Attachment I

## **NYISO 2013 Annual Report on Demand Response Programs**

#### **Program Descriptions**

The New York Independent System Operator, Inc. ("NYISO") offers two demand response programs that support reliability: the Emergency Demand Response Program<sup>1</sup> ("EDRP") and the Installed Capacity-Special Case Resource Program ("ICAP/SCR"). In addition, demand response resources may participate in the NYISO's energy market through the Day-Ahead Demand Response Program ("DADRP"), or the Ancillary Services market through the Demand-Side Ancillary Services Program ("DSASP").

EDRP provides demand resources an opportunity to earn the greater of \$500/MWh or the prevailing locational-based marginal price ("LBMP") for energy consumption curtailments provided when the NYISO calls on the program's resources to reduce load. Resources must be enrolled through Curtailment Service Providers ("CSPs"), which serve as the interface between the NYISO and resources, in order to participate in EDRP. There are no obligations for enrolled EDRP resources to curtail their load during an EDRP event.

The ICAP/SCR program allows demand resources that meet certification requirements – Special Case Resources ("SCRs") – to offer Unforced Capacity ("UCAP") to Load Serving Entities ("LSEs"). The load reduction capability of SCRs may be sold in the Installed Capacity ("ICAP") market; however, SCRs participate through Responsible Interface Parties ("RIPs"), which serve as the interface between the NYISO and the resources. RIPs also act as aggregators of SCRs. SCRs that have sold ICAP are obligated to reduce their system load when called upon by the NYISO with two or more hours notice, provided the NYISO notifies the RIP the day ahead of the possibility of such a call. In addition, enrolled SCRs are subject to testing each Capability Period to verify their capability to achieve the amount of enrolled load reduction. Failure of an SCR to reduce load during an event or test could result in penalties assessed to the applicable RIP in accordance with the ICAP/SCR program rules and procedures. Curtailments are called by the NYISO when reserve shortages are anticipated. Resources may be enrolled for either EDRP or ICAP/SCR, but not for both. In addition to a capacity payment, RIPs are eligible

<sup>&</sup>lt;sup>1</sup> Terms in upper case not defined herein have the meaning ascribed to them in the NYISO's Market Administration and Control Area Services Tariff.

for an energy payment during an event, using the same performance calculation used to pay EDRP resources.

The Targeted Demand Response Program ("TDRP"), introduced in July 2007, is a NYISO reliability program that deploys existing EDRP and SCR resources on a voluntary basis, at the request of a Transmission Owner, in targeted subzones to solve local reliability problems. The TDRP program is currently available in Zone J, New York City.

The DADRP provides demand resources with an opportunity to offer their load curtailment capability into the Day-Ahead Market ("DAM") as an energy supply resource. Resources submit offers by 5:00 a.m. specifying the hours and amount of load curtailment they are offering for the next day, and the price at which they are willing to curtail. Prior to November 1, 2004, the minimum offer price was \$50/MWh. The offer floor price currently is \$75/MWh. Offers are structured like those of generation resources: DADRP resources may specify minimum and maximum run times and the hours that they are available. They are eligible for Bid Production Cost guarantee payments to make up for any difference between the market price received and their block offer price across the day. Load scheduled in the DAM is obligated to curtail the next day. Failure to curtail results in the imposition of a penalty for each such hour equal to the product of the MW curtailment shortfall and the greater of the corresponding DAM or Real-Time Market price of energy.

The DSASP, introduced in June 2008, provides demand resources that meet telemetry and other qualification requirements an opportunity to offer their load curtailment capability into the DAM and/or Real-Time Market to provide Operating Reserves and Regulation Service. DSASP resources must qualify to provide Operating Reserves or Regulation Service through standard resource testing requirements. Offers are submitted through the same process as generation resources: resources submit offers by 5:00 a.m. specifying the Ancillary Service they are offering (Spinning or Non-Synchronous Reserves, and/or Regulation, if qualified) along with the hours and amount of load curtailment for the next day, and the price at which they are willing to curtail. Real-time offers may be made up to 75 minutes before the hour of the offer. Although DSASP resources are not scheduled for energy in the DAM, they are required to submit energy offers, which are used in the co-optimization algorithm for dispatching Operating Reserves resources. Similar to the DADRP, the energy offer floor price is currently \$75/MWh.

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DSASP resources are not paid for energy. They are eligible for a Day-Ahead Margin Assurance Payment to make up for any balancing difference between their Day-Ahead Operating Reserves or Regulation schedule and Real-Time dispatch, subject to their performance for the scheduled service. Performance indices are calculated on an interval basis for both Operating Reserves and Regulation. Payment is adjusted by the performance index for the service provided.

#### **Summary of Significant Findings**

#### Emergency Demand Response Program and ICAP/SCR Program

As of July 31, 2013<sup>2</sup>, a total of 28 CSPs and RIPs have resources enrolled in the NYISO's EDRP and/or ICAP/SCR programs<sup>3</sup>. This level of participation represents a reduction of three Load Serving Entities (that are not Transmission Owners, "Competitive LSE"); a reduction of one Transmission Owner; an increase in one aggregator; and no change in resources representing themselves (referred to herein as a "direct resource") since 2012 figures. Participating CSPs and RIPs include:

- 4 Transmission Owners
- 2 Competitive LSEs
- 15 aggregators that are not Load Serving Entities or Transmission Owners
- 7 EDRP or ICAP/SCR direct resources

Resource representatives that are not Transmission Owners or affiliates thereof, including Load Serving Entities not affiliated with Transmission Owners and aggregators, currently sponsor 87.2% of the total EDRP and ICAP/SCR enrolled MW, up from the 55.4% enrolled in 2012. In 2013, three non-Transmission Owners had resources enrolled in the EDRP; all other EDRP resources were enrolled through Transmission Owners. Direct resources represent 7.9%

<sup>&</sup>lt;sup>2</sup> For several years, August 31 has been the date customarily used for reporting NYISO's demand response program participation statistics. In 2011, the NYISO made a change from reporting demand response enrollment as of August 31 each year to July 31 of each year to better align with several other reporting requirements for reliability and planning. Reporting as of July 31 also provides transparency with other reporting requirements for demand response. The NYISO evaluated the difference in enrollment between July and August enrollments and found it to be minimal (2% - 3%).

