p.m.	17	18

Table 8: 2014 Summary of July 8th CSRP Test*

*MWs enrolled are reflective of the amount approved at the time of the test or event.

Performance data shown in Table 8 is based on achieved MW performance, which captures the MW performance as seen on the system. This may differ from the load performance used to calculate participant payments, which is capped between zero and 100 percent of the customer's network pledged level. The performance data is used to calculate a network performance factor for each customer/aggregator by dividing the performance achieved by the performance pledged. The performance factor is important as it is used to calculate payments and determine resource reliability.

Performance of the 2014 CSRP portfolio improved from the previous year. The overall performance factor for all resources in 2013 was 105 percent representing 64 MW compared to the 110 percent performance representing 128 MW in the 2014 Summer Capability Period. This represents a 72% increase in the amount of reduction available for DR events.

Since there were no CSRP events in 2014 no Voluntary Participation Option customers were called.

CSRP Measurement and Methodology

As with the DLRP, CSRP uses the CBL methodology to measure load reduction during all tests and events for both Reservation and Voluntary enrolled customers. Only four percent of customers enrolled in the Reservation portion of CSRP elected to have their performance measured with the average day CBL, the remaining customer performance was measured using the weather adjustment calculation for the test and all events. After the test event Con Edison was approached by one of its participating Aggregators with concerns on how performance for CSRP test events is measured. The concern stemmed from the fact that CSPR is a heat driven program, so customers are enrolled based on their DR abilities on hot days, while test events occur on days with more mild temperatures. Without the additional cooling load available, customers may not be able to perform on a test event as they would during an actual event. Con Edison is researching the validity of the Aggregator's concerns to determine if an adjustment to the CSRP test event CBL methodology is needed.

CSRP System Impacts

The goal of the Company's peak shaving programs is to reduce the level of network peak to reduce capital costs, with the associated benefit of reduced customer costs and improved reliability of service. While the peak shaving programs are in the early stages of development, as illustrated in Table 9 below, the Company is already seeing growth in the impact of the programs on the network peaks. The average network impact of 1.10 percent for 2014 is an increase over the 2013 level of 0.59 percent. The network impact increase is assumed to be due to growing customer education with how best to respond based on experience and the increased levels of incentive to act. Both of these facts appear to have contributed to increased enrollment and stronger customer performance. Full performance data for all networks is presented in the appendices at the end of this report.

Call Window	Enrolled Reservation Payment Option	Reservation Payment Option Network Impact	Enrolled Voluntary Participation Option	Voluntary Participation Option Impact	Reservation and Voluntary Option Impact	Performance Adjusted Reservation Option Impact
11 AM to 3 PM	61.41	1.77% ⁻	8.84	0.25%	2.02%	1.82%
2 PM to 6 PM	26.59	1.54%	3.25	0.19%	1.73%	1.80%
4 PM to 8 PM	13.08	0.59%	5.85	0.26%	0.85%	0.71%
7 PM to 11 PM	16.79	0.40%	9.65	0.23%	0.63%	0.43%
Total	117.879	1.02%	27.59	0.24%	1.26%	1.10%

Table 9: Summary of Enrolled Anticipated and Achieved Impact¹³

Assessment of CSRP Program Growth

For the mandatory option of CSRP, enrollment increased significantly in 2014 as seen in Table 10 below. In addition to the amount of load enrolled, the actual amount of load reduction available during events has increased when compared to the 2013. This increase in actual load

¹³ This total represent total load reduction enrolled in the program and will differ from total reduction at the time of the CSRP events due to a customer being unable to provide load reduction at that time. The customer was added back once it was again able to provide load relief.

reduction improves the reliability of the program as an operational resource during load peaking events. An analysis of Con Edison's DLRP shows that only 55 percent of its resources have enrolled in CSRP, which suggests there may be potential to enroll more of these customers in CSRP. Furthermore, in conversations with the currently active Aggregators, most indicated that they expect growth in CSRP enrollments in 2015. There are three potential channels from which to gain growth in CSRP enrollment – customers who participated in only DLRP and who will also enroll in CSRP, customers who will increase their 2014 pledged load reductions in 2015 and customers who have never participated in DR. As noted in this evaluation the Company is targeting all of these opportunities for growth with increased incentive levels and marketing.

	2013 MW Enrolled	with	2014 MW Enrolled	2014 MW with Derating	2014 vs. 2013 Change in MW Enrolled % Increase	Change in MM with
Daytime Networks	48.27	50.39	99.49	94.43	106%	87%
Nighttime Networks **	26.6	16.54	45.37	33.64	73%	103%
All Networks	74.86	66.93	145.46	128.07	94%	91%

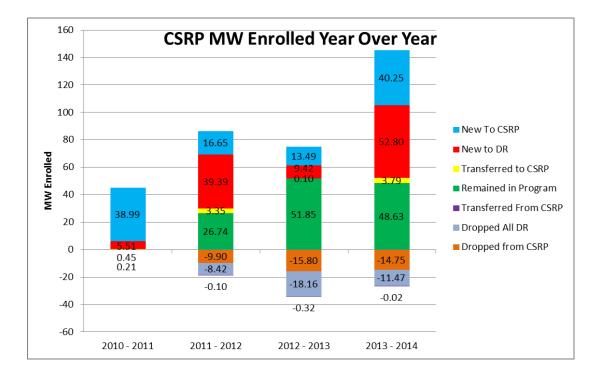
Table 10: CSRP Overall Enrollment by Call Window and System-Wide

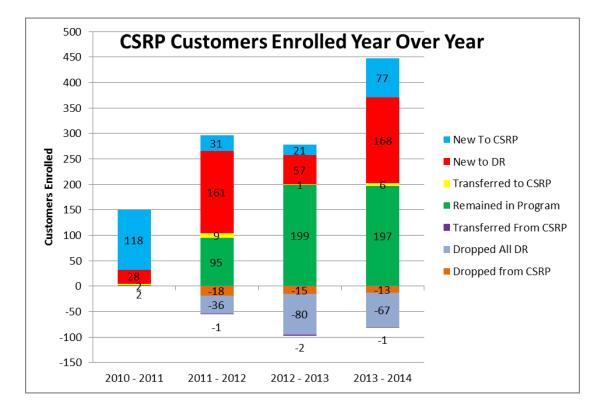
* Daytime Networks for 2014 are the 11 AM to 3 PM and 2 PM to 6 PM call windows combined

**Nighttime Networks for 2014 are the 4 PM to 8 PM and 7 PM to 11 PM call windows combined

The increase in enrollment and high level of performance resulted in a large increase in available load when compared to 2013.

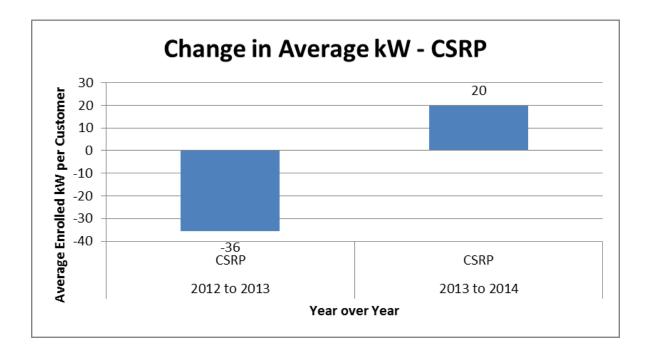
The following charts quantify the subcomponents of enrollments. Each subcomponent was described in Section 2 of the report. This information helps to provide a general idea of the impacts of the incentive changes on the subcomponents of enrollments. It is evident that in 2014, CSRP experienced the highest new enrolled MWs and the highest number of new customers who enrolled in the program as compared to any other year. This was the biggest driver for enrollment growth in 2014.





The following chart shows the year over year change in the average kW enrolled in CSRP per account. This chart reflects three years of pledged kW from accounts that

participated for three straight years and shows that participating customers wanted to take advantage of the increased incentives and pledged more in 2014 as compared to 2013.



As enrollment and performance continue to grow, the various benefits received from CSRP will continue to grow. Growth in available load reduction provides increased reliability, reduces the costs and environmental impacts associated with peaking generation, and becomes a larger driver of distribution system planning. The Company recognizes that additional enrollment growth is necessary for CSRP to have more substantial impacts on capital cost deferrals.

COMMERCIAL COST EFFECTIVENESS SUMMARY

Using the Company's cost effectiveness model (this model was described in the Company's Supplemental Filing submitted to the Commission on February 10, 2014), the Total Resource Cost ("TRC") test for the commercial DR programs yields a result of 1.69 and \$200 million in net benefit over a 10 year period. A TRC test above 1.0 confirms that a program is cost effective.

The incentives were designed on a combined basis for CSRP and DLRP and the programs are being evaluated in the same manner.

The assumptions in the model are the same as those used in the Company's Supplemental Filing. The only new assumptions are the following:

- Regional Greenhouse Gas Initiative CO₂ cost of \$1.99 per ton with a compounded growth rate of 19%;
- Number of DLRP events adjusted to more accurately reflect the number of events that were called historically;
- Actual 2014 data for the model's initial enrollment for 2014 and 10% compounded growth per year for 10 years;
- Program costs updated with costs incurred in 2014;
- Reservation payment adjusted based on 2014 performance and Three-Year Incentive payment based on 2014 actual performance;
- CSRP and DLRP overlap percentages updated based on 2014 enrollment overlaps; and
- 2013 NERA marginal avoided cost of capacity figures include transformer cost correction from Staff from the Company's electric rate case 13-E-0030.

5. SC 11 CUSTOMERS - EXPORT DEMAND RESPONSE

As required by the Commission's March 15, 2012 order, DR export capacity was accepted as load relief during peak shaving and contingency events in 2014. Only one SC 11 customer participated in the peak shaving program, and the contingency program. That customer enrolled a total DR export capacity of 11 MW for peak shaving and 10 MW for contingency events. This resource was called to perform for the contingency program test and, the peak shaving test. Performance was 55 percent for the contingency program test and 150 percent for the peak shaving test.

6. **NYPA**

As required by the Commission's February 16, 2010 Order Denying Petitions for *Rehearing and Addressing Petition for Clarification*, the Company is expected to include information in regard to NYPA's participation in the Company's DR programs.¹⁴

NYPA accounts are enrolled in DR through several different Aggregators. The following summary includes all NYPA accounts enrolled in DR.

DLRP						
Program/Test Date	# of Accounts Enrolled	kW Enrolled	kW Reduced during Test	Performance during Test		
2013 DLRP Test 6.26.13	61	10,385	7,417	71%		
2014 DLRP Test 6.26.14	25	11,218	11,885	106%		

Table 11: DLRP Enrollments and Performance for NYPA Accounts

Table 12: CSRP Enrollments and Performance for NYPA Accounts

CSRP						
Program/Test Date	# of Accounts Enrolled	kW Enrolled	kW Reduced during Test	Performance during Test		
2013 CSRP Test 6.25.13	1	75	42	56%		
2014 CSRP Test 7.8.14	20	22,432	26,089	116%		

7. UPDATE ON METER DATA ACCESS

The Company's Meter Data Access Plan provides commercial customers with 15-minute interval data on a close to real time basis during the Company's DR events. This access is

¹⁴ Case 09-E-0115, Proceeding on Motion of the Commission to Consider Demand Response Initiatives, *Order Denying Petitions for Rehearing and Addressing Petition for Clarification*, issued and effective February 16, 2010, p. 9.

provided via the customer portal known as Curtailment Manager, which is in turn a sub-site of Con Edison's Customer Care website. The Customer Care website also allows customers to export their interval meter data in Green Button format.

The Company has continued to work with the Curtailment Manager product, to improve the speed and quality of the data enabled via this portal.

8. COMMERCIAL PROGRAM CONCLUSIONS

Commercial DR programs experienced growth in enrollments in 2014, although approval late in the customer recruitment cycle of the incentive increases may have limited additional program growth. The Company continues to work with DPS Staff and other stakeholders to develop modifications in the timing of filings and approvals so that any program changes for the following year are approved sufficiently ahead of the start of the capability period to ensure that all parties, and most importantly customers, are comfortable with the implementation timeline. Such planning becomes only more important as operation of the Company's DR programs transitions from mainly manual operations handling to systematized operation through via a DR management system ("DRMS"), which requires advanced programing and/or re-configuration for any product rule changes. In such an operating environment, program rules will need to be finalized sufficiently in advance of the start of the capability period to allow system changes to be programed, tested and implemented and aggregators DR Aggregators and other market participants to market the programs and engage customers effectively.

Currently, customers have to manage their enrollment in DLRP knowing they may be called to participate in events at any time. This is particularly problematic for customers with low load levels and available response staff in the late night hours. The Company generally assumes that customers who participate in DLRP enroll a kW amount that is less than they would be able to provide at a peak consumption time in order to reflect that they will be unable to reduce demand as much during a lower consumption time, such as overnight. This assumption has been validated by conversations with stakeholders.

The Company has considered how to maximize the benefits of DLRP resources. When a contingency event occurs, the Company generally tries to maximize the impact of any DR resources by requesting customer response that coincides with the period of most demand on the network in question. Network events that occur during off peak hours generally do not result in the immediate call of customer resources. Instead, the resources are called at a later time that coincides with network peak in order to obtain maximum network impact.

Furthermore, the Company will work closely with the Commission and stakeholders to better develop a strategic outlook for the demand response programs. Such an approach, will provide a greater level of market certainty for potential participants and will assist with the cost effective deployment of marketing to animate participation and to minimize cost impacts associated with reconfiguration of tools such as the DRMS,

There were no actual demand response events in the summer of 2014, since weather was relatively mild. The Company relied on test events to assess customer performance, which was generally in line with historic levels.

Operation of the Commercial DR programs in 2015 will have unique challenges resulting from the ANRs going into effect for the first time. Introduction of ANRs will change the enrollment and settlement processes. The Company has been educating Aggregators about ANRs as well as modifying its internal tools and processes to prepare for the 2015 season.

9. DIRECT LOAD CONTROL PROGRAM ("DLC")

The DLC program is comprised of two components, the Residential Direct Load Control Program ("Residential" or "Residential Component") and the Business Direct Load Control Program ("Business" or "Business Component"). The DLC program supports electric system reliability and reduces operational costs by using communication enabled (radio paging and Wi-Fi) thermostats to control participants' central air conditioning units and reduce energy demand at times of critical system need. Customers have the ability at all times to over-ride any event the Company has called and are able to remotely control their central air conditioning units online through a personal computer or mobile device. The DLC program has been offered in the Company's service territory since 2002.

Con Edison provides and installs, without charge to the enrolling business or residential customer, a thermostat with Internet-enabled technology that becomes the property of the customer. In addition, participants are given a one-time incentive of \$25 or \$50 for enrollment in the residential and business programs, respectively. As of September 30, 2014, approximately 28,000 customers were enrolled in the program, using 35,000 thermostats that can provide 40 MW of peak load reduction (or capacity). The Company projects approximately 40 MW enrolled by year-end 2014. As a result of the mild 2014 summer, neither the NYISO nor Con Edison activated its DR programs. Con Edison called a test event on Monday, May 16, an 89-degree day.

A new, Bring Your Own Thermostat ("BYOT") offering was integrated into the residential program following approval of the Commission on August 1, 2014. The BYOT option allows customers to enroll a thermostat through a Service Provider, or thermostat manufacturer, for a one-time sign-up bonus of \$85. In addition, the Company offers an annual payment of \$25 for each summer period in which the company can verify that the customer participated in no less than 50 percent of the aggregate event hours that the Company activates. The BYOT option offers customers further choices with thermostat equipment, flexibility, and control. This approach leverages existing marketing done by various thermostat manufactures

and potentially removes barriers to DLC participation by customers that either already have a smart thermostat or are in the process of purchasing one of their choice.

Program Technology Overview

Two-way Paging Thermostats

Since program inception DLC has exclusively utilized a two-way paging technology thermostat, with DLC events initiated through the manufacturer's proprietary system. The Company continues to maintain this system in an effort to avoid stranded assets and maintain DR capacity, as these thermostats are no longer available.

Wi-Fi Thermostats

In 2013, the Company began installing Wi-Fi thermostats. The Wi-Fi thermostats connect to the customer's existing Wi-Fi router with no separate hardware needed. The Wi-Fi thermostats provide more reliable two-way communication, which allows the Company to more accurately monitor DR event participation and verify load reduction.

Behavior Modification/ Energy Portal to Encourage DR Event Participation

When Con Edison began installing Wi-Fi communicating thermostats in 2013, the Company began engaging residential customers through a new platform. Con Edison has provided an app and energy portal, which provides customers with energy savings tips to increase customer education and awareness through push notifications. This energy portal also provides energy coaching and behavioral modification messaging designed to help the customer save energy year round as well as increase DR event participation. The company has been unable to quantify the impact of this initiative due to no DR events being called in 2014.

Program Marketing

DLC used a strategic, analytical based, targeted field marketing approach to recruit participants, which has led to a significant increase in residential customer enrollment and will continue to be refined going forward. As seen in Table 13 below, the residential participation rate doubles at less than half the cost.

The Company's Implementation Contractor (IC) employs a strategic marketing database platform to drive all aspects of customer recruitment and engagement. The focus on data-driven marketing is the key reason for the current marketing success. Predictive models help the program by optimizing marketing campaigns, prioritizing customer segments, and predicting future response rates. Reducing the audience size to those customers who would qualify for the program and have a higher probability to respond translates into reduced marketing expense and increased customer satisfaction scores.

These predictive solutions can help with knowing who to target, what to say, and when and where to invest marketing dollars in order to achieve a desired customer reaction. This targeted marketing is informed by insights gained from segmentation and other means, and further driven by several areas of advanced analytics including predictive modeling, customer value identification, and forecasting.

The following chart summarizes the program's marketing results and the implementation of the strategic targeted marketing approach deployed on April 30.