<sup>&</sup>lt;sup>3</sup> The report on reliability programs is based on a snapshot of the programs as of July 31, 2013.

of the enrolled MW in the ICAP/SCR program or 7.3% of the combined reliability program MW.

EDRP and ICAP/SCR had a total of 4495 end-use locations enrolled capable of providing a total of 1269.5 MW of demand response capability, a 32.8% decrease from the 2012 MW enrollment level. The demand response resources in NYISO reliability programs represent 3.7% of the 2013 Summer Capability Period peak demand of 33,955 MW. There were 156 end-use locations in EDRP (147 EDRP resources and 9 ICAP/SCR unsold resources) and 4,339 end-use locations in ICAP/SCR. ICAP/SCR represents 96.5% of the total resources enrolled in the NYISO's reliability programs and 92.6% of the reliability programs' total enrolled MW. The TDRP, which deploys EDRP and ICAP/SCR resources in subzones of Zone J (New York City) for local reliability, included 25.6% of total NYCA EDRP end-use locations and encompassed 16.5% of total NYCA EDRP MW. The TDRP also included 50.7% of total NYCA ICAP/SCR end-use locations, representing 32.3% of the total NYCA enrolled ICAP/SCR MW, a decrease of 9.5% in total MW and a decrease of 6.2% in total resources since 2012.

Since participation in EDRP and ICAP/SCR became mutually exclusive in 2003, EDRP enduse locations and MW have continued to decrease. Aggregations by RIPs now account for 98.7% of ICAP/SCR resources and 81.4% of enrolled MW in the program, a decrease from 2012 in enrolled MW of 0.4%.

During the summer of 2013, the NYISO deployed its reliability demand response programs on five separate days; no TDRP was deployed during the summer of 2013. The NYISO deployments of the ICAP/SCR and EDRP programs occurred five days in July. Details on the 2013 demand response events are provided below in the section titled "2013 Event Performance for Emergency Demand Response Program and ICAP/SCR Program."

#### Day-Ahead Demand Response Program

During the analysis period of September 2012 through August 2013, there were no offers or schedules of DADRP resources. Given no activity in DADRP during the analysis period, there is nothing to report for this period.

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#### Demand-Side Ancillary Service Program

There are demand-side resources that have initiated and are progressing through the registration process for DSASP while implementing the infrastructure for direct communications with the NYISO. Additional confidential information on the DSASP is provided in Attachment II.

## Participation in Reliability-Supporting Demand Response Programs

#### Aggregation of ICAP/SCR Resources

Enrollments for ICAP/SCR resources are tracked by both: (a) end-use location and (b) Program ID. Program IDs, used to identify demand resources<sup>4</sup> in NYISO's systems, may represent individually enrolled end-use locations or aggregations of end-use locations enrolled as a single resource. Table 1 indicates that there are 79 aggregations represented by RIPs, collectively containing 4,282 end-use locations with 957.0 MW of the total 1175.2 MW of enrolled ICAP/SCR. Fifty-seven (57) individually enrolled resources account for the remaining 218.2 MW.

Table 1: Detail of 2013 ICAP/SCR Program Participation Level by Resource Type

		ICAP			ICAP Unsold <sup>+</sup>	
Resource Type	# Program IDs	# End-use Locations	Sold MW	# Program IDs	# End-use Locations	Enrolled MW
Individual Resources	57	57	218.2	*	*	0.4
Aggregated Resources	79	4282	957.0	*	*	0.0
Total	136	4339	1175.2	6	9	0.4

\* Number of entries in this category has been masked for confidentiality in the public version of the table. The unredacted values are presented in the confidential appendix submitted as Attachment II.

+ ICAP Unsold includes both offered and unoffered MW

MW represent the ICAP equivalent MW sold in the ICAP market in July 2013.

The right-hand section of Table 1 provides information for ICAP/SCR resources that did not sell MW in the July 2013 capacity market auctions. In cases where an ICAP/SCR resource offers load reduction in a NYISO auction that is not sold, or when the resource's derated MW

<sup>&</sup>lt;sup>4</sup> A resource is defined as a single end-use location enrolled in a program individually or an aggregation of end-use locations enrolled as a unit; resources are identified by a Program ID.

value is zero, that resource is automatically included in the EDRP at its enrolled MW value until the next auction or until the resource confirms a bilateral transaction with an LSE. The EDRP enrollment totals and event response reported include the offered, but unsold, MW of enrolled ICAP/SCR resources.

#### EDRP and ICAP/SCR Program Enrollment

At the end of July 2013, the NYISO's reliability programs had 4,495 end-use locations enrolled, with a total of 1269.5 MW of demand response capability, a 32.8% reduction from the 2012 MW enrollment level. There were 156 end-use locations in EDRP (147 EDRP resources and 9 ICAP/SCR unsold resources) and 4,339 end-use locations in ICAP/SCR. ICAP/SCR represents 96.5% of the total reliability program resources and 92.6% of the total reliability program MW, an increase of less than 0.4% in the distribution of enrolled MW between the ICAP/SCR program and the EDRP since 2012.

 Table 2: 2013 Program Enrollment Summary by Curtailment Service Provider Type

EDRP <sup>(1)</sup>			)	ICAP Unsold (2)				ICAP <sup>(3)</sup>			DADRP (4	1)	
CSP Type #	Agent Type	# CSP	# End-use Locations	Enrolled MW	# RIP	# End-use Locations	Enrolled MW	# RIP	# End-use Locations	ICAP MW	# DRP	# End-use Locations	MW
15	Aggregator	*	10	0.8	*	*	0.2	14	3772	911.9	*	*	9.0
0	Curtailment Program End-Use Customer	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0
7	Direct Customer	0	0	0.0	0	0	0.0	8	124	92.8	0	0	0.0
2	LSE	*	24	7.2	*	*	0.2	*	364	93.4	*	*	15.0
4	Transmission Owner	*	113	85.9	0	0	0.0	*	79	77.1	*	*	13.0
28	Total	7	147	93.9	4	9	0.4	26	4339	1175.2	4	4	37.0

\* Number of entries in this category has been masked for confidentiality in the public version of the table. The unredacted values are presented in the confidential appendix submitted as Attachment II.

Note 1: The sum of EDRP and SCR Unsold Enrolled MW = Total EDRP.