Campaign	Deployment Date	Quantity	Participation Rate	Participants	Cost Per Participant
Residential Direct Mail (Non-Targeted)	January 13 (3 drops)	83,000	.50%	415	\$120
Small Business Direct Mail (Non-Targeted)	February 27	12,325	0.26%	32	\$231
Residential	April 30	126,677	1.22%	1545	\$49

Table 13: DLC Marketing Efforts

Direct Mail	(3 drops)				
(Targeted)					
Cross-Marketing Email	May 20	1.6MM	0.02%	320	N/A*
Cross-Marketing Email	July 7	1.6MM	0.02%	320	N/A*

*Costs associated with Cross-Promotional Emails cannot be determined as they are part of the Company's overall awareness campaigns to customers.

DLC Program Costs

As indicated on Table 11 below, the total program costs incurred in 2014 are expected to be under the \$4 million allocated budget. While the Company's internal program management costs are not funded through the MAC and are not included in the budget, additional program support operations are included in the TRC benefit cost analysis.

Table 14: DLC Program Costs 2014

DLC Program Costs 2014						
Component	2014 Estimated Costs	Percentage				
Program Implementation Vendor/ Other	\$ 2,077,344.36*	56%				
Program Equipment	\$ 1,352,955.30	37%				
Program Marketing	\$ 160,285.48	4%				
Customer Incentives	\$ 92,625.00	3%				
Total Program Costs	\$3,683,210.14	100%				

*The following table assumes that the \$350,000 allocated to the BYOT concept will be spent in 2014.

Program Implementation – Vendor/Other

Costs in this category include expenses related to program operations and management functions performed by Con Edison's vendors. The costs in this category will be approximately \$2,077,344.36.

Equipment

Program equipment costs refer to the thermostat and other equipment related to installing the thermostat, website hosting and communication fees. The costs in this category will be approximately \$1,352,955.30.

Program Marketing

Marketing costs include all costs, including Con Edison and IC, associated with the marketing initiatives required to inform and involve customers in the program. These costs include, but are not limited to, program literature, direct mailings, website development, and promotional events. The costs in this category will be approximately \$160,285.48.

Customer Incentives

Customer incentives consist of all payments to both residential and small business customers for program enrollment. The costs in this category will be approximately \$92,625.

Challenges/ Non-Responsive Thermostats

Although the Company has transitioned to a Wi-Fi thermostat technology for increased communication reliability, currently over 31,000 thermostats are deployed that use paging technology, a communication method which is rapidly becoming extinct. The following chart depicts the status of these paging thermostats as of June 6, 2014.

Total Paging Stats in field	One-Way	Two-Way	NRT	% NRT	% Confirmed Available	
31684	3440	17460	10784	34.04%	55.11%	
One way communication thermostats can not be confirmed as available because the system						
is unable to receive a confirmation signal from the device						

A thermostat that stops communicating with the system for an extended period of time is assigned a Non-Responding Thermostat ("NRT") status. As shown in the chart above, 34 percent of the program's paging thermostats were non-responsive as of June 2014.

The Company tests communications with the paging thermostats weekly during the summer period. When a customer reports a non-communicating thermostat, the Company will generate a service call. In the case of a failed thermostat, the paging thermostat is replaced with a Wi-Fi thermostat, allowing the customer to stay in the program and continue participating in DR events.

Con Edison will replace 850 NRT paging thermostats in 2014. Without additional funding, Con Edison will quickly be unable to expand the program further while maintaining and updating the expired technology.

The DLC program faces its greatest challenge in the area of maintaining operational capacity. Operational capacity can be defined as the expected electric demand reduction capable of providing load relief when and where necessary. Maintaining and increasing the program's operational capacity is hampered by an increasing number of NRTs resulting from the aging Legacy Thermostat technology as well as the aging paging communication system and technology. Although the Program continues to meet its established goal of 3,500 new annual Wi-Fi communicating thermostats, program growth is being offset by increasing numbers of Legacy Thermostats that become NRTs. Between 2011 and the 2014 during the summer capability months (May through September), the number of NRT's grew over 400 percent from less than 2,500 to over 10,000 resulting in a loss of 12 MW of capacity out of the 39 MW currently enrolled in the program, leaving only 27 MW of operational capacity.

Customer Service

Con Edison has retained call center services for both residential and business DLC customers, including, but not limited to, helping customers apply for the DLC program, answering scheduling questions, and handling incentive check inquiries. The IC call center is available 24 hours a day, seven days a week. For 2014, the Company estimates that 20,053 calls will be received.

Customer Satisfaction

After the summer season a customer satisfaction survey is being conducted with 460 residential and business participants, chosen at random. Unlike in previous years, in 2013, the Company used telephone surveys instead of written surveys in an attempt to attain more realistic and accurate results. The telephone surveys were conducted in November 2013, using sample records provided by Con Edison. Qualified respondents were involved in the decision to participate in the program. The survey utilized a 1 to 5 Overall Satisfaction Scale and considered a customer as satisfied if it gave the program a satisfaction score of "4" or "5." Key outcomes of the 2013 survey include:

• A wide majority of those surveyed report being satisfied with the program (77 percent

Residential and 69 percent Business);

- The most common reasons to participate in the program were: the free thermostat (38 percent Residential and 22 percent Business), managing energy use (33 percent Residential and 31 percent Business), and helping ensure reliable power for their community (14 percent Residential and 0 percent Business);
- A minority of participants have used the Internet programming feature (22 percent Residential and 23 percent Business), and even less have used the mobile phone programming feature (2 percent Residential and 0 percent Business); for the Internet feature, the primary reasons were lack of understanding (27 percent Residential and 23 percent Business) and not interested (25 percent Residential and 18 percent Business); similar reasons accounted for customers not using the mobile phone features; and
- A number of participants reported contacting the call center (17 percent Residential and 14 percent Business), with the majority of those that contacted the call center reporting that the call center was helpful (91 percent Residential and 83 percent Business).

DLC Cost Effectiveness Summary

DLC Total Resource Cost Test

The 2014 DLC program was cost effective based upon the Company's use of the Freeman, Sullivan, and Co. TRC test to the combined Residential and Business Components. In order to perform the TRC analysis, the following assumptions were made:

- The analysis includes actual benefits and costs from January through September and estimated figures for the months of October, November, and December 2014;
- Thermostats are estimated to have a 10-year lifespan;
- TRC calculations include program operations administration, implementation, maintenance and marketing costs, installation costs were calculated using 2014 adjusted installation and equipment costs, and maintenance costs were calculated using 2014 operation and maintenance costs for all active thermostats as well as estimates of operation and maintenance costs for the remaining life of all active thermostats; and
- The capacity benefits were based on the 2013 NERA marginal avoided cost of capacity.

The DLC program evaluated cost effectiveness for two separate scenarios, one included and one excluded the value of NRTs. At the time of this analysis, 10,000 NRTs were removed from the thermostat file and benefits associated with these NRTs were disregarded. Despite the decrease in available thermostats for the program, cost effectiveness has increased from 2013 as a result of the program's improved marketing efforts, lower costs, and higher installations.

Total: Residential Component + Business Component	
Costs of the Program	\$14,430,765
Benefits of the Program	\$41,072,903
Net Present Value of the Total Resource	\$26,642,138
Benefit-Cost Ratio of the Total Resource	2.85

Table 15: DLC Residential and Small Business TRC including value of NRTs

Total: Residential Component + Business Component	
Costs of the Program	\$14,341,180
Benefits of the Program	\$29,930,234
Net Present Value of the Total Resource	\$15,589,054
Benefit-Cost Ratio of the Total Resource	2.09

Table 16: DLC Residential and Small Business TRC excluding value of NRTs

DLC Test and Event Performance

During the 2014 summer peak period, the Company did not call any contingency or peak-shaving events. Con Edison called one test and, due to a mild day, the Program only achieved a .371 kW per thermostat reduction for the Residential component and a .667 kW per thermostat reduction for the Small Business component.

Program Attrition

Customers leave the program or choose to have their thermostats removed for a variety of reasons. A thermostat that stops communicating with the system for an extended period of time is assigned a NRT status. The DLC program administrator will then undertake efforts to contact the customer to determine why the thermostat is not communicating. If the administrator is unable to contact the customer after multiple attempts, the customer is classified as a "Dropout" and is included in the attrition calculation. If one of these Dropout customers calls the call center for assistance, and the communicating problem can be resolved, the thermostat is reactivated and returned to active status in the program. If the customer calls the call center and it is determined that its thermostat has failed, the customer will have its thermostat replaced with a new, Wi-Fi communicating thermostat. The Company estimates that 850 paging thermostats will be replaced in this manner during the summer 2014.

When the program administrator is able to make contact with a customer whose thermostat has been categorized as an NRT, it may be determined that the customer had the thermostat removed by its own contractor without notifying the program administrator or the Company. In these cases, the thermostat and customer are noted as Dropouts. Although the thermostat is the customer's property, whenever possible the thermostat vendor removes the customer's thermostat, with the customer's approval, and replaces it with a lower cost simple thermostat. The Program thermostat is either recycled back into the Program or disposed of properly. Table 16, below, summarizes program activity regarding Program attrition.

The Company projects that 1,000 residential and business thermostats will be removed from the Program, 1.89 percent of the Small Business DLC enrollment and 2.79 percent of the Residential DLC enrollment.

Activity	Residential	Business
Drop Outs	472	82
De-Installs	376	140
Total Thermostats Removed	808	192
Attrition Rate	2.79%	1.89%

Table 17: DLC 2014 Program Attrition*

* Includes estimates for Oct, Nov, Dec

DLC Program Summary

The DLC program had a largely successful year, particularly for the Residential Component, where a total of 3,335 new thermostats (111 percent of goal) will be installed. The Company expects that for its Business Component, a total of 185 new thermostats (37 percent of goal) will be installed. The business sector continues to be difficult to penetrate due to high turnover rates and businesses reluctance to interfere with customer comfort. In addition, the Company expects to replace 850 failed paging thermostats with Wi-Fi thermostats by year end, 82 Commercial and 768 Residential. In total, the Company projects to install a total of 4,396 thermostats in 2014. Going forward, the Company would like to reassess its market potential for Residential and Small Business customers. The Company has incorporated several new initiatives and will closely monitor the performance of behavior modification, customer engagement and the integration of new devices through BYOT. We will also monitor the challenges associated with NRTs and the impact that has on our DR capacity and continue to evaluate the integration of newer technologies as they come to the market in order to improve DLC.

10. RESIDENTIAL SMART APPLIANCE PROGRAM ("RSAP") EXTENSION – COOLNYC

RSAP was originally approved in 2009 as a pilot intended to extend DR offerings to a broader residential population through the integration of "smart" curtailable appliances.¹⁵ The concept was that participants would receive a rebate for each smart or DR-ready appliance installed and, in return, the Company could curtail appliances as needed during system critical conditions. Since market availability and the adoption of smart appliances were slower than anticipated, the Company explored alternative strategies to connect with customers' homes.

- Between 2010 and 2012, RSAP targeted 300 customers with Automated Meter Reading ("AMR") meters and implemented a Tendril home area network ("HAN") solution. This proved cost prohibitive to test at a larger scale.
- In 2011, as part of a research and development ("R&D") initiative, the Company
 partnered with a vendor to jointly develop a prototype technology to enable customers to
 remotely operate and monitor their room air conditioner ("RAC") via the internet. The
 Company was able to use the technology to remotely turn off (or "cycle") RAC loads
 either on command or in response to ambient room temperature. The technology (the
 "Modlet") consisted of a ZigBee¹⁶ to USB internet-connected plug control device with a
 thermostat control. A major drawback of this early Modlet version was that it required

¹⁵ Case 09-E-0115, Proceeding on Motion of the Commission to Consider Demand Response Initiatives, *Order Adopting in Part and Modifying in Part Con Edison's Proposed Demand Response Programs*, issued and effective October 23, 2009.

¹⁶ ZigBee is a communications protocol, often used in home automation applications, for sensors and networks requiring low data transfer and low power consumption.

the customers' computers to remain on at all times in order for the RAC to be controlled and monitored remotely. A 500 RAC proof of concept pilot was conducted in a mastermetered building.

- In March of 2012, the Company received Commission approval and funding to expand the 2011 proof-of-concept pilot as an extension of RSAP.¹⁷ RSAP branded the Modlet based DR Program "CoolNYC" and deployed 10,000 RAC Modlets to 3,916 customers, largely through mail distribution.¹⁸ The Modlets distributed included both first generation and an improved second generation Modlet with a ZigBee to Ethernet Gateway interconnection. The Gateway interconnection eliminated the need for customers to keep their computers on at all times to remotely control and monitor their RAC.
- In April 2013, the Commission approved and funded \$4 million over 2 years for CoolNYC to continue as a pilot with the goal of continuing to refine the product offering while remaining open to other technology options.¹⁹ This translated into the deployment of an additional 10,000 Modlets, now regularly referred to as "SmartAC kits,"²⁰ during 2013 and 2014 with the objective of increasing the impact and reliability of the RAC load as a DR resource. The Program introduced a variety of improvements, including 1) a third generation Wi-Fi SmartAC kit which is easier to install and connects directly to the internet via the customer's home router; 2) machine-learning DR platform software to enable the vendor to custom-tailor DR events based on learned customer preferences; 3) an installer-based distribution method for devices; and 4) two new pilot initiatives to improve DR participation and expand the program offerings, including "gamification" to further engage customers during DR, and the integration and testing of one

¹⁷ Case 09-E-0115, Proceeding on Motion of the Commission to Consider Demand Response Initiatives. *Order Adopting in Part and Modifying in Part Con Edison's Proposed Demand Response Programs*, issued and effective March 15, 2012.

¹⁸ Under the brand "CoolNYC," the Company provides participants with a free "Modlet" device to enable window air-conditioning units to respond during DR events.

¹⁹ Case 09-E-0115, Proceeding on Motion of the Commission to Consider Demand Response Initiatives. *Order Adopting in Part and Modifying in Part Con Edison's Proposed Demand Response Programs*, issued and effective April 19, 2013.

²⁰ The Company is now uniformly using the "SmartAC kit" terminology to more accurately reflect that multiple pieces of equipment are included in the kit rather than just the Modlet.

manufacturer's "smart" web-enabled RAC appliance into the DR platform and program – a Bring Your Own Device ("BYOD") model.

CoolNYC Program Improvements

<u>Wi-Fi SmartAC kit</u>

In 2014, CoolNYC introduced a Wi-Fi-enabled SmartAC kit, which is more user-friendly to install than the previous generation, and connects to the internet directly via a Wi-Fi router, a significant upgrade from prior ZigBee to USB devices (which required a computer to be on at all times) and ZigBee to Gateway devices (which, although they had improved connectivity, were more complex to set up). Customers without in-home Wi-Fi could continue to receive Zigbee-based equipment. Of the 4,475 devices net distributed in 2014, 2,952 (66%) were Wi-Fi, and 1,523 (34 percent) were Zigbee Ethernet. As part of the 2014 Program, no USB Zigbee SmartAC kits were deployed. The USB system is still supported by the vendor's platform, but will not be distributed going forward. The Company will also look for opportunities to move existing USB users to more up-to-date technologies (either Zigbee Ethernet gateway or Wi-Fi). With the introduction of the Wi-Fi SmartAC kit, the CoolNYC vendor developed an entirely new server and software back-end to support the product.

Machine Learning Software

The vendor's cloud-based online platform now features machine-learning and big data computing to enable custom-tailored DR event calling, i.e. customized temperature setbacks, based on a calculated understanding of customer preferences and tolerances, with customer comfort and increased DR participation being the main focus. In 2014, CoolNYC tested a customer-tailored DR strategy, which adjusted the temperature set back based on the customer's tendency to opt out. Those who did not opt out frequently were assigned larger offsets than those who had a tendency to opt out.

<u>Mobile Phone App</u>

The smartphone application or "app" continues to be a valuable resource for customers to engage with their devices on the go, to remotely schedule and operate their RAC, and to monitor real-time and historical usage for better bill management. The app also enables the Company to communicate directly with customers via their smartphones. The app has evolved to be more user-friendly and functional in response to industry trends and direct user feedback. For 2014, the app helped simplify the Wi-Fi commissioning process. In 2014, as part of a "gamification" pilot to increase customer engagement and performance during DR, the smartphone app also became the user interface of a built-in game with raffles.

Use of CoolNYC Installers & Collection of Credit Cards

The 2014 Program also tested new implementation strategies to address device setup and online platform-connected success rates, including a sign-up process that offers the customer the option to have a "free in-home installation" if they had requested 2 or more SmartAC kits. Previously, installations were largely reserved for customers who had requested 3 or more kits. In 2014, Of the 4,475 devices net distributed, 2,025 were installed by CoolNYC Program installers (45 percent).

The 2014 Program also tested a new enrollment process where credit card information was collected for new enrollers who would be direct-mailed devices (as opposed to those who received a free in-home installation). Those customers who provided credit card information also provided a signed a waiver giving the Program permission to charge accounts up to the full retail price of the device if the mailed devices were not setup within a specified time period. At this time, the Program has opted not to charge customers who have not yet setup devices.

The use of installers and the collection of credit card information at signup greatly contributed to an improvement in the percentage of distributed number of SmartAC kits installed and setup for DR capability. Of the 4,475 devices net distributed in 2014, 3,297 SmartAC kit thermostats were setup (74 percent).