Note 2: Resources in the ICAP/SCR program with Unsold capacity are considered EDRP resources in the month(s) that capacity is unsold. MW represent Enrolled MW in the ICAP program, but not sold.

Note 3: MW represent the ICAP equivalent MW sold in the ICAP market in July 2013.

Note 4: Total NYISO enrollment is not necessarily the sum of all programs due to the rules that state that end-use locations are allowed to participate in a reliability program (EDRP or ICAP) and economic (DADRP or DSASP).

Table 2 shows the total number of CSPs enrolled for 2013 in the first column and the number of CSPs, by type, with the number of end-use locations and enrolled MW for each of the program categories. This table provides the enrollment detail by program and CSP type.

Enrollments in EDRP in 2013 were predominantly through Transmission Owners.

ICAP/SCR enrollments by aggregators provide 86.9% of participating end-use locations and 77.6% of the enrolled MW.

Table 3 shows program enrollment detail by Load Zone. Although statistics on resource class are not collected, resources in Load Zones A through E are typically industrial and retail resources, while those in Load Zones J and K include commercial office, retail, and multi-family residential resources.

	EDR	<b>P</b> <sup>(1)</sup>	ICAP Offere	d/Unsold <sup>(2)</sup>	ICA	P <sup>(3)</sup>	DADI	RP <sup>(4)</sup>
Zone	#	Enrolled MW	#	Enrolled MW	#	ICAP MW	#	MW
А	13	13.5	*	0.0	408	311.4	0	0.0
В	2	1.3	*	0.0	185	64.4	0	0.0
C	29	13.9	*	0.0	302	114.6	0	0.0
D	8	3.7	*	0.0	11	9.2	0	0.0
E	20	14.9	*	0.1	137	35.3	0	0.0
F	23	26.8	*	0.0	190	104.2	*	28.0
G	*	0.0	0	0.0	135	35.9	*	9.0
н	*	1.6	0	0.0	19	4.7	0	0.0
I	*	0.1	*	0.3	104	25.2	0	0.0
J	36	15.6	*	0.0	2203	379.2	0	0.0
К	12	2.6	*	0.0	645	91.1	0	0.0
Total	147	93.9	9	0.4	4339	1175.2	4	37.0

Table 3: 2013 Program Enrollment by Load Zone

\* Number of entries in this category has been masked for confidentiality in the public version of the table. The unredacted values are presented in the confidential appendix submitted as Attachment II.

Note 1: The sum of EDRP and SCR Unsold Enrolled MW = Total EDRP.

Note 2: Resources in the ICAP/SCR program with Unsold capacity are considered EDRP resources in the month(s) that capacity is unsold. MW represent Enrolled MW in the ICAP program, but not sold.

Note 3: MW represent the ICAP equivalent MW sold in the ICAP market in July 2013.

Note 4: Total NYISO enrollment is not necessarily the sum of all programs due to the rules that state that end-use locations are allowed to participate in a reliability program (EDRP or ICAP) and economic (DADRP or DSASP).

#### Targeted Demand Response Program Enrollment

Load Zone J currently is the only Load Zone with resources assigned to the TDRP. This Load Zone has been divided into subzones designated by Consolidated Edison Company of New York, Inc. ("Con Edison") Resources enrolled in EDRP and ICAP/SCR are assigned to one of the various subzones based on their location. Unassigned resources remain in the general Zone J category (J9: Shared Subzone). The sub-load pockets correspond to the following Con Edison network area substation groupings:

- J1: Sherman Creek/Parkchester/E 179<sup>th</sup> J6: W 49<sup>th</sup>
- J2: Astoria West/Queensbridge

• J5: Astoria East/Corona/Jamaica

- J3: Vernon/Greenwood
- J4: Staten Island

• J9: Shared Subzone

• J7: E13th/East River

• J8: Farragut/Rainey

	J	J1	J2	13	J4	J5	J6	J7	18	19	Total
MW	0.5	0.9	0.0	0.8	0.0	0.6	0.2	0.0	0.5	12.0	15.6
End-use Locations	*	*	*	13	*	6	*	*	8	*	40

#### Table 4: EDRP End-use Locations enrolled in TDRP – Load Zone J

\* Number of entries in this category has been masked for confidentiality in the public version of the table. The unredacted values are presented in the confidential appendix submitted as Attachment II.

Table 5: ICAP/SCR End-use Locations enrolled in TDRP – Load Zone J

	J	J1	J2	J3	J4	J5	J6	J7	J8	19	Total
MW	1.4	24.0	30.0	57.5	27.6	34.6	66.8	63.7	73.6	0.0	379.2
End-use Locations	6	153	171	453	82	223	245	384	486	0	2203

#### Historical Enrollment in Reliability Programs

Figure 1 plots the growth in the NYISO's reliability-based programs from inception through July 2013. The stacked area plots enrolled MW by program and year. The lines plot the number of end-use locations by program and year. From May 2001 through July 2013, combined enrollment in EDRP and ICAP/SCR has grown from approximately 200 MW to 1269.5 MW; and the total number of end-use locations has increased from approximately 200 in March 2002 to 4,495. Since participation in EDRP and ICAP/SCR became mutually exclusive, EDRP resources and MW have continued to decrease.





#### Changes in Program Enrollment

Table 6 shows the program enrollment changes by number of Program IDs enrolled. Program IDs, which are used to represent resources in NYISO's market systems, may represent individual end-use locations or aggregations of end-use locations. Table 7 shows the program enrollment changes by number of end-use locations.

	2012		2012 2013			Percent Change From 2012 to 2013		Subscri Prc	ber	
	Count	MW	Count	MW	MW Change	Program ID Count	Subscribe d MW	2012	2013	Percent Change
EDRP	198	143.9	147	93.9	-50.0	-26%	-35%	0.73	0.64	-12%
ICAP/SCR Unsold	13	3.2	9	0.4	-2.8	-31%	-87%	0.25	0.04	-82%
ICAP/SCR	138	1741.1	136	1175.2	-565.9	-1%	-33%	12.62	8.64	-32%
DADRP	4	37.0	4	37.0	0.0	0%	0%	9.25	9.25	0%

Table 6: Program Enrollment by Program ID - Changes 2012 to 2013

	2012 2013			Percent Cha 2012 to	inge From 2013	Subscri End-u	bed MW p se locatio	per n		
	Count	N 40 A /	Count	N (1) A (	MW Change	End-use Location	Subscribed	2012	2012	Percent
	Count		Count	IVIVV		Count	IVIVV	2012	2013	Change
EDRP	198	143.9	147	93.9	-50.0	-26%	-35%	0.73	0.64	-12%
ICAP/SCR Unsold	61	3.2	9	0.4	-2.8	-85%	-87%	0.05	0.04	-15%
ICAP/SCR	4773	1741.1	4339	1175.2	-565.9	-9%	-33%	0.36	0.27	-26%
DADRP	4	37.0	4	37.0	0.0	0%	0%	9.25	9.25	0%

 Table 7: Program Enrollments by End-use Location - Changes 2012 to 2013

Table 7, which shows changes in enrollment by end-use location, shows reductions in all reliability programs since the year-end report for Summer 2012. Changes in the number of enrolled resources in the ICAP/SCR Unsold category for July 2013 can be attributed to one or more of the following: poor performance factors, which results in some resources having little or no capacity to offer; or fewer ICAP/SCR resources with offered capacity that was not sold in any ICAP auction.

Enrollment in DADRP has been static for several years and the enrolled resources have shown no offer activity in the market since 2010.

Figures 2 through 4 track enrollment and MW in EDRP, ICAP/SCR and DADRP, respectively, over the period 2001 through 2013. The primary difference between Figures 2 and 3 is the representation of ICAP/SCR resources: Figure 2 shows the number of Program IDs, including individually enrolled resources and aggregated resources. Figure 3 provides information on the total number of end-use locations. ICAP/SCR enrollment of end-use locations was initiated in 2004; prior to that period, the enrolled resources shown in Figures 2 and 3 for ICAP/SCR were based on Program IDs, also referred to as Aggregation IDs. In addition, during 2001 and 2002, program enrollment was non-exclusive, *i.e.*, an end-use location could register for both EDRP and ICAP/SCR. Beginning in 2003, participation in the EDRP and ICAP/SCR programs became mutually exclusive.



Figure 2: Demand Response Program Enrollment History by Program ID, 2001 – 2013

Figure 3: Demand Response Program Enrollment History by Number of End-use locations, 2001 – 2013



Figure 4 shows that since making EDRP and ICAP/SCR mutually exclusive, the general trend has been for number of resources and the level of MW enrolled in EDRP to decrease. At the same time, given the monthly capacity payment associated with it, the ICAP/SCR program enrollment has seen increases in the number of resources and MW levels. The reductions in the number of end-use locations and enrolled MW in recent years are in part due to changes to market rules designed to better estimate the demand response capability available to the NYISO under peak load conditions.



Figure 4: Demand Response Program MW Enrollment History, 2001 – 2013

#### Analysis of ICAP/SCR Strike Prices

Beginning in 2003, resources in the ICAP/SCR program were required to indicate, at the time of enrollment, a curtailment strike price, between \$0-\$500/MWh, which would be used by the NYISO to determine which resources to call for curtailments when all resources in a given Load Zone or Zones are not needed to restore system security to its equilibrium state.

To characterize how resources responded to this requirement, strike price curves were analyzed for all resources enrolled in July 2013. The curves in the figures below map the percentage of enrolled ICAP MW at a given strike price. Figure 5 illustrates the strike price curves for 2003 to 2013, covering the period of time since the program provision has been in place. The steeper slope for the strike price curve overall indicates that strike prices are clustered close to the offer ceiling of \$500/MWh. It is evident that over time the number of resources with higher strike prices has increased; in 2013, less than 3% of enrolled ICAP MW have a strike price below \$500/MWh. Figure 6 is a detailed view of the strike price curves for the past five years, 2009 through 2013, and displays a limited range where the price curve levels off to the offer ceiling of \$500/MWh; the strike price curves for 2010 and 2011 have the same shape. Figure 6 shows the 2013 percentages in blue and, for comparison, the 2012 percentages in red.



Figure 5: 2003 - 2013 ICAP/SCR Curtailment Bid Curves



Figure 6: 2009 - 2013 ICAP/SCR Curtailment Bid Curve Detail

## 2013 Event Performance for Emergency Demand Response Program and ICAP/SCR Program

During the summer of 2013, the NYISO deployed its reliability demand response programs on five separate days; the TDRP was not deployed during the summer 2013. The NYISO deployments of the ICAP/SCR and EDRP programs occurred on five days in July.<sup>5</sup> The 2013 deployments were as follows:

#### July 15:

SCR and EDRP resources were deployed in Load Zones G, H, I, I, J, and K from 1 p.m. to 6 p.m. (HB 13 through HB 17) for SENY transmission security operations, the requirement to

http://www.nyiso.com/public/webdocs/markets\_operations/committees/mc/meeting\_materials/2013-07-31/July%20Heat%20Wave.pdf and

<sup>&</sup>lt;sup>5</sup> Details of demand response deployments in July were presented to NYISO's Management Committee on July 31, 2013 and Market Issues Working Group on August 31, 2013 :

http://www.nyiso.com/public/webdocs/markets\_operations/committees/bic\_miwg/meeting\_materials/201 3-08-06/ScarcityOutcomes-July%20Heat%20Wave\_August6thMIWG\_vFinalvrepost.pdf

restore system power flows to within normal operating limits within 30 minutes. Response from SCRs in the deployed Load Zones was mandatory.

86% of the intervals during this time were subject to EDRP/SCR Scarcity Pricing.

#### **July 16:**

SCR and EDRP resources were deployed in Load Zones G, H, I, I, J, and K from 1 p.m. to 6 p.m. (HB 13 through HB 17) for SENY transmission security operations, the requirement to restore system power flows to within normal operating limits within 30 minutes. Response from SCRs in the deployed Load Zones was mandatory.

55% of the intervals during this time were subject to EDRP/SCR Scarcity Pricing.

#### **July 17:**

SCR and EDRP resources were deployed in Load Zones G, H, I, I, J, and K from 1 p.m. to 6 p.m. (HB 13 through HB 17) for SENY transmission security operations, the requirement to restore system power flows to within normal operating limits within 30 minutes. Response from SCRs in the deployed Load Zones was mandatory.

89% of the intervals during this time were subject to EDRP/SCR Scarcity Pricing.