Table 18: 2014 CoolNYC Device Distribution Summary

		Net Distributed 2014						
	Mail Distributed (provided credit cards)	(Mail tributed Installed by did not CoolNYC rovide Program credit Staff cards)		1	Total		
Wi-Fi kits	1,511		87		1,35	54	2,952	
Gateway kits	575	277		67		1	1,523	
Total	2,086	363		363 2,0		25	4,475	

Table 19: 2014 CoolNYC Device Setup Summary (Thermostats)

	Setup 2014 (as of 9/8/2014)					
	Mail Distributed (provided credit cards) Mail Distributed (did not provide credit cards)		Installed by CoolNYC Program Staff	Total		
Wi-Fi kits	852	41	1,336	2,229		
Gateway kits	336	99	633	1,068		
Total	1,188	140	1,969	3,297		

Bring Your Own Device ("BYOD") – Friedrich Smart AC Pilot

During the summer of 2014, the Company began a pilot process aimed at understanding the potential for enrolling natively web-connected "smart" RACs into DR Programs. Utilizing

R&D funding, the Program partnered with Friedrich, the manufacturer of the smart RAC unit "Kühl," to integrate 310 customer-purchased Wi-Fi enabled units into the existing CoolNYC Program DR platform. A total of 245 customers were offered a \$50 rebate per smart RAC to enroll in DR and the opportunity to receive a DR participation incentive of \$25 per year. The technology integration was successful. The overall operation of the pilot showed the potential to leverage disperse customer purchasing activities to enroll native web-enabled RACs into DR Programs. Further details and event performance numbers are presented in the section titled, CoolNYC Event Performance, and Tables 25.

"Gamification" Incentive Pilot

During the summer of 2014, Con Edison launched the "2048 Gamification Pilot" within the CoolNYC Program with 200 new enrollees. The Company and the Program partnered with Cornell University to develop the game – a mobile application that interfaces with customers participating in CoolNYC Program DR events. The game takes place during a DR event 4-hour window and the customer forgoes the traditional Program \$25 annual thank you for DR participation in exchange for the opportunity to participate in raffles throughout a DR event, with greater levels of reward the longer the customer participates in the DR event; i.e., higher stakes, greater potential reward for customers; and lower overall participation incentive payouts for the utility. Further details and results are presented in the section titled, CoolNYC Event Performance, and Table 26.

CoolNYC Program Costs

Table 20: CoolNYC Program Costs

CoolNYC 2014 Program Costs						
Component*	Cost	Percentage				
Customer Incentives	\$61,775.00	6%				
Program Administration - Vendor	\$426,832.43	41%				
Program Equipment	\$422,385.53	41%				
Program Marketing	\$123,570.64	12%				
2014 Program Costs	\$1,034,563.60	100%				

* Does not include Con Edison Program Administration or MV&E.

Customer Incentives

For the 2014 program year, \$25 e-gift card incentive payments were made to 2,471 customers totaling \$61,775.00 for having a communicating SmartAC kit thermostat during the summer.

<u>Program Administration – Vendor</u>

The Program administration – vendor cost of \$426,832.43 is for expenses associated with CoolNYC Program implementation provided by the vendor, ThinkEco Inc., under contract with Con Edison. ThinkEco provides the energy management technology and associated services. These costs include administration, installation support, software hosting, online engagement and customer care.

Program Equipment

Program equipment costs of \$422,385.53 include the hardware and software for the SmartAC technology

Program Marketing

Marketing costs of \$123,571.64 include all costs associated with the marketing initiatives required to inform and involve customers in the Program. These costs include, but are not limited to: CoolNYC literature, email and social media campaigns, Program enrollment website and educational videos.

CoolNYC Event Performance

2014 experienced a relatively mild summer, resulting in no official DR events. Despite the lack of formal events, the Program did call three test events (8/27, 8/28, and 9/4) during which an average of 1,691 customers (4,084 RACs) participated in each event. The average outdoor temperature during each of the three test events was 82, 80, and 78 degrees Fahrenheit, respectively. The second test event was conducted during daytime hours (2-6 PM), to better observe response during the day-time system-wide peak. During the three test events the Program tested its machine learning software to implement custom-tailored DR event calling. Additionally, the Program implemented the two pilots, BYOD and Gamification, during each of the test events.

The average kW percentage reduction from baseline for all RACs reporting online was within range of the 2013 events; i.e. a 22 percent average demand reduction from baseline per event (consistent with KEMA's approved calculation methodology).²¹ The 26 percent demand reduction during the daytime event was higher than the average demand reduction during the other two evening test events during 2014.

Event	Date	Test Event Hours	# Customers Online	# Modlets Online	kW Reduction Achieved**	kW Reduction from Baseline, %
Test Event	08/27/2014	7-11 pm	1682	3942	223.78	22%
Test Event	08/28/2014	2-6 pm	1623	4104	124.22	26%
Test Event	09/04/2014	7-11 pm	1767	4206	186.04	19%
2014 Test Event Average			1691	4084	178.01	22%

The demand reductions per RAC for 2012, 2013, and 2014 were 0.402, 0.220, and 0.055 kW respectively with a three year average of 0.225 kW. During 2014, while percentage reductions were consistent with previous years' performance, actual wattage reductions were small due to the mild outdoor temperatures and do not provide useful data for furthering the understanding of potential impact through load control on plug-in AC units.

Table 22: 2014 CoolNYC Average Demand Reductions

Demand Reductions	2012	2013	2014	3 Year Average
Per AC	0.402 kW	0.220 kW	0.055 kW	0.225 kW
Per Customer	0.945 kW	0.486 kW	0.149 kW	0.526 kW

* 2014 Average AC per home is 2.6

²¹ See: Case 09-E-0115, Proceeding on Motion of the Commission to Consider Demand Response Initiatives. *Report on Program Performance and Cost Effectiveness of Demand Response Programs*, issued and effective December 1, 2013.

Event Date	Method	Demand Reduction
7/15/13 Monday	Set 82 F	23%
7/16/13 Tuesday	Set 82 F	27%
7/17/13	+ 5 degrees	24%
7/18/13 Thursday	+ 5 degrees	22%
7/19/13 Friday	+ 5 degrees	16%
8/22/13 Thursday	+5 degrees	32% (New Setups)
	+5 degrees	25% (less than 3 opt
	+3 degrees	outs)
8/27/14	+2	21%
Wednesday	+4	22%
* test event	+6	26%
	2048 Control (+5)	15%
	2048 Experimental (+5)	32%
	All CoolNYC	22%
8/28/14 Thursday	+2	13%
* test event	+4	23%
	+6	40%
	2048 Control (+5)	29%
	2048 Experimental (+5)	46%
9/04/14 Thursday	+2 Control	18%
* test event	+2 Experimental	3%
	+4 Control	10%
	+4 Experimental	16%
	+6 Control	21%

Table 23: 2013-2014 Summary of CoolNYC Demand Reductions

Machine Learning Results:

In 2014, the latest machine-learning algorithms and software technology were utilized to develop temperature offsets based on collected data regarding learned customer preferred temperatures and customer tendencies to opt out of DR with different temperature offsets. The software is used to detect patterns in customers' peak time AC use (on both event and non-event days). During the first two test DR events of the summer, customers were randomly sent a +2, +4 or +6 degree offset, as part of the process of understanding customers' sensitivity to different temperature levels. Based on the results of the first two events, as well as customer-specific behavior throughout the course of the summer, the vendor optimized the algorithm. On its third test DR event (on 9/4/2014), based on the algorithm, customer specific +2, +4 or +6 offsets were assigned to 60 percent of the population, an "experimental group," and randomly assigned +2, +4 or +6 degree offsets to the other 40 percent of the population to serve as a "control group."

The principle is to provide gentler offsets (+2 or +4) to customers who would be more likely to opt out of DR during an event if the offset were higher and more aggressive offset (+6)to customers who are more tolerant to larger setbacks. The results are as follows:

- The +6 Experimental group (with 35 percent demand reduction) performed better than the +6 Control group (with 21 percent demand reduction), with 9.4 percent more time in DR and 11 percent fewer opt outs.
- The +2 Experimental group (with 3 percent demand reduction) performed worse than the +2 Control group (with 18 percent demand reduction). This was expected, as the +2 Experimental group contains low DR performers overall; the +2 Control group contains a random sampling of high, mid, and low DR performers. The Experimental group spent 8.8 percent less time in DR and opted out 7.4 percent more than the Control group.
- The +4 Experimental group (with 10 percent demand reduction) performed worse than the +4 Control group (with 16 percent demand reduction). This was also expected, as the +4 Experimental group contains low to mid-range DR performers overall; and the +4 Control group contains a random sampling of high, mid, and low DR performers. The Experimental group spent 1.0 percent less time in DR and opted out 3.7 percent less than the Control group.

Table 24: 2014 Results of Machine Learning on Test Event 9/4/2014 vs. Control Group

	Time in DR Relative to Control Group	Opt out rate Relative to Control Group	Proportion of assignment
2 deg offset	-8.8%	-7.4%	20.9%
4 deg offset	-1.0%	3.7%	30.5%
6 deg offset	9.4%	11.0%	48.5%

Friedrich Smart AC – BYOD Pilot Results:

During 2014 there were four DR test events for the BYOD Friedrich Smart AC Pilot. The results from this pilot are shown in the table below (and not included in the overall CoolNYC results). Load reductions are still being evaluated; however, as presented below, the average time spent in DR was approximately 85 percent of the 4 hour event.

Table 25: 2014 Results of CoolNYC BYOD - Friedrich Smart AC Pilot

Event Date	Time	Degree	Total ACs	Avg. time in DR (min)
5-Aug	7-11pm	5	271	204
27-Aug	7-11pm	5	295	205
28-Aug	2-6pm	5	296	213
4-Sep	7-11pm	5	295	208

Gamification Pilot Results:

The preliminary results of the Gamification Pilot are promising, demonstrating increased levels of DR participation with fewer DR opt outs (19 percent fewer on average) and increased time spent in DR (8 percent more on average). The demand reductions from the experimental group (with 35 percent average demand reduction across the three test events) greatly outperformed the control group (with 21 percent average demand reduction across the three test events).

Table 26:	2014 Results	of CoolNYC	Gamification Pilot
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	Difference between trial and control time in DR	Difference between control and trial opt out rate
8/21/2014	3.6%	14.4%
8/27/2014	14.8%	23.9%
9/4/2014	5.8%	19.7%
Average	8.0%	19.3%

CoolNYC Marketing & Outreach

The 2014 Program was greatly oversubscribed, with 14,648 RAC sign-ups for 4,475 available devices. This success can be greatly attributed to the Program's active marketing and outreach efforts.

Table 27: 2013-2014 CoolNYC Sign-Up, Distributed, and Installed Numbers

Description	ACs	Customers
2013 Sign-ups	7,010	2,920
2013 Distributed	5,370	2,090
2013 Installed	3,015	1,400
2014 Sign-ups	14,648	6,051
2014 Distributed	4,475	1,649
2014 Installed	3,439	1,458
Total Setups (2013 and 2014)	9,942	4,821

<u>Marketing</u>

To support recruitment efforts, marketing materials from last year were updated and new ones were created, leveraging all three brand assets: CoolNYC, Con Edison Green Team, and the vendor, ThinkEco. As in past years, the Program hub was hosted at

www.CoolNYCprogram.com, and serves as both the central repository of information as well as

the vehicle for online sign-ups. The 2014 site was rebranded to have a sleeker look and incorporated new social media elements, including presenting Twitter messages sent to <u>@CoolNYCprogram</u> and focusing customers on ongoing CoolNYC campaigns.

Program Outreach

Program recruitment was focused on generating media buzz through targeted public relations, and supporting this buzz through online outreach efforts. CoolNYC was able to gain attention in national television, radio, and print such as ABC News, Fox & Friends, Wired, local television, news articles and blogs such as NY1 and Gothamist. In addition, the Program promoted eligible customers to sign up for the CoolNYC Program through the Con Edison website <u>www.conedison.com</u> and billing envelopes. The vendor's web-based analytics indicate that conedison.com was the source of at least 3,550 of the 14,648 ACs that signed up for the 2014 Program. CoolNYC also continued to engage local communities and affinity groups through in-person events. To encourage participants to stay engaged with the Program, the multiple email campaigns were distributed to over one hundred different segments of the CoolNYC population (and specific pilot populations) from April 1 through the end of September. Email campaigns included offering prizes, alerts of upcoming DR events, and reminders to set-up devices.

Customer Survey

As in prior years, at the end of the 2014 Program cycle, customers were sent an end of year survey. The Program received some direct comments from customers, including:

"I think it's a smart idea to get people to conserve energy."

"Made me realize that a few degrees in temp is very reasonable"

"Easy to setup, works well, feel like I'm contributing to alleviating the grid"

"It is pretty seamless, and you don't inundate me with emails or other announcements. The iPhone app is very easy to use as well."

"The free equipment is an incredible value, and being able to contribute to a more efficient energy grid is a huge plus."

"Remote a/c control (coming home to a cool apt). Saving electricity and hopefully saving building more power stations."

"I liked how easy it was to enroll and how little hassle was involved. It was a really great experience overall."

Some of the same questions were presented in the survey as in prior years. For comparison, some of the questions and their responses across the last 3 years are presented below.

Were you satisfied with how the technology allowed you to opt out of the Program?

Customer Response	2012	2013	2014
N/A – I never tried to opt out	41%	44%	47%
No – it was difficult to opt out	5%	5%	3%
Yes – it was easy to opt out	54%	51%	51%

Did you feel that 24 hours was enough advance notice about the upcoming conservation events?

Customer Response	2012	2013	2014
Yes	41%	44%	75%
No	5%	5%	11%

How many MORE conservation events would you have been willing to participate in?

Customer Response	2012	2013	2014
1-2	42%	45%	43%
3+	43%	42%	39%
Zero	15%	13%	19%

Please rate how the conservation events affected the comfort level in your home.

Customer Response	2012	2013	2014
It was slightly warmer	35%	31%	28%
It was too hot	19%	15%	26%
It was totally comfortable	17%	16%	17%
N/A	9%	16%	15%
No change – I did not even notice the event was happening	21%	22%	14%

By participating in the Program and seeing your window air-conditioner energy usage, did you change the way you used your air-conditioners?

Customer Response	2012	2013	2014
No	28	29%	32%
Yes	72	71%	68%

Some new survey questions were included this year to better understand the customer experience with some of the new Program initiatives.

How satisfied were you with your in-home installation experience? (606 out of 1700 people answered this question)

Satisfied	483 / 80%
Somewhat Satisfied	86 / 14%
Somewhat Dissatisfied	15 / 2%
Neither	14 / 2%
Dissatisfied	8/1%

How comfortable did you feel about providing your credit card information? 530 out of 1700 people answered this question

Somewhat comfortable	169 / 32%
Somewhat uncomfortable	114 / 22%
Very comfortable	108 / 20%
Neither comfortable or uncomfortable	104 / 20%
Very uncomfortable	35 / 7%

CoolNYC Conclusion

With more smart appliance technology beginning to emerge in the retail markets, RSAP is expanding its focus. Aligning strategy to stay current with rapidly changing technologies, to demonstrate connecting these products into utility DR ready platforms, and to engage customers, present choice, and animate DR participation to expand the Program is critical. \

With more smart appliance technology beginning to emerge in the retail markets, RSAP is expanding its focus. Aligning strategy to stay current with rapidly changing technologies, to demonstrate connecting these products into utility DR ready platforms, and to engage customers, present choice, and animate DR participation to expand the Program is critical. The 2014 CoolNYC Program made significant improvements in both technology and Program implementation, which resulted in in higher installation and setup rates and an increased understanding about how to custom-tailor DR events according to learned customer preferences. Through the pilot efforts, the Program demonstrated both a successful integration of a smart appliance into the vendor's utility DR platform and the success of alternative strategies in incentivizing DR participation within the residential sector.

11. <u>Residential Programs – Conclusion</u>

Over the last several years, combined residential DER capacity growth has slowed significantly even as the Company has increased distribution of DER devices, largely due to the increased failure rate of paging thermostat systems in DLC. This has kept us from realizing the full value of our residential DR programs in our planning and distribution operations. The Company will work closely with the Commission and other stakeholders to address the specific challenges outline above.

The Company has considered how to best leverage existing resources while integrating newer technologies as they come to the market. As more devices are enrolled in the residential DR programs, we will continue to adjust our marketing strategies, test new connected devices, and once they are proven, to integrate them into permanent program offerings. Residential DR programs remain an integral component where we can continue to engage, educate and empower our customers in order to increase capacity of DR.

Residential DR programs remain an integral component of the Company's overall strategy for increasing its DR capacity. Additionally, Residential DR Programs offer the Company an opportunity to continue to engage, educate and empower its customers. The Company is continuing to assess how to best leverage existing resources while integrating newer technologies as they come to the market. As more devices are successfully tested in RSAP, we will continue to adjust our marketing strategies, test new connected devices, and once they are proven, integrate them into permanent program offerings like DLC. In 2015, the Company will look to address the issue of NRTs, evaluate behavior modification, increase customer engagement, and continue the adoption of new devices behind the meter. As we evaluate these initiatives we look forward to working closely with DPS Staff to advance the objectives of these programs.

In 2015, the Company will look to address the issue of NRTs, evaluate behavior modification, increase customer engagement, and continue the adoption of new devices behind the meter. As we evaluate these initiatives we look forward to working closely with DPS Staff to advance the objectives of these programs.

12. <u>Con Edison Demand Response Programs – Conclusion</u>

The Company has long been a committed leader in regard to demand response. The Company has developed and deployed a broad range of demand response solutions and has successfully created opportunities for customers to better control their electricity use through tools such as smart thermostats (DLC) and modern communicating outlets (CoolNYC). Whereas the majority of discussion in regard to demand response across the country has focused on demand response in the context of wholesale markets, the Company has viewed demand response as a tool to support the effective and efficient operation of its electric distribution system.

Real operational experience and investment in analytical approaches, such as presented in this and prior reports, have served to inform the DER discussion currently taking place in the Commission's Reforming the Energy Vision ("REV") proceeding²² and provide a strong base for the Company, partnering with the Commission and other stakeholders, to demonstrate leadership. The deployment of tools such as the DRMS, positions the Company to better manage broader demand response offerings, such as the inclusion of wholesale market demand response

²² Case 14-M-0101 – Developing the REV Market in New York.

products which has been raised in the context of REV and may be needed as the consequence of the recent 745 ruling.