#### **July 18:**

SCR and EDRP resources were deployed in Load Zones G, H, I, I, J, and K from 12 p.m. to 6 p.m. (HB 12 through HB 17) for SENY transmission security operations, the requirement to restore system power flows to within normal operating limits within 30 minutes. SCR and EDRP resources were deployed in Load Zones A, B, C, D, E, and F from 1 p.m. to 6 p.m. (HB 13 through HB 17) for statewide capacity needs. Response from SCRs in the deployed Load Zones was mandatory.

100% of the intervals during this time were subject to EDRP/SCR Scarcity Pricing.

#### **July 19:**

SCR and EDRP resources were deployed in Load Zones G, H, I, I, J, and K from 12 p.m. to 6 p.m. (HB 12 through HB 17) for SENY transmission security operations, the requirement to restore system power flows to within normal operating limits within 30 minutes. SCR and EDRP resources were deployed in Load Zones A, B, C, D, E, and F from 1 p.m. to 6 p.m. (HB

13 through HB 17) for statewide capacity needs. Response from SCRs in the deployed Load Zones was mandatory.

100% of the intervals during this time were subject to EDRP/SCR Scarcity Pricing.

#### **Response during NYISO Demand Response Program Events**

This section provides a summary of event response and payments for the Summer 2013 demand response events. Event response is compared to the Obligated MW (SCR) or Available MW (EDRP) for the zones deployed during an event. Obligated MW are the ICAP equivalent of the UCAP sold by resources in a Load Zone during the calendar month in which the event occurred. When Obligated MW differ from enrolled MW, it indicates that some of the enrolled UCAP of SCRs in the Load Zone was not sold for the month of the event; SCRs enrolled during a capability month that did not sell UCAP are treated as EDRP resources for that month. Available MW for EDRP is the amount of demand response reduction nominated by the EDRP resources in a Load Zone.

Appendix A of this report provides detailed hourly response and payment information by Load Zone for each demand response event during the Summer of 2013.

Table 8 provides a summary of average hourly response by SCR and EDRP resources during NYISO's demand response events during the Summer of 2013.

NYISO Event Date	Zones	Average Hourly MW	Obligated SCR MW and Available EDRP MW	Response as % of Obligated or Available MW	Event Energy Payments (based on CBL)	Average \$/MWh
July 15, 2013	G, H, I, J, K	343.2	556.2	61.7%	\$728,236.21	\$504.97
July 16, 2013	G, H, I, J, K	387.1	556.2	69.6%	\$776,871.90	\$499.97
July 17, 2013	G, H, I, J, K	361.0	556.2	64.9%	\$884,522.57	\$570.87
July 18, 2013	A, B, C, D, E, F, G, H, I, J, K	898.8	1269.5	70.8%	\$2,277,227.31	\$519.28
July 19, 2013	A, B, C, D, E, F, G, H, I, J, K	915.2	1269.5	72.1%	\$2,322,857.18	\$527.98
					\$6,989,715.17	\$524.39

 Table 8. Summary of Summer 2013 Demand Response Program Event Response

#### ICAP/SCR Capacity Response

Event response based on the ICAP/SCR reporting rules is contained in the NYISO's Installed Capacity Manual. ICAP/SCR response is determined by comparing the actual hourly interval metered energy with the Average Coincident Load ("ACL"):

$$RED_MW_{gn} = ACL_{gm} - METER_MW_{gn}$$

where:

- RED\_MW<sub>gn</sub> is the Installed Capacity Equivalent response that Resource *g* supplies during hour *n* of an SCR event;
- ACL<sub>gm</sub> is the Average Coincident Load for Resource *g* applicable to month *m*, using data submitted in its Special Case Resource Certification; and
- METER\_MW<sub>gn</sub> is the metered hourly-integrated energy for Resource *g* in hour *n* of an SCR event.

Response using this measure compares actual reduction with the Installed Capacity Equivalent (ICAP) of the resource's reduction capability sold. Individual resource performance factors are based on the four highest contiguous hours of demand response during each event as well as response during mandatory tests, as shown in Table 9. Beginning with the Summer of 2012, aggregation performance factors are used to determine the kW that can be sold in the next like Capability Period (*i.e.*, Summer or Winter). Reporting of meter data is required for all hours of a mandatory event in which the SCR was expected to respond.

 Table 9: Summary of SCR MW Response Based on ICAP Measures for Summer 2013

 Demand Response Events

SCR ICAP Response	Zones	Average Hourly MW	Obligated SCR MW	Response as % of Obligated MW
July 15, 2013	G, H, I, J, K	341.4	536.1	63.7%
July 16, 2013	G, H, I, J, K	385.0	536.1	71.8%
July 17, 2013	G, H, I, J, K	359.4	536.1	67.0%
July 18, 2013	A, B, C, D, E, F, G, H, I, J, K	884.0	1175.2	75.2%
July 19, 2013	A, B, C, D, E, F, G, H, I, J, K	898.1	1175.2	76.4%

#### NYISO Event Energy Response and Payments

In addition to compensation for committing to reduce capacity, RIPs with resources enrolled in the ICAP/SCR are eligible for payment related to energy reduction during a demand response event when they submit the associated performance data. To compute energy payments, response is determined using a Customer Baseline Load ("CBL") computed using recent historical data to determine what the resource's energy consumption would have been during event hours if the SCR had not reduced its load in response to a NYISO deployment request. This computation method is the same method used in the EDRP program to measure demand response reductions eligible for energy payment.<sup>6</sup> For settlement of the energy payment, the amount of demand response reduction is equal to the difference between the hourly CBL and corresponding hourly interval meter readings during event hours.

Table 10 presents a summary of energy response data for ICAP/SCR resources that reported CBL data for the NYISO's ICAP/SCR events; reporting of CBL data is voluntary for SCRs. Since the ICAP/SCR ACL values are based on the prior like Capability Period and the CBL is determined from load data that ranges from two weeks to 30 days prior to the event, differences in response can be expected. Contributing to the difference between the capacity response reported above and the energy response reported (in Table 10) is the fact that not all RIPs submitted CBL energy performance data. The NYISO has observed that some RIPs report CBL data for their larger resources, particularly in Load Zone J where energy prices are typically higher than the rest of the NYCA. Details on the energy payments made to SCRs for the Summer 2013 demand response events are included in Appendix A of this report.