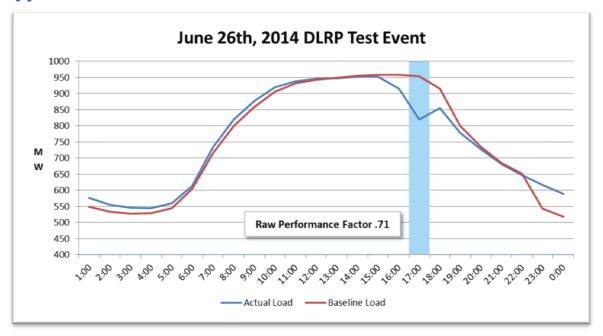
Residential DR programs remain an integral component of the Company's overall strategy for increasing its DR capacity. Additionally, Residential DR Programs offer the Company an opportunity to continue to engage, educate and empower its customers. The Company is continuing to assess how to best leverage existing resources while integrating newer technologies as they come to the market. As more devices are successfully tested in RSAP, we will continue to adjust our marketing strategies, test new connected devices, and once they are proven, integrate them into permanent program offerings like DLC.

In 2015, the Company will look to address the issue of NRTs, evaluate behavior modification, increase customer engagement, and continue the adoption of new devices behind the meter. As we evaluate these initiatives we look forward to working closely with DPS Staff to advance the objectives of these programs.

The Company believes the initiatives explained within this document are positive examples of progress but it is important to recognize that this progress must continue, with further efforts being made to encourage participation by more customers. The Company sees customer education and integration of new tools as important to growth of customer participation.

13. <u>Appendices</u>

Appendix A: DLRP Test Event Performance Chart	.61
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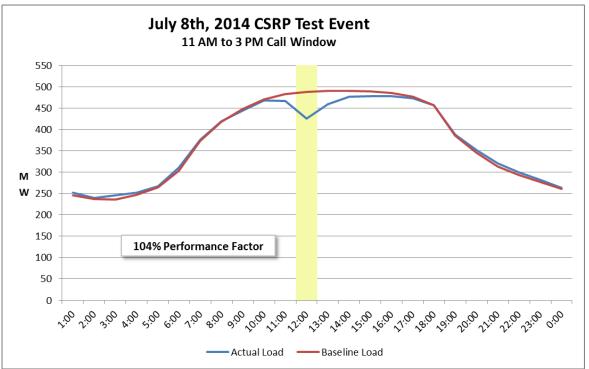
Appendix A: DLRP Test Event Performance Chart

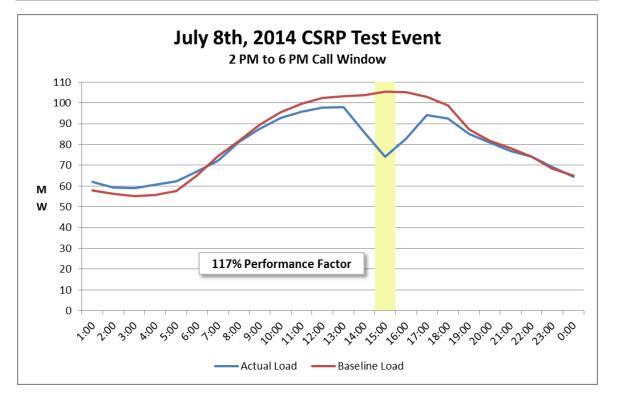
Network	Tier	2014 Network Peak Demand (MW)	Enrolled DLRP Summer Reservation	Achieved DLRP Summer Reservation Reduction (Test Event)	Enrolled at time of test	Impact with test PF	Enrolled DLRP Voluntary	Achieved DLRP Voluntary Reduction	Total Enrolled DLRP Summer Reservation and Voluntary	Enrolled DLRP Summer Reservation	Enrolled DLRP Voluntary	Total Enrolled DLRP Summer Reservation and Voluntary	Total Achieved DLRP Test
Battery Park City	Tier 1	66	4.14	4.15	4.025	4.27	0	0	4.14	6.27%	0.00%	6.27%	6.29%
Bay Ridge	Tier 1	243	2.327	0.58	2.277	0.59	0	0	2.327	0.96%	0.00%	0.96%	0.24%
Beekman	Tier 1	131	3.856	2.04	3.731	2.10	1	0	4.856	2.94%	0.76%	3.71%	1.55%
Borden	Tier 1	116	2.74	1.43	2.74	1.43	0.14	0	2.88	2.36%	0.12%	2.48%	1.24%
Borough Hall	Tier 1	288	2.815	3.52	2.815	3.52	0.525	0	3.34	0.98%	0.18%	1.16%	1.22%
Bowling Green	Tier 1	116	3.095	3.21	2.97	3.35	1	0	4.095	2.67%	0.86%	3.53%	2.77%
Brighton Beach	Tier 2	100	1.26	0.00	1.26	0.00	0	0	1.26	1.26%	0.00%	1.26%	0.00%
Buchanan	Tier 1	128	0.045	0.03	0.045	0.03	0	0	0.045	0.04%	0.00%	0.04%	0.02%
Canal	Tier 1	113	12.45	0.25	12.45	0.25	0	0	12.45	11.02%	0.00%	11.02%	0.22%
Cedar Street	Tier 1	109	0	0.00	0	0.00	0	0	0	0.00%	0.00%	0.00%	0.00%
Central Bronx	Tier 1	159	1.68	1.84	1.68	1.84	0	0	1.68	1.06%	0.00%	1.06%	1.16%
Central Park	Tier 1	227	1.945	1.06	1.945	1.06	0	0	1.945	0.86%	0.00%	0.86%	0.47%
Chelsea	Tier 1	230	4.236	2.19	4.176	2.23	0	0	4.236	1.84%	0.00%	1.84%	0.95%
City Hall	Tier 1	152	1.9	0.13	1.6	0.16	0	0	1.9	1.25%	0.00%	1.25%	0.09%
Columbus Circle	Tier 1	130	3.15	2.11	2.55	2.60	0	0	3.15	2.42%	0.00%	2.42%	1.62%
Cooper Square	Tier 1	263	1.515	1.35	1.465	1.39	0	0	1.515	0.58%	0.00%	0.58%	0.51%
Cortlandt	Tier 1	64	1.667	1.19	1.832	1.09	0	0	1.667	2.60%	0.00%	2.60%	1.86%
Crown Heights	Tier 2	210	0.7	-0.29	0.7	-0.29	0	0	0.7	0.33%	0.00%	0.33%	-0.14%
Elmsford No.2	Tier 1	182	0.2	0.10	0.2	0.10	0	0	0.2	0.11%	0.00%	0.11%	0.06%
Empire	Tier 1	63	2.02	0.60	2.02	0.60	0	0	2.02	3.21%	0.00%	3.21%	0.96%
Fashion	Tier 1	68	0.08	0.01	0.08	0.01	0	0	0.08	0.12%	0.00%	0.12%	0.02%
Flatbush	Tier 2	282	1.195	1.37	1.185	1.38	0	0	1.195	0.42%	0.00%	0.42%	0.48%
Flushing	Tier 1	384	5.641	6.96	5.641	6.96	0	0	5.641	1.47%	0.00%	1.47%	1.81%
Fordham	Tier 1	259	3.285	2.07	3.285	2.07	0	0	3.285	1.27%	0.00%	1.27%	0.80%
Fox Hills	Tier 1	217	0.435	1.07	0.435	1.07	0	0	0.435	0.20%	0.00%	0.20%	0.49%
Freedom	Tier 1	15	0	0.00	0	0.00	0	0	0	0.00%	0.00%	0.00%	0.00%
Fresh Kills	Tier 1	203	1.58	0.33	1.02	0.52	0.025	0	1.605	0.78%	0.01%	0.79%	0.16%
Fulton	Tier 1	103	4.176	2.48	4.051	2.55	0	0	4.176	4.05%	0.00%	4.05%	2.40%
Grand Central	Tier 1	201	6.692	4.13	6.692	4.13	0.2	0	6.892	3.33%	0.10%	3.43%	2.05%
Granite Hill	Tier 1	232	0.335	0.35	0.325	0.36	0.15	0	0.485	0.14%	0.06%	0.21%	0.15%
Grasslands	Tier 1	117	2.25	2.25	2.25	2.25	0	0	2.25	1.92%	0.00%	1.92%	1.92%
Greeley Square	Tier 1	70	0.509	-0.10	0.509	-0.10	0.175	0	0.684	0.73%	0.25%	0.98%	-0.14%
Greenwich	Tier 1	70	0.47	0.36	0.47	0.36	0	0	0.47	0.67%	0.00%	0.67%	0.51%
Harlem	Tier 1	199	2.49	1.29	0.99	3.25	0	0	2.49	1.25%	0.00%	1.25%	0.65%
Harrison	Tier 1	245	1.036	0.86	0.6	1.48	0	0	1.036	0.42%	0.00%	0.42%	0.35%
Herald Square	Tier 1	108	4.185	1.47	4.185	1.47	0	0	4.185	3.88%	0.00%	3.88%	1.36%
Hudson	Tier 1	59	3.634	0.56	3.6	0.57	0.1	0	3.734	6.16%	0.17%	6.33%	0.96%
Hunter	Tier 1	78	1.11	0.76	0.86	0.99	0	0	1.11	1.42%	0.00%	1.42%	0.98%
Jackson Heights	Tier 1	189	2.355	0.91	2.33	0.91	0	0	2.355	1.25%	0.00%	1.25%	0.48%
Jamaica	Tier 1	462	2.105	1.22	2.05	1.25	0	0	2.105	0.46%	0.00%	0.46%	0.26%

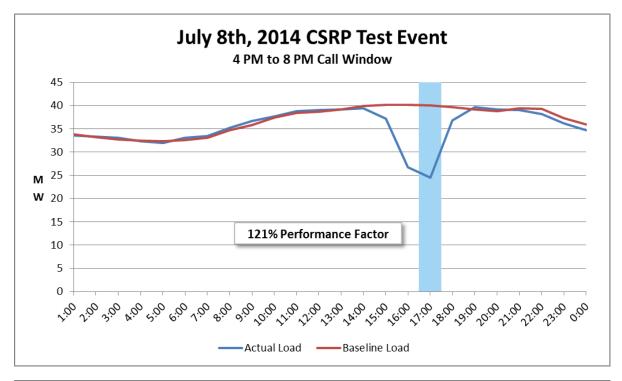
Appendix B: DLRP Reservation Payment Option and Voluntary Participation Programs - Enrolled and Achieved System Impacts

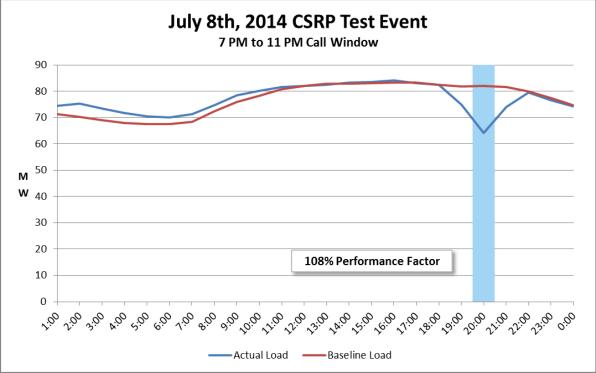
Network	Tier	2014 Network Peak Demand (MW)	Enrolled DLRP Summer Reservation	Achieved DLRP Summer Reservation Reduction (Test Event)	Enrolled at time of test	Impact with test PF	Enrolled DLRP Voluntary	Achieved DLRP Voluntary Reduction	Total Enrolled DLRP Summer Reservation and Voluntary	Enrolled DLRP Summer Reservation	Enrolled DLRP Voluntary	Total Enrolled DLRP Summer Reservation and Voluntary	Total Achieved DLRP Test
Kips Bay	Tier 1	120	5.11	5.42	5.11	5.42	0	0	5.11	4.26%	0.00%	4.26%	4.52%
Lenox Hill	Tier 1	265	3.385	3.91	3.375	3.92	0	0	3.385	1.28%	0.00%	1.28%	1.47%
Lincoln Square	Tier 1	156	5.722	5.78	5.65	5.85	0	0	5.722	3.67%	0.00%	3.67%	3.71%
Long Island City	Tier 1	236	0.835	0.04	0.785	0.05	0.1	0	0.935	0.35%	0.04%	0.40%	0.02%
Madison Square	Tier 1	251	3.18	2.91	2.68	3.46	0.55	0	3.73	1.27%	0.22%	1.49%	1.16%
Maspeth	Tier 1	261	2.414	1.20	2.414	1.20	0	0	2.414	0.92%	0.00%	0.92%	0.46%
Millwood West	Tier 1	87	0.045	0.03	0.045	0.03	0	0	0.045	0.05%	0.00%	0.05%	0.04%
Mohansic	Tier 1	8	0	0.00	0	0.00	0	0	0	0.00%	0.00%	0.00%	0.00%
Northeast Bronx	Tier 2	117	1.12	1.11	1.12	1.11	0.05	0	1.17	0.96%	0.04%	1.00%	0.95%
Ocean Parkway	Tier 1	174	0.88	0.74	0.88	0.74	0	0	0.88	0.51%	0.00%	0.51%	0.42%
Ossining West	Tier 1	77	0	0.00	0	0.00	0	0	0	0.00%	0.00%	0.00%	0.00%
Park Place	Tier 1	84	5.115	3.47	5.115	3.47	0	0	5.115	6.09%	0.00%	6.09%	4.14%
Park Slope	Tier 2	222	0.7	0.36	0.7	0.36	0	0	0.7	0.32%	0.00%	0.32%	0.16%
Pennsylvania	Tier 1	251	6.144	5.17	6.144	5.17	0	0	6.144	2.45%	0.00%	2.45%	2.06%
Plaza	Tier 1	155	4.35	3.16	4.35	3.16	0	0	4.35	2.81%	0.00%	2.81%	2.04%
Pleasantville	Tier 1	85	0	0.00	0	0.00	0	0	0	0.00%	0.00%	0.00%	0.00%
Prospect Park	Tier 1	65	0	0.00	0	0.00	0	0	0	0.00%	0.00%	0.00%	0.00%
Randall's Island	Tier 1	24	1.448	3.05	1.448	3.05	0	0	1.448	6.03%	0.00%	6.03%	12.72%
Rego Park	Tier 1	244	0.86	0.46	0.825	0.48	0	0	0.86	0.35%	0.00%	0.35%	0.19%
Richmond Hill	Tier 2	345	1.832	1.17	1.832	1.17	0	0	1.832	0.53%	0.00%	0.53%	0.34%
Ridgewood	Tier 2	207	0.42	0.18	0.22	0.34	0	0	0.42	0.20%	0.00%	0.20%	0.09%
Riverdale	Tier 1	101	0.453	0.97	0.453	0.97	0	0	0.453	0.45%	0.00%	0.45%	0.96%
Rockefeller Center	Tier 1	85	4.8	3.65	4.8	3.65	0	0	4.8	5.65%	0.00%	5.65%	4.30%
Rockview	Tier 1	93	0	0.00	0	0.00	0	0	0	0.00%	0.00%	0.00%	0.00%
Roosevelt	Tier 1	78	0.505	0.30	0.505	0.30	0	0	0.505	0.65%	0.00%	0.65%	0.38%
Sheepshead Bay	Tier 2	174	0.837	0.87	0.837	0.87	0	0	0.837	0.48%	0.00%	0.48%	0.50%
Sheridan Square	Tier 2	173	1.875	0.50	1.875	0.50	0	0	1.875	1.08%	0.00%	1.08%	0.29%
Southeast Bronx	Tier 1	222	11.265	6.34	11.25	6.35	0	0	11.265	5.07%	0.00%	5.07%	2.86%
Sunnyside	Tier 1	88	0	0.00	0	0.00	0	0	0	0.00%	0.00%	0.00%	0.00%
Sutton	Tier 1	144	6.545	7.07	6.545	7.07	0	0	6.545	4.55%	0.00%	4.55%	4.91%
Time Square	Tier 1	154	3.94	3.96	3.225	4.84	1.45	0	5.39	2.56%	0.94%	3.50%	2.57%
Triboro	Tier 1	143	0.3	0.34	0.3	0.34	0	0	0.3	0.21%	0.00%	0.21%	0.24%
Turtle Bay	Tier 1	119	3.068	1.51	3.068	1.51	0	0	3.068	2.58%	0.00%	2.58%	1.27%
Wainwright	Tier 1	93	0.595	0.61	0.595	0.61	0	0	0.595	0.64%	0.00%	0.64%	0.65%
Washington Heights	Tier 1	193	3.92	1.15	3.92	1.15	0	0	3.92	2.03%	0.00%	2.03%	0.60%
Washington St W	Tier 1	215	0.32	0.44	0.32	0.44	0	0	0.32	0.15%	0.00%	0.15%	0.21%
West Bronx	Tier 1	219	4.18	1.63	4.125	1.65	0	0	4.18	1.91%	0.00%	1.91%	0.74%
White Plains	Tier 1	255	2.185	1.51	2.185	1.51	0.1	0	2.285	0.86%	0.04%	0.90%	0.59%
Williamsburg	Tier 2	268	6.805	9.10	6.805	9.10	1	0	7.805	2.54%	0.37%	2.91%	3.39%
Willowbrook	Tier 1	90	0	0.00	0	0.00	0.07	0	0.07	0.00%	0.08%	0.08%	0.00%
Woodrow	Tier 1	119	0.82	0.42	0.82	0.42	0	0	0.82	0.69%	0.00%	0.69%	0.35%
Yorkville	Tier 1	312	1.555	1.10	1.555	1.10	0	0	1.555	0.50%	0.00%	0.50%	0.35%
Tier 1		11325	176.09	119.10	170.38	124.61	5.59	0.00	181.67	1.55%	0.05%	1.60%	1.05%
Tier 2		2098	16.74	14.34	16.53	14.52	1.05	0.00	17.79	0.80%	0.05%	0.85%	0.68%
Total		13423	192.83	133.45	186.92	139.13	6.64	0.00	199.47	1.44%	0.05%	1.49%	0.99%