Table 10: SCR Energy Response based on CBL for Summer 2013 Demand Response Events

SCR CBL Response	Zones	HB 12	HB 13	HB 14	HB 15	HB 16	HB 17	Average Hourly MW	Obligated ICAP MW of SCRs Reporting CBL Data	Response as % of Obligated MW
July 15, 2013	G, H, I, J, K		238.2	306.7	311.0	301.6	275.7	286.6	460.1	62.3%
July 16, 2013	G, H, I, J, K		273.5	331.6	329.2	317.1	292.0	308.7	464.1	66.5%
July 17, 2013	G, H, I, J, K		271.1	328.1	327.1	316.4	298.3	308.2	471.4	65.4%
July 18, 2013	A, B, C, D, E, F, G, H, I, J, K	228.6	717.1	861.8	866.6	839.8	794.0	803.0	1082.1	74.2%
July 19, 2013	A, B, C, D, E, F, G, H, I, J, K	245.1	710.7	840.0	880.5	848.4	802.1	802.9	1094.3	73.4%

Table 11 reports the energy reductions of EDRP resources during the Summer 2013 NYISO demand response events, computed using the CBL method. Response of EDRP resources varied greatly by zone and event. It is important to note that the enrolled MW values shown below that are used to compute performance include unsold SCRs as reported in Table 3.

<sup>&</sup>lt;sup>6</sup> EDRP Manual, section 5.2:

<sup>&</sup>lt;http://www.nyiso.com/public/webdocs/products/demand\_response/emergency\_demand\_response/edrp\_ mnl.pdf >

EDRP CBL Response	Zones	HB 12	HB 13	HB 14	HB 15	HB 16	HB 17	Average Hourly MW	Available EDRP MW	Response as % of Available
July 15, 2013	G, H, I, J, K		2.0	2.0	1.8	1.8	1.5	1.8	20.1	8.9%
July 16, 2013	G, H, I, J, K		2.1	2.0	2.1	2.0	2.0	2.1	20.1	10.2%
July 17, 2013	G, H, I, J, K		1.8	1.9	1.8	1.6	1.3	1.7	20.1	8.4%
July 18, 2013	A, B, C, D, E, F, G, H, I, J, K	1.0	12.8	15.4	16.3	17.6	13.0	14.8	94.3	15.7%
July 19, 2013	A, B, C, D, E, F, G, H, I, J, K	3.2	17.0	17.5	16.9	18.2	16.0	17.0	94.3	18.1%

Table 11: Energy Response of EDRP Resources for Summer 2013 Demand Response Events

Table 12 provides a summary of energy payments by event and program during NYISO demand response program events in the Summer 2013. Tables with the hourly detail of the energy payments by program and event are reported in Appendix A.

 Table 12: Summary of Energy Payments for 2013 Events

NYISO Event Date	Zones	SCR	EDRP	Total	Average Event Payment
15-Jul-13	G, H, I, J, K	\$723,534.60	\$4,701.61	\$728,236.21	\$504.97
16-Jul-13	G, H, I, J, K	\$771,721.35	\$5,150.55	\$776,871.90	\$499.97
17-Jul-13	G, H, I, J, K	\$879,394.09	\$5,128.48	\$884,522.57	\$570.87
18-Jul-13	A, B, C, D, E, F, G, H, I, J, K	\$2,238,029.59	\$39,197.72	\$2,277,227.31	\$519.28
19-Jul-13	A, B, C, D, E, F, G, H, I, J, K	\$2,276,118.93	\$46,738.25	\$2,322,857.18	\$527.98
	Totals	\$6,888,798.56	\$100,916.60	\$6,989,715.17	\$524.39

#### Combined Hourly Event Performance

Tables 13 - 17 summarize hourly event response from ICAP/SCR and EDRP for each NYISO event date.

#### **Table 13: Hourly Event Response Detail**

NYISO Demand Response Event – July 15, 2013

Combined Hourly Response for July 15, 2013	HB 13	HB 14	HB 15	HB 16	HB 17	Average Hourly MW	Obligated SCR MW and Available EDRP MW	Response as % of Obligated or Available MW
SCR (ICAP)	256.7	331.0	350.8	372.6	396.0	341.4	536.1	63.7%
EDRP (CBL)	2.0	2.0	1.8	1.8	1.5	1.8	20.1	8.9%
Totals	258.7	332.9	352.6	374.4	397.5	343.2	556.2	61.7%

#### Table 14: Hourly Event Response Detail

Combined Hourly Response for July 16th, 2013	HB 13	HB 14	HB 15	HB 16	HB 17	Average Hourly MW	Obligated SCR MW and Available EDRP MW	Response as % of Obligated or Available MW
SCR (ICAP)	311.4	376.2	390.6	409.6	437.2	385.0	536.1	71.8%
EDRP (CBL)	2.1	2.0	2.1	2.0	2.0	2.1	20.1	10.2%
Totals	313.5	378.3	392.8	411.6	439.1	387.1	556.2	69.6%

#### NYISO Demand Response Event – July 16, 2013

#### Table 15: Hourly Event Response Detail

#### NYISO Demand Response Event – July 17, 2013

Combined Hourly Response for July 17th, 2013	HB 13	HB 14	HB 15	HB 16	HB 17	Average Hourly MW	Obligated SCR MW and Available EDRP MW	Response as % of Obligated or Available MW
SCR (ICAP)	284.9	348.0	363.4	383.8	416.7	359.4	536.1	67.0%
EDRP (CBL)	1.8	1.9	1.8	1.6	1.3	1.7	20.1	8.4%
Totals	286.8	349.9	365.2	385.4	418.0	361.0	556.2	64.9%

#### **Table 16: Hourly Event Response Detail**

#### NYISO Demand Response Event – July 18, 2013

Combined Hourly Response for July 18th, 2013	Zones	HB 12	HB 13	HB 14	HB 15	HB 16	HB 17	Average Hourly MW	Obligated SCR MW and Available EDRP MW	Response as % of Obligated or Available MW
SCR (ICAP)	A, B, C, D, E, F, G, H, I, J, K	233.6	751.6	874.4	925.5	962.6	999.2	884.0	1175.2	75.2%
EDRP (CBL)	A, B, C, D, E, F, G, H, I, J, K	1.0	12.8	15.4	16.3	17.6	13.0	14.8	94.3	15.7%
Totals		234.6	764.4	889.7	941.8	980.2	1012.2	898.8	1269.5	70.8%