Appendix C: CSRP Test Event Performance Charts









Call Window	Network	2014 Network Peak Demand (MW)	Enrolled CSRP Summer Reservation	Achieved CSRP Summer Reservation Reduction	Enrolled CSRP Voluntary	Achieved CSRP Voluntary	Total Enrolled CSRP Summer Reservation and Voluntary	Enrolled CSRP Summer Reservation	Enrolled CSRP Voluntary	Total Enrolled CSRP Summer Reservation and Voluntary	Total Achieved CSRP Summer Reservation
11 AM - 3 PM	Battery Park City	66	3.805	4.98	0.00	0	3.805	5.77%	0.00%	5.77%	7.55%
11 AM - 3 PM	Beekman	131	4.05	2.98	1.00	0	5.05	3.09%	0.76%	3.85%	2.27%
11 AM - 3 PM	Borden	116	0.3	0.30	0.74	0	1.04	0.26%	0.64%	0.90%	0.26%
11 AM - 3 PM	Borough Hall	288	0.61	0.30	1.18	0	1.785	0.21%	0.41%	0.62%	0.11%
11 AM - 3 PM	Bowling Green	116	3.08	4.45	1.00	0	4.08	2.66%	0.86%	3.52%	3.84%
11 AM - 3 PM	City Hall	152	0.75	0.18	0.85	0	1.6	0.49%	0.56%	1.05%	0.12%
11 AM - 3 PM	Columbus Circle	130	1.965	2.27	0.50	0	2.465	1.51%	0.38%	1.90%	1.75%
11 AM - 3 PM	Cortlandt	64	1.795	0.81	0.00	0	1.795	2.80%	0.00%	2.80%	1.27%
11 AM - 3 PM	Freedom	15	0	0.00	0.00	0	0	0.00%	0.00%	0.00%	0.00%
11 AM - 3 PM	Fulton	103	3.356	2.27	0.00	0	3.356	3.26%	0.00%	3.26%	2.21%
11 AM - 3 PM	Grand Central	201	6.52	6.29	0.20	0	6.72	3.24%	0.10%	3.34%	3.13%
11 AM - 3 PM	Greeley Square	70	0	0.00	0.18	0	0.175	0.00%	0.25%	0.25%	0.00%
11 AM - 3 PM	Greenwich	70	0.305	0.45	0.00	0	0.305	0.44%	0.00%	0.44%	0.64%
11 AM - 3 PM	Hunter	78	1.071	1.44	0.00	0	1.071	1.37%	0.00%	1.37%	1.85%
11 AM - 3 PM	Kips Bay	120	2.805	3.37	0.00	0	2.805	2.34%	0.00%	2.34%	2.81%
11 AM - 3 PM	Lenox Hill	265	3.26	4.90	0.00	0	3.26	1.23%	0.00%	1.23%	1.85%
11 AM - 3 PM	Lincoln Square	156	4.383	3.87	0.00	0	4.383	2.81%	0.00%	2.81%	2.48%
11 AM - 3 PM	Madison Square	251	2.39	3.13	0.55	0	2.94	0.95%	0.22%	1.17%	1.25%
11 AM - 3 PM	Park Place	84	0.4	0.43	1.20	0	1.6	0.48%	1.43%	1.90%	0.51%
11 AM - 3 PM	Pennsylvania	251	5.68	6.84	0.00	0	5.68	2.26%	0.00%	2.26%	2.73%
11 AM - 3 PM	Plaza	155	3.93	3.56	0.00	0	3.93	2.54%	0.00%	2.54%	2.29%
11 AM - 3 PM	Sheridan Square	173	0.575	0.41	0.00	0	0.575	0.33%	0.00%	0.33%	0.24%
11 AM - 3 PM	Sutton	144	4.265	4.62	0.00	0	4.265	2.96%	0.00%	2.96%	3.21%
11 AM - 3 PM	Time Square	154	4.015	4.14	1.45	0	5.465	2.61%	0.94%	3.55%	2.69%
11 AM - 3 PM	Turtle Bay	119	2.1	1.31	0.00	0	2.1	1.76%	0.00%	1.76%	1.10%
2 PM - 6 PM	Bay Ridge	243	3.03	1.96	0.00	0	3.03	1.25%	0.00%	1.25%	0.81%
2 PM - 6 PM	Canal	113	1.08	1.14	0.00	0	1.08	0.96%	0.00%	0.96%	1.01%
2 PM - 6 PM	Chelsea	230	0.26	0.26	0.70	0	0.96	0.11%	0.30%	0.42%	0.11%
2 PM - 6 PM	Empire	63	1.475	1.16	0.00	0	1.475	2.34%	0.00%	2.34%	1.84%
2 PM - 6 PM	Fashion	68	0.4	0.59	0.00	0	0.4	0.59%	0.00%	0.59%	0.87%
2 PM - 6 PM	Herald Square	108	2.15	0.75	1.40	0	3.55	1.99%	1.30%	3.29%	0.70%
2 PM - 6 PM	Hudson	59	0.434	0.17	0.10	0	0.534	0.74%	0.17%	0.91%	0.29%
2 PM - 6 PM	Long Island City	236	2.98	5.02	0.45	0	3.43	1.26%	0.19%	1.45%	2.13%
2 PM - 6 PM	Park Slope	222	0.335	0.28	0.00	0	0.335	0.15%	0.00%	0.15%	0.13%
2 PM - 6 PM	Rockefeller Center	85	3.25	3.20	0.00	0	3.25	3.82%	0.00%	3.82%	3.77%
2 PM - 6 PM	Roosevelt	78	0.2	0.06	0.00	0	0.2	0.26%	0.00%	0.26%	0.08%

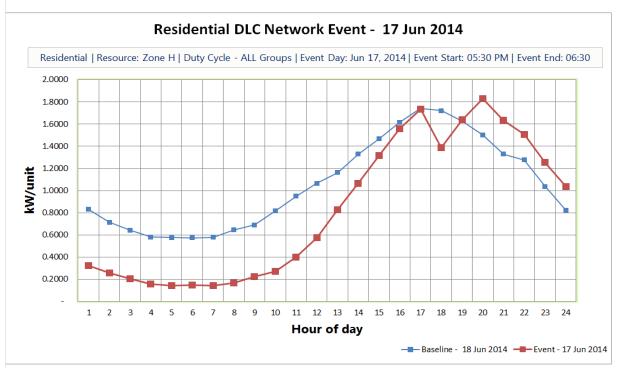
Appendix D: CSRP Reservation Payment Option and Voluntary Participation Programs - Enrolled and Achieved System Impacts

Call Window	Network	2014 Network Peak Demand (MW)	Enrolled CSRP Summer Reservation	Achieved CSRP Summer Reservation Reduction	Enrolled CSRP Voluntary	Achieved CSRP Voluntary	Total Enrolled CSRP Summer Reservation and Voluntary	Enrolled CSRP Summer Reservation	Enrolled CSRP Voluntary	Total Enrolled CSRP Summer Reservation and Voluntary	Total Achieved CSRP Summer Reservation
4 PM - 8 PM	Cooper Square	263	0.605	0.66	0.85	0	1.455	0.23%	0.32%	0.55%	0.25%
4 PM - 8 PM	Fox Hills	217	0.57	0.36	0.00	0	0.57	0.26%	0.00%	0.26%	0.17%
4 PM - 8 PM	Fresh Kills	203	1.17	0.11	0.03	0	1.195	0.58%	0.01%	0.59%	0.06%
4 PM - 8 PM	Ocean Parkway	174	0.045	0.05	0.88	0	0.925	0.03%	0.51%	0.53%	0.03%
4 PM - 8 PM	Richmond Hill	345	0.972	1.47	1.48	0	2.452	0.28%	0.43%	0.71%	0.43%
4 PM - 8 PM	Sunnyside	88	0	0.00	0.00	0	0	0.00%	0.00%	0.00%	0.00%
4 PM - 8 PM	Triboro	143	0.35	0.43	0.00	0	0.35	0.24%	0.00%	0.24%	0.30%
4 PM - 8 PM	Wainwright	93	0.525	0.66	0.40	0	0.925	0.56%	0.43%	0.99%	0.71%
4 PM - 8 PM	West Bronx	219	0.16	0.07	0.54	0	0.7	0.07%	0.25%	0.32%	0.03%
4 PM - 8 PM	Williamsburg	268	8.685	11.89	1.30	0	9.985	3.24%	0.49%	3.73%	4.44%
4 PM - 8 PM	Willowbrook	90	0	0.00	0.07	0	0.07	0.00%	0.08%	0.08%	0.00%
4 PM - 8 PM	Woodrow	119	0	0.00	0.30	0	0.3	0.00%	0.25%	0.25%	0.00%
7 PM - 11 PM	Brighton Beach	100	1	0.19	0.00	0	1	1.00%	0.00%	1.00%	0.19%
7 PM - 11 PM	Central Bronx	159	1.38	2.47	0.16	0	1.54	0.87%	0.10%	0.97%	1.55%
7 PM - 11 PM	Central Park	227	0.065	0.01	0.53	0	0.595	0.03%	0.23%	0.26%	0.00%
7 PM - 11 PM	Crown Heights	210	0.395	0.17	0.00	0	0.395	0.19%	0.00%	0.19%	0.08%
7 PM - 11 PM	Flatbush	282	0.075	0.06	1.10	0	1.175	0.03%	0.39%	0.42%	0.02%
7 PM - 11 PM	Flushing	384	5.57	6.08	0.40	0	5.97	1.45%	0.10%	1.55%	1.58%
7 PM - 11 PM	Fordham	259	1	0.43	0.63	0	1.63	0.39%	0.24%	0.63%	0.16%
7 PM - 11 PM	Harlem	199	1.545	1.99	0.19	0	1.735	0.78%	0.10%	0.87%	1.00%
7 PM - 11 PM	Jackson Heights	189	0	0.00	1.05	0	1.05	0.00%	0.56%	0.56%	0.00%
7 PM - 11 PM	Jamaica	462	0.2	0.71	0.87	0	1.07	0.04%	0.19%	0.23%	0.15%
7 PM - 11 PM	Maspeth	261	1.295	0.99	0.73	0	2.025	0.50%	0.28%	0.78%	0.38%
7 PM - 11 PM	Northeast Bronx	117	0	0.00	0.80	0	0.8	0.00%	0.68%	0.68%	0.00%
7 PM - 11 PM	Prospect Park	65	0	0.00	0.00	0	0	0.00%	0.00%	0.00%	0.00%
7 PM - 11 PM	Randall's Island	24	1.448	1.31	0.00	0	1.448	6.03%	0.00%	6.03%	5.46%
7 PM - 11 PM	Rego Park	244	0.195	0.28	0.54	0	0.735	0.08%	0.22%	0.30%	0.12%
7 PM - 11 PM	Ridgewood	207	0.2	0.00	0.20	0	0.4	0.10%	0.10%	0.19%	0.00%
7 PM - 11 PM	Riverdale	101	0.108	0.19	0.18	0	0.288	0.11%	0.18%	0.29%	0.19%
7 PM - 11 PM	Sheepshead Bay	174	1.067	1.66	0.70	0	1.767	0.61%	0.40%	1.02%	0.95%
7 PM - 11 PM	Southeast Bronx	222	11	16.52	0.00	0	11.60	4.95%	0.00%	5.23%	7.44%
7 PM - 11 PM	Washington Heights	193	1.25	1.39	0.57	0	1.82	0.65%	0.30%	0.94%	0.72%
7 PM - 11 PM	Yorkville	312	0	0.00	1.00	0	1	0.00%	0.32%	0.32%	0.00%
Total		11590.00	117.88	128.07	27.59	0.00	145.46	1.02%	0.24%	1.26%	1.10%
11 AM - 3 PM		3472.00	61.41	63.31	8.84	0.00	70.25	1.77%	0.25%	2.02%	1.82%
2 PM - 6 PM		1727.00	26.59	31.12	2.65	0.00	29.24	1.54%	0.15%	1.69%	1.80%
4 PM - 8 PM		2222.00	13.08	15.71	5.85	0.00	18.93	0.59%	0.26%	0.85%	0.71%
7 PM - 11 PM		4169.00	16.79	17.93	10.25	0.00	27.04	0.40%	0.25%	0.65%	0.43%

		<u>LE</u>	<u>GACY</u>									
esource: Zone H Duty Cycle - ALL Groups Cycling Strategy: 50% Cycling												
Category	Event Day	Baseline Day	Start Time	End Time	Event Refresh	# of Thermostate						
Residential	June 17, 2014	June 18, 2014	5:30 PM	6:30 PM	No Refresh	2,104						
Demand (kW)	Hour ending 6:30 PM	Hour ending	Hour ending	Hour ending	Hour ending	Average						
Per unit kW - Baseline	1.72	NA	NA	NA	NA	1.72						
Per unit kW - Event	1.39	NA	NA	NA	NA	1.39						
Cumulative Overrides	2.1%	NA	NA	NA	NA	2.1%						
Per unit kW reduction	0.33	NA	NA	NA	NA	0.33						
Per unit kW reduction without overrides	0.34	NA	NA	NA	NA	0.34						
Total kW without curtailment	3,624	NA	NA	NA	NA	3,624						
Total kW with curtailment	2,923	NA	NA	NA	NA	2,923						
Total kW load reduction	701	NA	NA	NA	NA	701						

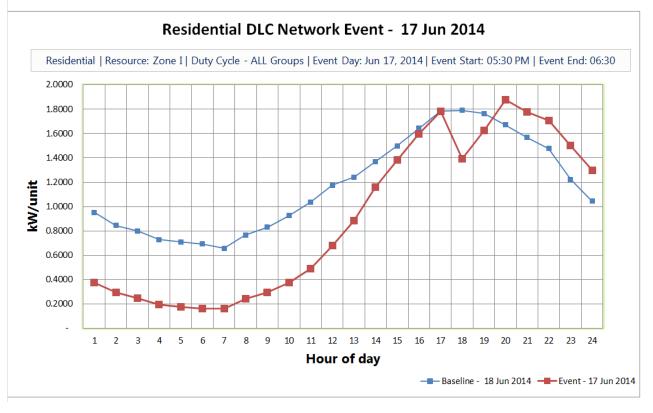
Appendix E: DLC Test Event Performance Charts

Residential DLC Network Event - 17 Jun 2014



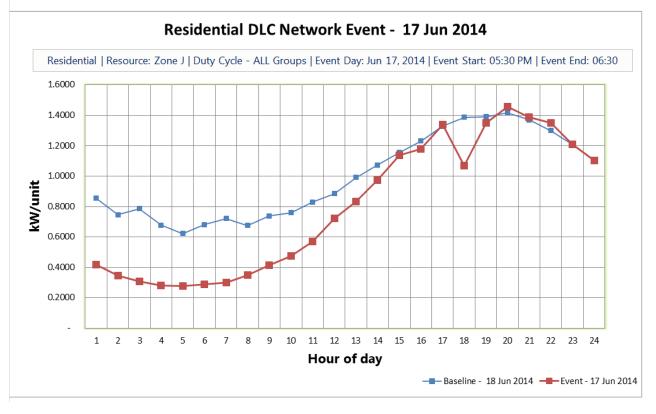
Residential DLC Network Event - 17 Jun 2014 <u>LEGACY</u>

Resource: Zone I Duty Cycle - ALL Groups Cycling Strategy: 50% Cycling												
Category	Baseline Day	Start Time	End Time	Event Refresh	# of Thermostats							
Residential	June 17, 2014	June 18, 2014	5:30 PM	6:30 PM	No Refresh	4,002						
Demand (kW) Hour ending Hour ending Hour ending Hour ending Hour ending Average												
Demana (KW)	6:30 PM					Average						
Per unit kW - Baseline	1.79	NA	NA	NA	NA	1.79						
Per unit kW - Event	1.39	NA	NA	NA	NA	1.39						
Cumulative Overrides	1.8%	NA	NA	NA	NA	1.8%						
Per unit kW reduction	0.40	NA	NA	NA	NA	0.40						
Per unit kW reduction without overrides	0.41	NA	NA	NA	NA	0.41						
Total kW without curtailment	7,172	NA	NA	NA	NA	7,172						
Total kW with curtailment	5,579	NA	NA	NA	NA	5,579						
Total kW load reduction	1,594	NA	NA	NA	NA	1,594						



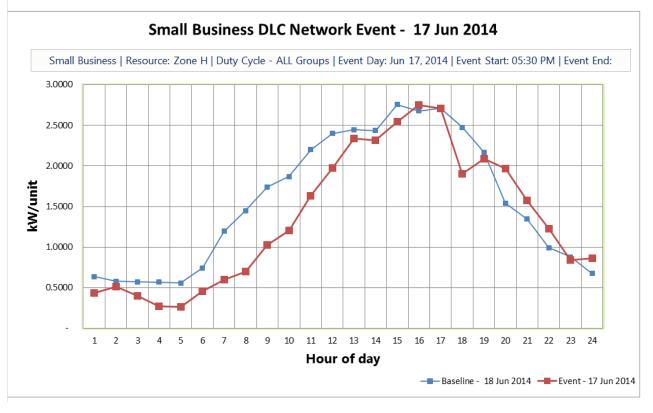
Residential DLC Network Event - 17 Jun 2014 LEGACY

Resource: Zone J Duty Cycle	e - ALL Groups	Cycling Strategy	/: 50% Cycling			
Category	Event Day	Baseline Day	Start Time	End Time	Event Refresh	# of Thermostats
Residential	June 17, 2014	June 18, 2014	5:30 PM	6:30 PM	No Refresh	13,557
Demand (kW)	Hour ending	Hour ending	Hour ending	Hour ending	Hour ending	A
Demand (KW)	6:30 PM					Average
Per unit kW - Baseline	1.39	NA	NA	NA	NA	1.39
Per unit kW - Event	1.07	NA	NA	NA	NA	1.07
Cumulative Overrides	2.2%	NA	NA	NA	NA	2.2%
Per unit kW reduction	0.32	NA	NA	NA	NA	0.32
Per unit kW reduction without overrides	0.33	NA	NA	NA	NA	0.33
Total kW without curtailment	18,805	NA	NA	NA	NA	18,805
Total kW with curtailment	14,494	NA	NA	NA	NA	14,494
Total kW load reduction	4,311	NA	NA	NA	NA	4,311