#### Table 17: Hourly Event Response Detail

#### NYISO Demand Response Event – July 19, 2013

Combined Hourly Response for July 19th, 2013	Zones	HB 12	HB 13	HB 14	HB 15	HB 16	HB 17	Average Hourly MW	Obligated SCR MW and Available EDRP MW	Response as % of Obligated or Available MW
SCR (ICAP)	A, B, C, D, E, F, G, H, I, J, K	243.5	752.5	897.3	945.7	978.7	1018.5	898.1	1175.2	76.4%
EDRP (CBL)	A, B, C, D, E, F, G, H, I, J, K	3.2	17.0	17.5	16.9	18.2	16.0	17.0	94.3	18.1%
Totals		246.7	769.5	914.8	962.6	996.8	1034.4	915.2	1269.5	72.1%

### **Day-Ahead Demand Response Program**

The DADRP program provides demand-side resources with an opportunity to offer their load curtailment capability into the Day-Ahead energy market as energy supply resources. Resources submit offers by 5:00 a.m., specifying the hours and amount of load curtailment they are offering for the next day, and the price at which they are willing to curtail. Prior to November 1, 2004, the offer price had to be \$50/MWh or higher. As of November 1, 2004, the offer floor price for DADRP has been set at \$75/MWh. Offers are structured like those of generation resources; thus, DADRP program resources may specify minimum and maximum run times and effectively submit a block of hours on an all-or-nothing basis. This structure makes resources eligible for Bid Production Cost Guarantee payments that make up for any difference between the market price during that block of hours and their block offer price. Load scheduled in the DAM is obligated to curtail the next day. Failure to curtail results in the imposition of a penalty equal to the product of the MW curtailment shortfall and the greater of the corresponding Day-Ahead or Real-Time market price.

During the analysis period of September 2012 through August 2013, there were no offers or schedules of DADRP resources. Because there was no activity in DADRP during the analysis period, there is nothing to report for this period.

#### **Demand Side Ancillary Services Program**

The DSASP program provides demand-side resources that meet telemetry and other qualification requirements an opportunity to offer their load curtailment capability into the DAM and/or Real-Time Market to provide Operating Reserves and Regulation Service. DSASP resources must qualify to provide Operating Reserves or Regulation Service through standard resource testing requirements. Offers are submitted through the same process as generation resources. Resources submit offers by 5:00 a.m. specifying the ancillary service they are offering (Spinning or Non-Synchronous Reserves, and/or Regulation, if qualified) along with the hours and amount of load curtailment for the next day, and the price at which they are willing to curtail. Real-time offers may be made up to 75 minutes before the hour of the offer. Although DSASP resources are not scheduled for energy in the DAM, they are required to submit energy offers, which are used in the co-optimization algorithm for dispatching Operating Reserves resources are not paid for energy, however, they are eligible for a Day-Ahead Margin Assurance Payment to make up for any balancing difference between their Day-Ahead Operating Reserves or Regulation schedule and Real-Time dispatch, subject to their performance for the scheduled

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service. Performance indices are calculated on an interval basis for both Operating Reserves and Regulation. Payment is adjusted by the performance index for the service provided.

Additional confidential information on the DSASP is provided in Attachment II.

#### Update on 2013 Demand Response Initiatives

This section provides an update on the status of the following initiatives that the NYISO has been working on with its stakeholders to improve the administration of its demand response programs and to address regulatory directives to facilitate market participation:

- Market Rule Changes to the SCR Program
- ACL Baseline Study
- Order 745 Compliance Filing on the Feasibility of a Dynamic Net Benefit Test
- Functional Requirements for Demand Response Participation in the Real-Time Energy Market
- Continued Development of the Demand Response Information System (DRIS)

#### Market Rule Changes to the SCR Program

The NYISO worked with stakeholders in the Price Responsive Load and Installed Capacity Working Groups to develop market rules regarding changes to exclusions and the hours from which SCR Load Zone Peak Hours are selected, changes to eligibility for enrollment with a Provisional Average Coincident Load, introduction of an Incremental Average Coincident Load, clarification to reporting requirements for a SCR Change of Load and SCR Change of Status, and definition of shortfall penalties applicable to individual SCRs. The NYISO made its filing of these proposed rule changes on October 4, 2013, in FERC Docket No. ER14-39, requesting that the changes become effective beginning with enrollment for the Summer 2014 Capability Period. The Commission approved the filing on December 4, 2013 and required the NYISO to make a compliance filing within 30 days to clarify the section of the tariff containing the shortfall penalties. On December 16, the NYISO requested a one-week extension of the compliance filing, which the Commission approved on December 24, 2013. The NYISO filed its compliance filing on January 10, 2014.

#### ACL Baseline Study

The NYISO presented the results of the ACL Baseline Study to stakeholders at joint Price Responsive Load and Installed Capacity Working Groups in November and December.<sup>7</sup> Stakeholders were invited to provide written comments by mid-January 2014 on the material presented. The NYISO is working with DNV KEMA, now DNV GL, to produce a formal report on the approach, analysis design, results, observations, and recommendations by the end of January 2014. The NYISO plans to post the report and provide stakeholders with an opportunity to provide written comments on the report. A NYISO management response will be provided in Q2 2014.

#### Demand Response in the Real-Time Energy Market

The NYISO developed preliminary business and functional requirements, including functional requirements for the necessary metering infrastructure, which will be used in development of the market design in 2014.

#### NYISO's Order No. 745 Compliance Filing for a Monthly Net Benefits Test

On May 16, 2013, the NYISO received an order on its August 19, 2011 filing in FERC Docket No. ER11-4338 in compliance with Order No. 745.<sup>8</sup> The NYISO submitted its compliance filing on August 14, 2013. Following a final order from the Commission on its Order 745 compliance filings, the NYISO will develop the schedule to implement the required changes.