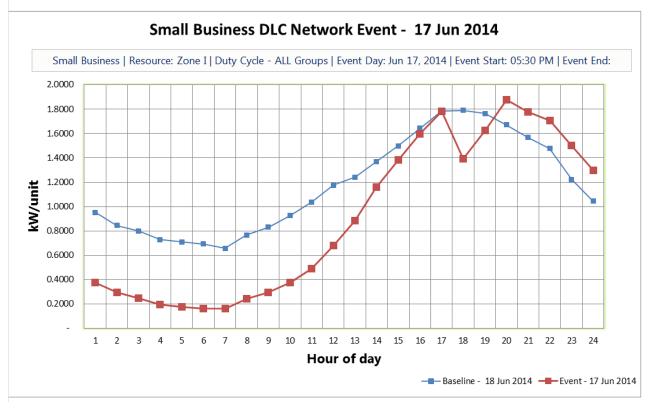
Small Business DLC Network Event - 17 Jun 2014 LEGACY

Resource: Zone H Duty Cycl	e - ALL Groups	Cycling Strategy	/: 50% Cycling			
Category	Event Day	Baseline Day	Start Time	End Time	Event Refresh	# of Thermostats
Small Business	June 17, 2014	June 18, 2014	5:30 PM	6:30 PM	No Refresh	217
Demand (kW)	Hour ending	Hour ending	Hour ending	Hour ending	Hour ending	Average
Demanu (KW)	6:30 PM					Average
Per unit kW - Baseline	2.47	NA	NA	NA	NA	2.47
Per unit kW - Event	1.90	NA	NA	NA	NA	1.90
Cumulative Overrides	1.5%	NA	NA	NA	NA	1.5%
Per unit kW reduction	0.57	NA	NA	NA	NA	0.57
Per unit kW reduction without overrides	0.58	NA	NA	NA	NA	0.58
Total kW without curtailment	537	NA	NA	NA	NA	537
Total kW with curtailment	412	NA	NA	NA	NA	412
Total kW load reduction	124	NA	NA	NA	NA	124



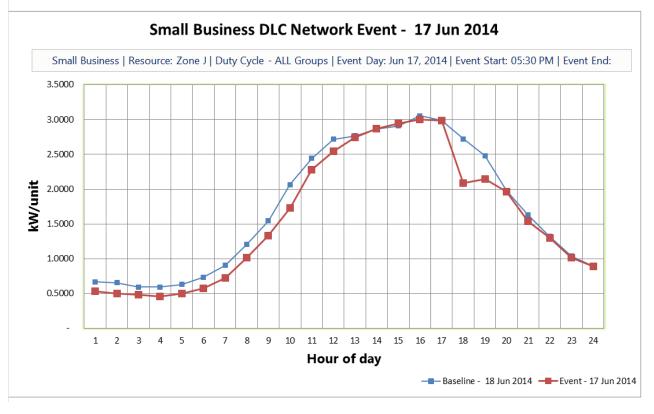
Small Business DLC Network Event - 17 Jun 2014 LEGACY

Resource: Zone I Duty Cycle	- ALL Groups	Cycling Strategy	y: 50% Cycling			
Category	Event Day	Baseline Day	Start Time	End Time	Event Refresh	# of Thermostats
Small Business	June 17, 2014	June 18, 2014	5:30 PM	6:30 PM	No Refresh	660
Demand (kW)	Hour ending	Hour ending	Hour ending	Hour ending	Hour ending	Average
Demand (KW)	6:30 PM					Average
Per unit kW - Baseline	2.66	NA	NA	NA	NA	2.66
Per unit kW - Event	2.06	NA	NA	NA	NA	2.06
Cumulative Overrides	2.3%	NA	NA	NA	NA	2.3%
Per unit kW reduction	0.60	NA	NA	NA	NA	0.60
Per unit kW reduction without overrides	0.62	NA	NA	NA	NA	0.62
Total kW without curtailment	1,755	NA	NA	NA	NA	1,755
Total kW with curtailment	1,357	NA	NA	NA	NA	1,357
Total kW load reduction	398	NA	NA	NA	NA	398



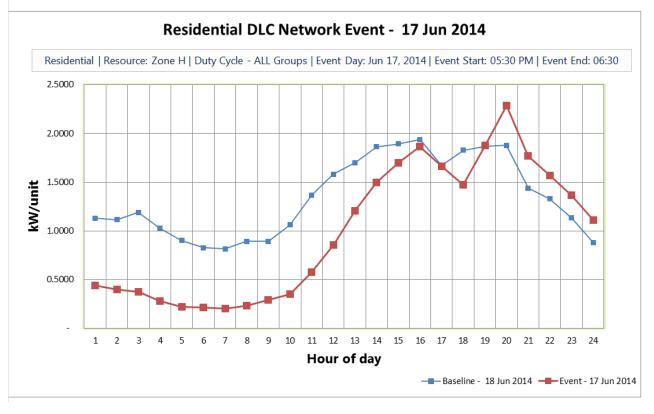
Small Business DLC Network Event - 17 Jun 2014 LEGACY

Resource: Zone J Duty Cycle	e - ALL Groups	Cycling Strategy	/: 50% Cycling			
Category	Event Day	Baseline Day	Start Time	End Time	Event Refresh	# of Thermostats
Small Business	June 17, 2014	June 18, 2014	5:30 PM	6:30 PM	No Refresh	4,590
Demand (kW)	Hour ending	Hour ending	Hour ending	Hour ending	Hour ending	Average
Demand (KW)	6:30 PM					Average
Per unit kW - Baseline	2.72	NA	NA	NA	NA	2.72
Per unit kW - Event	2.09	NA	NA	NA	NA	2.09
Cumulative Overrides	2.3%	NA	NA	NA	NA	2.3%
Per unit kW reduction	0.63	NA	NA	NA	NA	0.63
Per unit kW reduction without overrides	0.65	NA	NA	NA	NA	0.65
Total kW without curtailment	12,503	NA	NA	NA	NA	12,503
Total kW with curtailment	9,593	NA	NA	NA	NA	9,593
Total kW load reduction	2,910	NA	NA	NA	NA	2,910



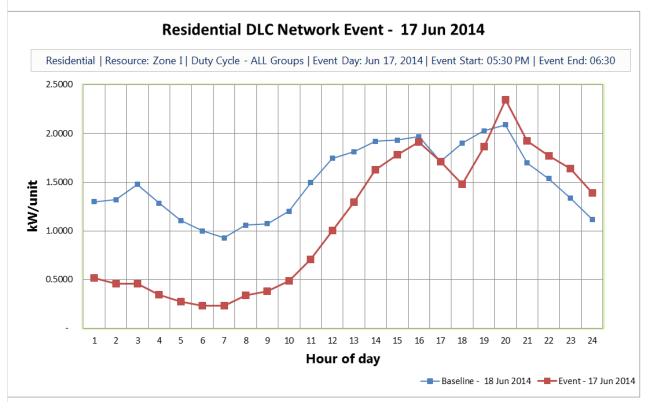
Residential DLC Network Event - 17 Jun 2014 Wi-Fi

Resource: Zone H Duty Cycl	e - ALL Groups	Cycling Strategy	/: 50% Cycling			
Category	Event Day	Baseline Day	Start Time	End Time	Event Refresh	# of Thermostats
Residential	June 17, 2014	June 18, 2014	5:30 PM	6:30 PM	No Refresh	251
Demand (kW)	Hour ending 6:30 PM	Hour ending	Hour ending	Hour ending	Hour ending	Average
Per unit kW - Baseline	1.83	NA	NA	NA	NA	1.83
Per unit kW - Event	1.47	NA	NA	NA	NA	1.47
Cumulative Overrides	2.1%	NA	NA	NA	NA	2.1%
Per unit kW reduction	0.35	NA	NA	NA	NA	0.35
Per unit kW reduction without overrides	0.36	NA	NA	NA	NA	0.36
Total kW without curtailment	459	NA	NA	NA	NA	459
Total kW with curtailment	370	NA	NA	NA	NA	370
Total kW load reduction	89	NA	NA	NA	NA	89



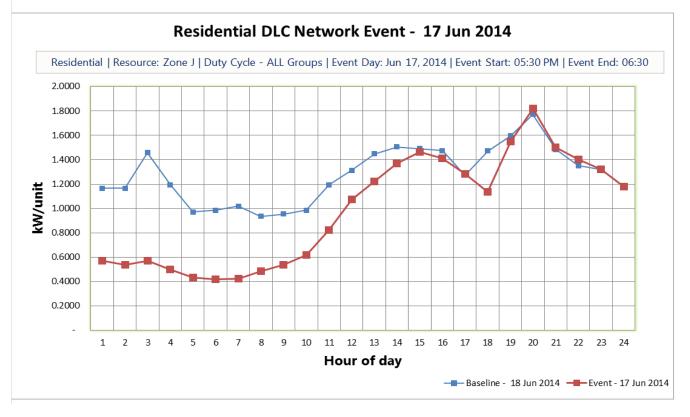
Residential DLC Network Event - 17 Jun 2014 Wi-Fi

Resource: Zone I Duty Cycle	- ALL Groups	Cycling Strategy	/: 50% Cycling			
Category	Event Day	Baseline Day	Start Time	End Time	Event Refresh	# of Thermostats
Residential	June 17, 2014	June 18, 2014	5:30 PM	6:30 PM	No Refresh	721
Demand (kW)	Hour ending	Hour ending	Hour ending	Hour ending	Hour ending	Average
	6:30 PM					_
Per unit kW - Baseline	1.90	NA	NA	NA	NA	1.90
Per unit kW - Event	1.48	NA	NA	NA	NA	1.48
Cumulative Overrides	1.8%	NA	NA	NA	NA	1.8%
Per unit kW reduction	0.42	NA	NA	NA	NA	0.42
Per unit kW reduction without overrides	0.43	NA	NA	NA	NA	0.43
Total kW without curtailment	1,371	NA	NA	NA	NA	1,371
Total kW with curtailment	1,066	NA	NA	NA	NA	1,066
Total kW load reduction	305	NA	NA	NA	NA	305



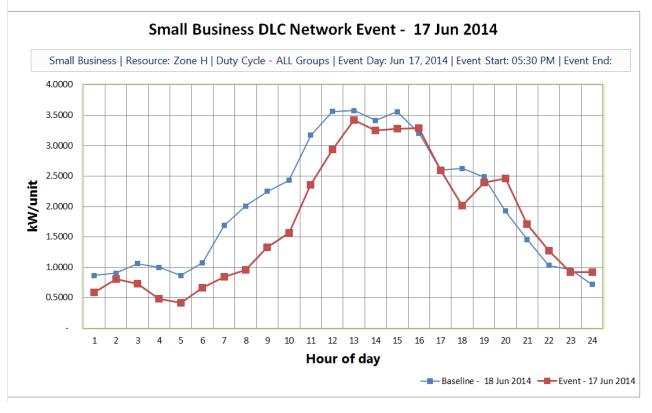
Residential DLC Network Event - 17 Jun 2014 Wi-Fi

Resource: Zone J Duty Cycle	e - ALL Groups	Cycling Strategy	/: 50% Cycling			
Category	Event Day	Baseline Day	Start Time	End Time	Event Refresh	# of Thermostats
Residential	June 17, 2014	June 18, 2014	5:30 PM	6:30 PM	No Refresh	1,005
Demand (kW)	Hour ending 6:30 PM	Hour ending	Hour ending	Hour ending	Hour ending	Average
Per unit kW - Baseline	1.47	NA	NA	NA	NA	1.47
Per unit kW - Event	1.13	NA	NA	NA	NA	1.13
Cumulative Overrides	2.2%	NA	NA	NA	NA	2.2%
Per unit kW reduction	0.34	NA	NA	NA	NA	0.34
Per unit kW reduction without overrides	0.35	NA	NA	NA	NA	0.35
Total kW without curtailment	1,479	NA	NA	NA	NA	1,479
Total kW with curtailment	1,140	NA	NA	NA	NA	1,140
Total kW load reduction	339	NA	NA	NA	NA	339

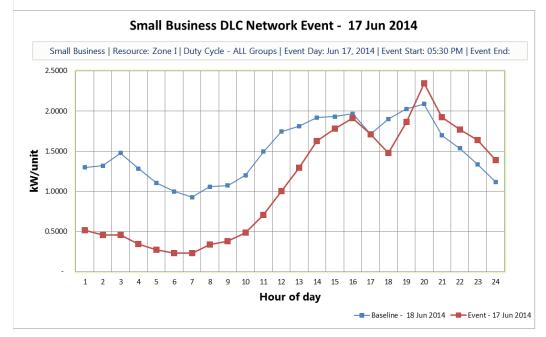


Small Business DLC Network Event - 17 Jun 2014 Wi-Fi

Resource: Zone H Duty Cycl	e - ALL Groups	Cycling Strategy	/: 50% Cycling			
Category	Event Day	Baseline Day	Start Time	End Time	Event Refresh	# of Thermostats
Small Business	June 17, 2014	June 18, 2014	5:30 PM	6:30 PM	No Refresh	2
Demand (kW)	Hour ending 6:30 PM	Hour ending	Hour ending	Hour ending	Hour ending	Average
Per unit kW - Baseline	2.63	NA	NA	NA	NA	2.63
Per unit kW - Event	2.02	NA	NA	NA	NA	2.02
Cumulative Overrides	1.5%	NA	NA	NA	NA	1.5%
Per unit kW reduction	0.61	NA	NA	NA	NA	0.61
Per unit kW reduction without overrides	0.62	NA	NA	NA	NA	0.62
Total kW without curtailment	5	NA	NA	NA	NA	5
Total kW with curtailment	4	NA	NA	NA	NA	4
Total kW load reduction	1	NA	NA	NA	NA	1



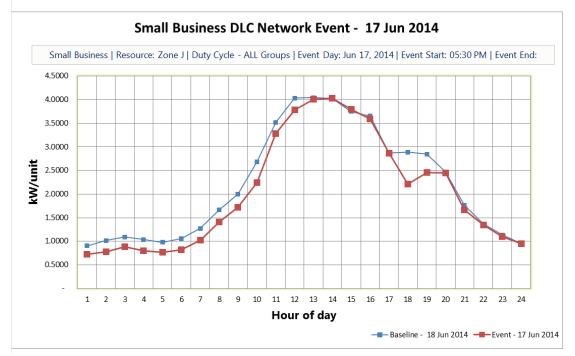
<u>S</u>	Small Business DLC Network Event - 17 Jun 2014										
		<u>v</u>	<u>Vi-Fi</u>								
Resource: Zone I Duty Cycle	- ALL Groups	Cycling Strategy	/: 50% Cycling								
Category	Event Day	Baseline Day	Start Time	End Time	Event Refresh	# of Thermostats					
Small Business	June 17, 2014	June 18, 2014	5:30 PM	6:30 PM	No Refresh	26					
Demand (kW)	Hour ending 6:30 PM	Hour ending	Hour ending	Hour ending	Hour ending	Average					
Per unit kW - Baseline	2.82	NA	NA	NA	NA	2.82					
Per unit kW - Event	2.18	NA	NA	NA	NA	2.18					
Cumulative Overrides	2.3%	NA	NA	NA	NA	2.3%					
Per unit kW reduction	0.64	NA	NA	NA	NA	0.64					
Per unit kW reduction without overrides	0.65	NA	NA	NA	NA	0.65					
Total kW without curtailment	73	NA	NA	NA	NA	73					
Total kW with curtailment	57	NA	NA	NA	NA	57					
Total kW load reduction	17	NA	NA	NA	NA	17					



Small Business DLC Network Event - 17 Jun 2014

<u>Wi-Fi</u>

Resource: Zone J Duty Cycle	e - ALL Groups	Cycling Strategy	/: 50% Cycling			
Category	Event Day	Baseline Day	Start Time	End Time	Event Refresh	# of Thermostats
Small Business	June 17, 2014	June 18, 2014	5:30 PM	6:30 PM	No Refresh	137
Demand (kW)	Hour ending 6:30 PM	Hour ending	Hour ending	Hour ending	Hour ending	Average
Per unit kW - Baseline	2.89	NA	NA	NA	NA	2.89
Per unit kW - Event	2.22	NA	NA	NA	NA	2.22
Cumulative Overrides	2.3%	NA	NA	NA	NA	2.3%
Per unit kW reduction	0.67	NA	NA	NA	NA	0.67
Per unit kW reduction without overrides	0.69	NA	NA	NA	NA	0.69
Total kW without curtailment	396	NA	NA	NA	NA	396
Total kW with curtailment	304	NA	NA	NA	NA	304
Total kW load reduction	92	NA	NA	NA	NA	92



Appendix F: 2014 – 2011 Con Edison Demand Response Event Review

As of September 30, 2014

NYISO TDRP - County/Network/Subzone

Country	Network	Cubaana	Country	Matural	Cube
County	Network	Subzone	County	Network	Subzone
BK	Bay Ridge	J3	MN	Madison Square	J7
BK	Boro Hall	J8	MN	Park Place	J7
ВК	Brighton Beach	J3	MN	Pennsylvania	J6
ВК	Crown Heights	J8	MN	Plaza	J6
BK	Flatbush	J3	MN	Randalis Island	J2
BK	Ocean Parkway	J3	MN	Rockefeller Cen	J6
BK	Park Slope	J3	MN	Roosevelt	J2
BK	Prospect Park	J8	MN	Sheridan Square	J7
BK	Richmond Hill	J8	MN	Sutton	J2
BK	Ridgewood	J8	MN	Times Square	J6
ВК	Sheepshead Bay	J3	MN	Triboro	8L
ВК	Williamsburg	J8	MN	Turtle Bay	J2
BX	Central Bronx	J8	MN	Washington Heights	J1
BX	Fordham	J1	MN	Yorkville	J2
BX	Northeast Bronx	J1	QN	Borden	J3
BX	Riverdale	J1	QN	Flushing	J5
BX	Southeast Bronx	J1	QN	Jackson Heights	J5
BX	West Bronx	J2	QN	Jamaica	J5
MN	Battery Park	J8	QN	Long Island Cit	J5
MN	Beekman	J3	QN	Maspeth	J3
MN	Bowling Green	J8	QN	Rego Park	J5
MN	Canal	J7	QN	Richmond Hill -	8L
MN	Central Park	J8	QN	Sunnyside	J3
MN	Chelsea	J7	SI	Fox Hills	J4
MN	City Hall	J7	SI	Fresh Kills	J4
MN	Columbus Circle	J6	SI	Wainwright	J4
MN	Cooper Square	J7	SI	Willowbrook	J4
MN	Cortlandt	J8	SI	Woodrow	J4
MN	Empire	J3	WS	Buchanan	Н
MN	Fashion	J3	WS	Cedar Street	1
MN	Freedom	J8	WS	Elmsford	
MN	Fulton	J8	WS	Granite Hill	-
MN	Grand Central	J3	WS	Grasslands	
MN	Greeley Square	J7	WS	Harrison	
MN	Greenwich	J7	WS	Millwood West	н
MN	Harlem	81	WS	Mohansic	н
MN	Herald Square	J6	WS	Ossining West	H
MN	Hudson	J6	WS	Pleasantville	
MN	Hunter	J2	WS	Rockview	
MN	Kips Bay	J7	WS	Washington	
MN	Lenox	37	WS	White Plains	
MN	Lincoln Square	J6	110	WHICE FIGHTS	

2014 Demand Response Program Activity

Thursday, February 6, 2014

Administrator	Program	Time Start	Time End	Zone/Network	Event/ Test	MW Pledged after De-rating	Accounts
Con Edison	DLRP - V	3:00 PM	8:00 PM	Time Square	Event	1.14	6

Thursday, February 20, 2014

Administrator	Program	Time Start	<u>Time End</u>	Zone/Network	Event/ Test	MW Pledged after De-rating	Accounts
NYISO	SCR	4:00 PM	5:00 PM	Zones J, K,	Test	-	-
NYISO	SCR	5:00 PM	6:00 PM	Zones A, B	Test	-	-
				Zones C, D, E, F, G,			
NYISO	SCR	6:00 PM	7:00 PM	H, I	Test	-	-

Tuesday, June 10, 2014

Administrator	Program	Time Start	Time End	Zone/Network	Event/ Test	MW Pledged after De-rating	Accounts
Con Edison	Modlet	1:00 PM	2:00 PM	Zone J	Test	1.5	1,510

Tuesday, June 17, 2014

Administrator	Program	Time Start	Time End	Zone/Network	Event/ Test	MW Pledged after De-rating	Accounts
Con Edison	DLC	5:30 PM	6:30 PM	Zone H	Test	2.1	1,629
Con Edison	DLC	5:30 PM	6:30 PM	Zone I	Test	6.6	4,899
Con Edison	DLC	5:30 PM	6:30 PM	Zone J	Test	17.4	13,510

Thursday, June 26, 2014

Administrator	Program	Time Start	Time End	Zone/Network	Event/ Test	MW Pledged after De-rating	Accounts
Con Edison	DLRP	4:00 PM	5:00 PM	All Networks	Test	131.9	703
Con Edison	DLRP SC 11	4:00 PM	5:00 PM	*	Test	10	1

is an export demand response resource

			Tuesda	ay, July 8th, 2014			
<u>dministrator</u>	Program	Time Start	<u>Time End</u>	Zone/Network	Event/ Test	MW Pledged after Derating	Accounts
Con Edison	CSRP	11:00 AM	12:00 PM	Zone J	Test	60.85	245
Con Edison	CSRP	2:00 PM	3:00 PM	Zone J	Test	26.53	46
Con Edison	CSRP SC 11	2:00 PM	3:00 PM	*	Test		1
Con Edison	CSRP	4:00 PM	5:00 PM	Zone J	Test	12.98	36
Con Edison	CSRP	7:00 PM	8:00 PM	Zone J	Test	16.59	46
1			Tuesday	, August 19, 201	4		
dministrator	Program	Time Start	Time End	Zone/Network	Event/Test	MW Pledged after Derating	Accounts
NYISO	SCR	1:00 PM	2:00 PM	Zones F,G,H,I,K	Test	-	-
NYISO	SCR	2:00 PM	3:00 PM	Zone J	Test	-	-
NYISO	SCR	3:00 PM	4:00 PM	Zones B, C, D, E	Test	-	-
NYISO	SCR	4:00 PM	5:00 PM	Zone A	Test	-	-
			Wednesda	ay, August 27, 20)14		
<u>dministrator</u>	Program	Time Start	<u>Time End</u>	Zone/Network	Event/ Test	MW Pledged after Derating	Accounts
Con Edison	Modlet	7:00 PM	11:00 PM	Zone J	Test	-	-
			Thursday	y, August 28, 201	L 4		
dministrator	Program	Time Start	<u>Time End</u>	Zone/Network	Event/ Test	MW Pledged after Derating	Accounts
Con Edison	Modlet	2:00 PM	6:00 PM	Zone J	Test	-	-
			Thursday,	September 4, 20)14		
dministrator	Program	Time Start	Time End	Zone/Network	Event/ Test	MW Pledged after Derating	Accounts

2013 Demand Response Program Activity

			Friday	y, May 24, 2013			
Administrator	Program	<u>Time Start</u>	<u>Time End</u>	Zone/Network	Event/ Test	MW Pledged after De-rating	Accounts
Con Edison	DLRP	9:25 AM (ASAP)	4:00 PM	Roosevelt	Event	0.29	3
Con Edison	DLC	9:25 AM (ASAP)	4:00 PM	Roosevelt	Event	0.009	8

Tuesday, J	lune	25	2013
Tuesuay,	June	ΖJ,	2015

Administrator	Program	<u>Time Start</u>	<u>Time End</u>	Zone/Network	Event/ Test	MW Pledged after De-rating	Accounts
Con Edison	CSRP - Day	2:00 PM	3:00 PM	Zone J	Test	54.30	113
Con Edison	CSRP - Night	7:00 PM	8:00 PM	Zone J	Test	16	67
Con Edison	CSRP - Day	2:00 PM	3:00 PM	*	Test	0.50	1
Con Edison	CSRP - Night	7:00 PM	8:00 PM	*	Test	6	1
Con Edison	DLRP	7:00 PM	12:00 AM	Flatbush	Event	0.44	3
Con Edison	DLC	7:00 PM	12:00 AM	Flatbush	Event	0.48	431

are export demand response resources

Wednesday, June 26, 2013

Administrator	Program	<u>Time Start</u>	<u>Time End</u>	Zone/Network	Event/ Test	MW Pledged after De-rating	Accounts
Con Edison	DLRP	12:00 PM	1:00 PM	All Networks	Test	91.3	583
Con Edison	DLRP	12:00 PM	1:00 PM	*	Test	8	1

is an export demand response resource

Saturday, July 6, 2013

Administrator	Program	<u>Time Start</u>	<u>Time End</u>	Zone/Network	Event/ Test	MW Pledged after De-rating	Accounts
Con Edison	DLRP	7:00 AM	12:00 PM	Fox Hills	Event	0.45	4
Con Edison	DLC	8:00 AM	12:00 PM	Fox Hills	Event	1.688	1,802

Tuesday, July 9, 2013

Administrator	<u>Program</u>	<u>Time Start</u>	<u>Time End</u>	Zone/Network	Event/ Test	MW Pledged after De-rating	<u>Accounts</u>
Con Edison	Modlet	6:00 PM	7:00 PM	Zone J	Test	1.9	1,955

Administrator	Program	Time Start	Time End	Zone/Network	Event/ Test	MW Pledged after De-rating	Accounts
Con Edison	CSRP - Day	12:00 PM	5:00 PM	Zone J	Event	30.47	150
Con Edison	CSRP - Night	5:00 PM	10:00 PM	Zone J	Event	18.48	91
Con Edison	CSRP - Day	12:00 PM	5:00 PM	*	Event	0.50	1
Con Edison	CSRP - Night	5:00 PM	10:00 PM	*	Event	6	1
Con Edison	DLC	12:00 PM	5:00 PM	Zone J	Event	4.2	3,725
Con Edison	DLC	5:00 PM	10:00 PM	Zone J	Event	21.8	20,065
Con Edison	Modlet	12:00 PM	5:00 PM	Zone J	Event	1.9	1,955
Con Edison	DLRP	5:00 PM	10:00 PM	Fox Hills	Event	0.21	4
Con Edison	DLC	5:00 PM	10:00 PM	Fox Hills	Event	1.69	1,802
Con Edison	DLRP	6:00 PM	11:00 PM	Fresh Kills	Event	1.11	8
Con Edison	DLC	6:00 PM	11:00 PM	Fresh Kills	Event	1.25	1,364
NYISO	SCR	1:00 PM	6:00 PM	Zones G, H, I, J, K	Event	363.30**	5,616
NYISO	EDRP	1:00 PM	6:00 PM	Zones G, H, I, J, K	Event	4**	92
NYISO	SCR	1:00 PM	6:00 PM	Zones A, B, C, D, E, F	Event	N/A	-
NYISO	EDRP	1:00 PM	6:00 PM	Zones A, B, C, D, E, F	Event	N/A	-

Monday, July 15, 2013

* are export demand response resources **MW's only within Con Edison's service territory; Zones H, I, & J

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Tuesday, July 16, 2013

				,,,,			
Administrator	Program	<u>Time Start</u>	<u>Time End</u>	Zone/Network	Event/ Test	MW Pledged after De-rating	Accounts
Con Edison	CSRP - Day	12:00 PM	5:00 PM	Zone J	Event	30.47	150
Con Edison	CSRP - Night	5:00 PM	10:00 PM	Zone J	Event	18.48	91
Con Edison	CSRP - Day	12:00 PM	5:00 PM	*	Event	0.50	1
Con Edison	CSRP - Night	5:00 PM	10:00 PM	*	Event	6	1
Con Edison	DLC	12:00 PM	5:00 PM	Zone J	Event	4.20	3,725
Con Edison	DLC	5:00 PM	10:00 PM	Zone J	Event	21.80	20,065
Con Edison	Modlet	5:00 PM	10:00 PM	Zone J	Event	1.90	1,955
NYISO	SCR	1:00 PM	6:00 PM	Zones G, H, I, J, K	Event	363.30**	5,616
NYISO	EDRP	1:00 PM	6:00 PM	Zones G, H, I, J, K	Event	4**	92
NYISO	SCR	1:00 PM	6:00 PM	Zones A, B, C, D, E, F	Event	N/A	-
NYISO	EDRP	1:00 PM	6:00 PM	Zones A, B, C, D, E, F	Event	N/A	-
	are export dema	and response resources					

* are export demand response resources **MW's only within Con Edison's service territory; Zones H, I, & J

Wednesday, July 17, 2013

Administrator	Program	Time Start	<u>Time End</u>	Zone/Network	Event/ Test	MW Pledged after De-rating	Accounts
Con Edison	CSRP - Day	12:00 PM	5:00 PM	Zone J	Event	30.47	150
Con Edison	CSRP - Night	5:00 PM	10:00 PM	Zone J	Event	18.48	91
Con Edison	CSRP - Day	12:00 PM	5:00 PM	*	Event	0.50	1
Con Edison	CSRP - Night	5:00 PM	10:00 PM	*	Event	6	1
Con Edison	DLC	12:00 PM	5:00 PM	Zone J	Event	4.20	3,725
Con Edison	DLC	5:00 PM	10:00 PM	Zone J	Event	21.80	20,065
Con Edison	Modlet	5:00 PM	10:00 PM	Zone J	Event	1.90	1,955
NYISO	SCR	1:00 PM	6:00 PM	Zones G, H, I, J, K	Event	363.30**	5,616
NYISO	EDRP	1:00 PM	6:00 PM	Zones G, H, I, J, K	Event	4**	92
NYISO	SCR	1:00 PM	6:00 PM	Zones A, B, C, D, E, F	Event	N/A	-
NYISO	EDRP	1:00 PM	6:00 PM	Zones A, B, C, D, E, F	Event	N/A	-

* and are export demand response resources **MW's only within Con Edison's service territory; Zones H, I, & J

Thursday, July 18, 2013

Administrator	Program	Time Start	Time End	Zone/Network	Event/ Test	MW Pledged after De-rating	Accounts
Con Edison	CSRP - Day	12:00 PM	5:00 PM	Zone J	Event	30.47	150
Con Edison	CSRP - Night	5:00 PM	10:00 PM	Zone J	Event	18.48	91
Con Edison	CSRP - Day	12:00 PM	5:00 PM	*	Event	0.50	1
Con Edison	CSRP - Night	5:00 PM	10:00 PM	*	Event	6	1
Con Edison	DLC	12:00 PM	5:00 PM	Zone J	Event	4.20	3,725
Con Edison	DLC	5:00 PM	10:00 PM	Zone J	Event	21.80	20,065
Con Edison	Modlet	5:00 PM	10:00 PM	Zone J	Event	1.90	1,955
NYISO	SCR	1:00 PM	6:00 PM	Zones G, H, I, J, K	Event	363.30**	5,616
NYISO	EDRP	1:00 PM	6:00 PM	Zones G, H, I, J, K	Event	4**	92
NYISO	SCR	1:00 PM	6:00 PM	Zones A, B, C, D, E, F	Event	N/A	-
NYISO	EDRP	1:00 PM	6:00 PM	Zones A, B, C, D, E, F	Event	N/A	-
Con Edison	DLRP	5:00 PM (ASAP)	12:00 AM	Fresh Kills	Event	1.11	8
Con Edison	DLC	5:00 PM (ASAP)	12:00 AM	Fresh Kills	Event	1.25	1,364
Con Edison	DLRP	10:59 PM	N/A	Williamsburg	Event	DR resources were not called	-

* and are export demand response resources **MW's only within Con Edison's service territory; Zones H, I, & J

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	Friday, July 19, 2013											
Administrator	Program	Time Start	<u>Time End</u>	Zone/Network	Event/ Test	MW Pledged after De-rating	Accounts					
Con Edison	DLRP	3:00 AM	N/A	Washington Street	Event	DR resources were not called	-					
Con Edison	CSRP - Day	12:00 PM	5:00 PM	Zone J	Event	30.47	150					
Con Edison	CSRP - Night	5:00 PM	10:00 PM	Zone J	Event	18.48	91					
Con Edison	CSRP - Day	12:00 PM	5:00 PM	*	Event	0.50	1					
Con Edison	CSRP - Night	5:00 PM	10:00 PM	*	Event	6	1					
Con Edison	DLC	12:00 PM	5:00 PM	Zone J	Event	4.20	3,725					
Con Edison	DLC	5:00 PM	10:00 PM	Zone J	Event	21.80	20,065					
Con Edison	Modlet	5:00 PM	10:00 PM	Zone J	Event	1.90	1,955					
NYISO	SCR	1:00 PM	6:00 PM	Zones G, H, I, J, K	Event	363.30**	5,616					
NYISO	EDRP	1:00 PM	6:00 PM	Zones G, H, I, J, K	Event	4**	92					
NYISO	SCR	1:00 PM	6:00 PM	Zones A, B, C, D, E, F	Event	N/A	-					
NYISO	EDRP	1:00 PM	6:00 PM	Zones A, B, C, D, E, F	Event	N/A	-					
Con Edison	DLRP	11:03 PM	N/A	South East Bronx	Event	DR resources were not called	-					

* and are export demand response resources **MW's only within Con Edison's service tenitory; Zones H, I, & J

	Saturday, July 20, 2013									
Administrator	Program	Time Start	Time End	Zone/Network	Event/ Test	MW Pledged after De-rating	Accounts			
Con Edison	DLRP	1:12 AM	N/A	Fordham	Event	DR resources were not called	-			

	Thursday, August 8, 2013											
Administrator	Program	Time Start	Time End	Zone/Network	Event/ Test	MW Pledged after De-rating	Accounts					
NYISO	SCR	1:00 PM	2:00 PM	Zones B, C, D, E	Test	DR resources were not called	-					
NYISO	SCR	2:00 PM	3:00 PM	Zones A	Test	DR resources were not called	-					
NYISO	SCR	3:00 PM	4:00 PM	Zones J	Test	DR resources were not called	-					
NYISO	SCR	4:00 PM	5:00 PM	Zones F, G, H, I, K	Test	DR resources were not called	-					

	Thursday, October 17, 2013								
Administrator	Program	Time Start	<u>Time End</u>	Zone/Network	Event/ Test	MW Pledged after De-rating	Accounts		
NYISO	SCR	3:00 PM	4:00 PM	Zones J	Test	DR resources were not called	-		

	Wednesday, October 30, 2013									
Administrator	<u>Program</u>	<u>Time Start</u>	<u>Time End</u>	Zone/Network	Event/ Test	MW Pledged after De-rating	<u>Accounts</u>			
Con Edison	DLRP	6:58 PM	7:52 PM	Brighton Beach	Event	DR resources were not called	-			
Con Edison	DLRP	6:58 PM	7:52 PM	Flatbush	Event	DR resources were not called	-			

2012 Demand Response Program Activity

	Tuesday, May 29, 2012										
Administrator	Program	<u>Time Start</u>	<u>Time End</u>	Zone/Network	Event/ Test	MW Pledged after De-rating	<u>Accounts</u>				
NYISO	SCR	1:00 PM	6:00 PM	Zones A, B, C, D, E, F, G, H, I, J, K	Event	436.09*	2,517				

*MW's only within Con Edison's service territory; Zones H, I, & J

Wednesday, June 20, 2012

<u>Administrator</u>	Program	<u>Time Start</u>	<u>Time End</u>	Zone/Network	Event/ Test	MW Pledged after De-rating	<u>Accounts</u>
Con Edison	DLRP	4:57 PM (ASAP)	12:00 AM	Williamsburg	Event	2.95	19
Con Edison	DLRP	4:57 PM (ASAP)	12:00 AM	Sheepshead Bay	Event	1.53	8
Con Edison	DLRP	4:57 PM (ASAP)	12:00 AM	Jamaica	Event	2.72	19
Con Edison	DLC	4:57 PM (ASAP)	12:00 AM	Williamsburg	Event	0.48	357
Con Edison	DLC	4:57 PM (ASAP)	12:00 AM	Sheepshead Bay	Event	0.38	288
Con Edison	DLC	4:57 PM (ASAP)	12:00 AM	Jamaica	Event	0.75	664
Con Edison	DLRP	5:18 PM (ASAP)	1:00 AM	Maspeth	Event	1.46	21
Con Edison	DLC	5:18 PM (ASAP)	1:00 AM	Maspeth	Event	0.42	322
Con Edison	DLRP	6:18 PM (ASAP)	2:00 AM	Richmond Hill	Event	1.36	14
Con Edison	DLC	6:18 PM (ASAP)	2:00 AM	Richmond Hill	Event	0.51	433
NYISO	SCR	2:00 PM	6:00 PM	Zones C,G,H,I,J	Event	436.09*	2,517
NYISO	EDRP	2:00 PM	6:00 PM	Zones C,G,H,I,J	Event	58.97*	55

*MW's only within Con Edison's service territory; Zones H, I, & J

Thursday, June 21, 2012

<u>Administrator</u>	Program	<u>Time Start</u>	<u>Time End</u>	Zone/Network	Event/ Test	MW Pledged after De-rating	Accounts
Con Edison	CSRP - Day	12:00 PM	5:00 PM	Zone J	Event	50.20	230
Con Edison	CSRP - Night	5:00 PM	10:00 PM	Zone J	Event	11.93	66
Con Edison	DLC	12:00 PM	5:00 PM	Zone J	Event	3.47	1,995
Con Edison	DLC	5:00 PM	10:00 PM	Zone J	Event	31.64	22,609
Con Edison	CSRP - Night	5:00 PM	10:00 PM	**	Event	11.40	1
Con Edison	RSAP	5:00 PM	10:00 PM	Zone J	Event	0.14	145
Con Edison	DLRP	8:00 AM	3:00 PM	Flushing Network	Event	3.52	20
Con Edison	DLRP	8:00 PM	3:00 AM	Park Slope	Event	1.27	21
Con Edison	DLRP	9:00 PM	4:00 AM	Sheepshead Bay	Event	1.53	8
Con Edison	Modlet	5:00 PM	10:00 PM	Zone J	Event	0.38	966
NYISO	SCR	1:00 PM	6:00 PM	Zones A,B,C,D,E,F,G,H,I,J,K	Event	436.09*	2,517
NYISO	EDRP	1:00 PM	6:00 PM	Zones A,B,C,D,E,F,G,H,I,J,K	Event	58.97*	55

MW's only within Con Edison's service territory; Zones H, I, & J
 is an export demand response resource

Friday, June 22, 2012

				1, ,			
Administrator	Program	<u>Time Start</u>	<u>Time End</u>	Zone/Network	Event/Test	MW Pledged after De-rating	Accounts
Con Edison	DLRP	7:00 AM	2:00 PM	Flatbush	Event	1.07	9
Con Edison	DLRP	5:00 PM	10:00 PM	Williamsburg	Event	2.95	19
Con Edison	DLRP	12:00 PM	1:00 PM	All Networks	Test	132.50	806
Con Edison	DLRP	12:00 PM	1:00 PM	* *	Test	11.40	1
NYISO	SCR	1:00 PM	6:00 PM	Zones G,H,I,J,K	Event	436.09*	2,517
NYISO	EDRP	1:00 PM	6:00 PM	Zones G,H,I,J,K	Event	58.97*	55

•MW's only within Con Edison's service territory; Zones H, I, & J •• is an export demand response resource

Wednesday, July 04, 2012

<u>Administrator</u>	Program	<u>Time Start</u>	<u>Time End</u>	Zone/Network	<u>Event/ Test</u>	MW Pledged after De-rating	Accounts
Con Edison	DLRP	9:06 PM (ASAP)	2:00 AM	Flatbush	Event	1.07	9

Thursday, July 05, 2012

Administrator	Program	<u>Time Start</u>	<u>Time End</u>	Zone/Network	Event/ Test	MW Pledged after De-rating	Accounts
Con Edison	DLRP	3:00 PM	8:00 PM	Crown Heights Network	Event	1.16	9
Con Edison	DLRP	10:30 PM	N/A	South East Bronx	Event	DR resources were not called	-

				Friday, July 06, 2012			
<u>Administrator</u>	<u>Program</u>	<u>Time Start</u>	<u>Time End</u>	Zone/Network	<u>Event/ Test</u>	MW Pledged after De-rating	Accounts
Con Edison	Modlet	6:00 PM	10:00 PM	Zone J	Event	0.38	966
NYISO	TDRP	3:00 PM	11:00 PM	J1, J3, J8	Event	Program was on standby but not called	-
NYISO	DLC	4:00 PM	5:00 PM	Zones I,J	Test	21.68	18,067

Saturday, July 07, 2012

Administrator	Program	<u>Time Start</u>	<u>Time End</u>	Zone/Network	Event/ Test	MW Pledged after De-rating	<u>Accounts</u>
Con Edison	Modlet	6:00 PM	10:00 PM	Zone J	Event	0.38	966
NYISO	TDRP	3:00 PM	11:00 PM	J1, J3, J8	Event	Program was on standby but not called	-

Monday, July 16, 2012

<u>Administrator</u>	Program	<u>Time Start</u>	<u>Time End</u>	Zone/Network	<u>Event/ Test</u>	MW Pledged after De-rating	<u>Accounts</u>
NYISO	TDRP	3:00 PM	11:00 PM	J3	Event	Program was on standby but not called	-
Con Edison	DLRP	1:20 PM (ASAP)	9:00 PM	Turtle Bay	Event	1.61	16

Tuesday, July 17, 2012

Administrator	Program	<u>Time Start</u>	<u>Time End</u>	Zone/Network	Event/ Test	MW Pledged after De-rating	Accounts
NYISO	TDRP	6:00 PM	11:00 PM	J3	Event	55.00*	Not Available
NYISO	TDRP	6:00 PM	11:00 PM	8L	Event	Program was on standby but not called	-
NYISO	SCR	1:00 PM	7:00 PM	Zones A, B, C, D, E, F, G, H, I, J, K	Event	Program was on standby but not called	-
Con Edison	DLC	3:00 PM	8:00 PM	Bay Ridge, Fashion, Empire, Grand Central, Borden	Event	0.34 - Network Initiated Peak Shaving	255
Con Edison	DLC	5:00 PM	10:00 PM	Brighton Beach, Flatbush, Ocean Parkway, Park Slope, Sheepshead Bay, Beekman, Maspeth, Sunnyside	Event	2.46 - Network Initiated Peak Shaving	1,891
Con Edison	Modlet	5:00 PM	10:00 PM	Zone J	Event	0.38	966

*J3 MW's may not be indicative of actual demand reduction due to voluntary basis and as large commercial customer base called outside general commercial hours.

Wednesday, July 18, 2012

Administrator	Program	<u>Time Start</u>	<u>Time End</u>	Zone/Network	Event/Test	MW Pledged after De-rating	<u>Accounts</u>
Con Edison	DLRP	7:09 AM (ASAP)	3:00 PM	Sutton	Event	4.59	21
Con Edison	CSRP-Day	12:00 PM	5:00 PM	Zone J	Event	50.20	230
Con Edison	CSRP - Night	5:00 PM	10:00 PM	Zone J	Event	11.93	66
Con Edison	CSRP - Night	5:00 PM	10:00 PM	**	Event	11.40	1
Con Edison	RSAP	5:00 PM	10:00 PM	Zone J	Event	0.14	145
Con Edison	DLRP	5:09 PM (ASAP)	12:30 AM	Ocean Parkway	Event	1.39	12
Con Edison	DLRP	9:00 PM	N/A	Flushing	Event	DR resources were not called	-
NYISO	SCR	2:10 PM	6:00 PM	Zones G, H, I, K	Event	48.09*	126
NYISO	SCR	1:00 PM	6:00 PM	Zone J	Event	388.00	2,391
NYISO	TDRP	6:00 PM	10:00 PM	J3	Event	55.00***	Not Available

• MW's only within Con Edison's service territory; Zones H, I, & J

** is an export demand response resource

***J3 MW's may not be indicative of actual demand reduction due to voluntary basis and as large commercial customer base called outside general commercial hours.

				Tuesday, July 24, 2012			
Administrator	Program	<u>Time Start</u>	<u>Time End</u>	Zone/Network	Event/ Test	MW Pledged after De-rating	<u>Accounts</u>
NYISO	TDRP	3:00 PM	10:00 PM	J3	Event	Program was on standby but not called	-
				Thursday, July 26, 2012			
Administrator	Program	<u>Time Start</u>	<u>Time End</u>	Zone/Network	Event/ Test	MW Pledged after De-rating	<u>Accounts</u>
NYISO	TDRP	3:00 PM	10:00 PM	J3	Event	Program was on standby but not called	-
				Friday, July 27, 2012			
Administrator	Program	Time Start	Time End	Zone/Network	Event/ Test	MW Pledged after De-rating	Accounts

ammistrator	Program	<u>Time Start</u>	<u>Time Enu</u>	ZONE/NELWORK	<u>event/ test</u>	INITY Pleaged after De-rating Accord	unts
NYISO	TDRP	3:00 PM	10:00 PM	J3	Event	Program was on standby but not called -	6 - C

				Thursday, August 02, 2012			
Administrator	Program	<u>Time Start</u>	<u>Time End</u>	Zone/Network	Event/Test	MW Pledged after De-rating	<u>Accounts</u>
Con Edison	DLRP	12:00 PM	5:00 PM	Riverdale	Event	1.40	11
NYISO	SCR	4:00 PM	5:00 PM	E, F, G, H, I	Test	48.09*	126
NYISO	SCR	5:00 PM	6:00 PM	J,K	Test	388.00*	2,391
•MW's only within C	on Edison's sen	rice territory: Zones H	1.8.1				

*MW's only within Con Edison's service territory; Zones H, I, & J

Thursday, August 09, 2012

<u>Administrator</u>	<u>Program</u>	<u>Time Start</u>	<u>Time End</u>	Zone/Network	Event/Test	MW Pledged after De-rating	Accounts
Con Edison	DLRP	1:00 AM	N/A	Sheridan Square	Event	DR resources were not called	-

Wednesday, August 15, 2012

<u>Administrator</u>	Program	<u>Time Start</u>	<u>Time End</u>	Zone/Network	Event/Test	MW Pledged after De-rating	Accounts
Con Edison	DLRP	5:00 PM	N/A	Sheepshead Bay	Event	DR resources were not called	-
Con Edison	Modlet	5:00 PM	10:00 PM	Zone J	Event	0.38	966

Friday, August 24, 2012

<u>Administrator</u>	Program	<u>Time Start</u>	<u>Time End</u>	Zone/Network	Event/ Test	MW Pledged after De-rating	<u>Accounts</u>
Con Edison	DLRP	11:00 AM	N/A	West Bronx	Event	DR resources were not called	-

				11100y, August 51, 2017	2		
<u>Administrator</u>	Program	<u>Time Start</u>	<u>Time End</u>	Zone/Network	Event/ Test	MW Pledged after De-rating	<u>Accounts</u>
Con Edison	DLRP	5:30 AM	N/A	Central Park	Event	DR resources were not called	-

Friday, August 31, 2012

Sunday, September 16, 2012

Administrator	Program	<u>Time Start</u>	<u>Time End</u>	Zone/Network	Event/Test	MW Pledged after De-rating	<u>Accounts</u>
Con Edison	DLRP	10:48 AM (ASAP)	7:00 PM	Brighton Beach	Event	1.17	8
Con Edison	DLRP	10:48 AM (ASAP)	7:00 PM	Flatbush	Event	1.07	9

2011 Demand Response Program Activity

Wednesday, June 08, 2011

<u>Administrator</u>	Program	<u>Time Start</u>	<u>Time End</u>	Zone/Network	Event/ Test	MW Reduction Achieved	<u>Accounts</u>
Con Edison	DLRP	3:00 P.M.	4:00 P.M.	All	Test	127.62	701
Con Edison	DLC	3:00 P.M.	4:00 P.M.	All	Test	28.63	20,442
Con Edison	RSAP	4:00 P.M.	5:00 P.M.	J	Test	0.01	110

Thursday, June 09, 2011

<u>Administrator</u>	Program	<u>Time Start</u>	<u>Time End</u>	Zone/Network	Event/ Test	MW Reduction Achieved	Accounts
Con Edison	CSRP	2:00 P.M.	3:00 P.M.	All	Test	17.04	115
Con Edison	CSRP	5:00 P.M.	6:00 P.M.	All	Test	4.16	30

Tuesday, July 19, 2011

Administrator	Program	<u>Time Start</u>	<u>Time End</u>	Zone/Network	Event/ Test	MW Reduction Achieved	<u>Accounts</u>
NYISO	SCR (ICAP)	3:00 P.M.	4:00 P.M.	H&I	Test	42.20	84
NYISO	SCR (ICAP)	4:00 P.M.	5:00 P.M.	J	Test	473.53	1,346

Thursday, July 21, 2011

<u>Administrator</u>	<u>Program</u>	<u>Time Start</u>	<u>Time End</u>	Zone/Network	<u>Event/ Test</u>	MW Reduction Achieved	Accounts
Con Edison	RSAP	11:00 A.M.	7:00 P.M.	l	Event	0.01	110
Con Edison	CSRP - Day	12:00 P.M.	5:00 P.M.	J	Event	21.40	115
Con Edison	CSRP - Night	5:00 P.M.	10:00 P.M.	J	Event	6.20	30
Con Edison	DLC	1:00 P.M.	6:00 P.M.	All	Event	32.38	20,442
NYISO	SCR (ICAP)	1:00 P.M.	6:00 P.M.	All	Event	515.73	1,430
NYISO	EDRP	1:00 P.M.	6:00 P.M.	All	Event	65.55	48

<u>Administrator</u>	Program	<u>Time Start</u>	<u>Time End</u>	Zone/Network	Event/ Test	MW Reduction Achieved	<u>Accounts</u>
Con Edison	CSRP - Day	12:00 P.M.	5:00 P.M.	1	Event	29.52	115
Con Edison	CSRP - Night	5:00 P.M.	10:00 P.M.	J	Event	6.72	30
Con Edison	DLRP	7:00 A.M.	3:00 P.M.	Elmsford	Event	0.30	9
Con Edison	DLC	7:00 A.M.	3:00 P.M.	Elmsford	Event	0.78	809
Con Edison	DLRP	7:00 A.M.	3:00 P.M.	Maspeth	Event	2.66	18
Con Edison	DLC	7:00 A.M.	3:00 P.M.	Maspeth	Event	0.37	275
Con Edison	DLRP	6:00 P.M.	11:00 P.M.	Richmond Hill	Event	1.98	14
Con Edison	DLC	6:00 P.M.	11:00 P.M.	Richmond Hill	Event	0.34	163
Con Edison	DLRP	6:00 P.M.	11:00 P.M.	Fox Hills	Event	0.79	5
Con Edison	DLC	6:00 P.M.	11:00 P.M.	Fox Hills	Event	1.66	1,493
Con Edison	DLC	6:00 P.M.	11:00 P.M.	Ossining West	Event	0.50	384
Con Edison	DLRP	6:00 P.M.	11:00 P.M.	Sheepshead Bay	Event	3.20	8
Con Edison	DLC	6:00 P.M.	11:00 P.M.	Sheepshead Bay	Event	0.27	249
Con Edison	DLRP	7:31 P.M. (ASAP)	11:00 P.M.	Granite Hill	Event	0.90	4
Con Edison	DLC	7:31 P.M. (ASAP)	11:00 P.M.	Granite Hill	Event	0.63	590
Con Edison	DLRP	8:19 P.M. (ASAP)	11:00 P.M.	Buchanan	Event	-0.01	1
Con Edison	DLC	8:19 P.M. (ASAP)	11:00 P.M.	Buchanan	Event	0.70	653
Con Edison	DLRP	9:03 P.M. (ASAP)	6:00 A.M.	Ridgewood	Event	-0.12	9
Con Edison	DLC	9:03 P.M. (ASAP)	6:00 A.M.	Ridgewood	Event	0.08	143
Con Edison	DLRP	9:03 P.M. (ASAP)	6:00 A.M.	Rego Park	Event	0.23	12
Con Edison	DLC	9:03 P.M. (ASAP)	6:00 A.M.	Rego Park	Event	0.43	526
NYISO	SCR (ICAP)	12:00 P.M.	6:00 P.M.	J	Event	473.53	1,346
NYISO	EDRP	12:00 P.M.	6:00 P.M.	J	Event	61.85	39
NYISO	SCR (ICAP)	1:00 P.M.	6:00 P.M.	H&I	Event	42.20	84
NYISO	EDRP	1:00 P.M.	6:00 P.M.	H&I	Event	3.70	9

Friday July 22, 2011

Saturday, July 30, 2011

<u>Administrator</u>	Program	<u>Time Start</u>	<u>Time End</u>	Zone/Network	Event/ Test	MW Reduction Achieved	<u>Accounts</u>
Con Edison	DLRP	12:00PM	12:00 A.M.	Central Park	Event	0.21	8