#### Complaint on Exclusion of Behind-the-Meter Generation from DADRP

On June 17, 2013, the Demand Response Supporters filed a Complaint in FERC Docket No. EL13-74 arguing that demand response facilitated by behind-the-meter generation should be

<sup>&</sup>lt;sup>7</sup> Presentations on November 14 and December 10, 2013:

http://www.nyiso.com/public/webdocs/markets\_operations/committees/bic\_icapwg/meeting\_materials/20 13-11-14/ICAPWG\_CBL\_Results\_11142013\_final.pdf\_and

http://www.nyiso.com/public/webdocs/markets\_operations/committees/bic\_icapwg/meeting\_materials/20 13-12-10/ICAPWG\_ACL\_Results\_12102013.pdf

<sup>&</sup>lt;sup>8</sup> New York Independent System Operator, Order on Compliance Filing, 143 FERC ¶ 61,134 (2013).

permitted to participate in the DADRP. The NYISO filed an answer to the Complaint on July 8, 2013. On November 22, 2013, the Commission granted the Complaint, in part, directing the NYISO to develop market rules within 180 days of the order to address the appropriate eligibility, measurement, verification and control requirements to ensure that demand response facilitated by behind-the-meter generation can participate in the DADRP in a manner that maintains system reliability and ensures that the resources are compensated only for the demand response service that they actually provide. On December 23, 2013, the NYISO filed a request for extension to align the revisions required by the November order with the underlying DADRP requirements, as revised in response to the NYISO's August 14, 2013 Order No. 745 compliance filing.

#### Continued Development of the Demand Response Information System (DRIS)

The NYISO had two deployments in 2013 for DRIS to manage the enrollment of aggregations of demand side resources into the DSASP and Phase 1 of the Provisional ACL project to develop the infrastructure to support the proposed market rules and to enhance the functionality of DRIS.

#### **Demand Response Initiatives for 2014**

This section provides an overview of the projects that the NYISO has planned for its demand response programs for 2014.

## Compliance Filing Regarding Docket No. ER14-39-000, Revisions to the SCR Program

The NYISO presented its draft compliance filing which includes proposed changes to its tariff at the January 7, 2014 ICAP Working Group and made its compliance filing on January 10, 2014. Any corresponding changes to the ICAP Manual will be brought through the stakeholder process, prior to approval by the Business Issues Committee.

# Compliance Filing Regarding Exclusion of Behind-the-Meter Generation from DADRP (Docket No. EL13-74-000)

The NYISO plans to begin discussions with stakeholders in early 2014 to develop the requirements that are not directly dependent upon Order No. 745.

#### Demand Response in the Real-Time Energy Market

The NYISO has a 2014 project to continue to develop market rules and detailed requirements to allow demand response to participate in the real-time energy market. Market design will include the metering infrastructure to support real-time participation by demand response.

#### Continued Development of the Demand Response Information System (DRIS)

The NYISO has two software deployments planned for DRIS in 2014. A Q1 2014 deployment will incorporate the revisions to the SCR program approved in Docket No. ER14-39-000. In Q4 2014, a deployment will include automation of demand-response-related Installed Capacity market auction operations.

## Appendix A: Detailed Event Response for Summer 2013 Demand Response Events

For each of the five NYISO's demand response events, the following tables are reported in this Appendix:

- Event Summary reports average hourly response compared to Obligated or Available MW by program, event energy payments by program and average \$/MWh.
- SCR MW Response Based on ICAP Measures reports hourly response detail, based on ICAP measures, by zone and average hourly response compared to Obligated MW for the zone.
- SCR Energy Response Based on CBL reports hourly response detail, based on CBL measures, by zone and average hourly response compared to Obligated MW of SCRs that reported CBL data in the zone.
- SCR Energy Payments reports hourly energy payments, daily BPCG payments, and average \$/MWh by zone to SCRs that reported CBL data.
- Energy Response of EDRP Resources and SCRs treated as EDRP reports detailed hourly response by zone, average hourly response, and comparison of average hourly response to enrolled (also referred to as Available) MW.
- Energy Payments to EDRP Resources and SCRs treated as EDRP reports hourly and total event energy payments by zone and average \$/MWh.

July 15, 2013: SCR Response was mandatory for all deployed zones

Combined Hourly Response for July 15, 2013	Zones	Average Hourly MW	Obligated SCR MW and Available EDRP MW	Response as % of Obligated or Available MW	Event Energy Payments (based on CBL)	Average \$/MWh
SCR (ICAP)	G, H, I, J, K	341.4	536.1	63.7%	\$723,534.60	\$504.86
EDRP (CBL)	G, H, I, J, K	1.8	20.1	8.9%	\$4,701.61	\$522.98
Totals		343.2	556.2	61.7%	\$728,236.21	\$504.97

Table A-1: Event Summary – July 15, 2013

## Table A-2: SCR MW Response Based on ICAP Measures – July 15, 2013

			Hourly Respo	onse based o	on ICAP/UCA	P Measures		
15-Jul								
Zone	HB 13	HB 14	HB 15	HB 16	HB 17	Average Hourly MW	Obligated ICAP MW	% Response of ICAP MW All Event Hours
G	19.2	27.9	31.6	32.6	32.7	28.8	35.9	80.2%
Н	4.4	4.3	4.4	4.5	4.7	4.5	4.7	95.4%
I	7.3	15.2	16.7	17.0	18.2	14.9	25.2	59.1%
J	186.3	234.0	246.3	262.5	282.4	242.3	379.2	63.9%
К	39.4	49.6	51.7	56.0	58.0	51.0	91.1	56.0%
Total	256.7	331.0	350.8	372.6	396.0	341.4	536.1	63.7%

Table A-3: SCR Energy Response Based on CBL – July 15, 2013

		Но	urly CBL Resp	onse for SCRs	Reporting En	ergy Response		
15-Jul	MWh							
Zone	HB 13	HB 14	HB 15	HB 16	HB 17	Average Hourly MW	Obligated ICAP MW of SCRs Reporting CBL Data	CBL Response as % of ICAP MW
G	18.4	26.5	28.0	24.7	20.6	23.7	32.1	73.7%
н	4.6	4.5	4.5	4.5	4.3	4.5	4.7	95.2%
I	7.8	15.7	16.5	16.1	15.4	14.3	21.6	66.1%
J	171.0	215.2	217.5	213.1	194.5	202.3	325.7	62.1%
К	36.4	44.8	44.5	43.2	40.9	42.0	76.0	55.2%
Total	238.2	306.7	311.0	301.6	275.7	286.6	460.1	62.3%

15-Jul									
7000	Ц <b>Д</b> 12				UD 17	Sum of LBMP	Sum of BPCG	Total Daymants	Average
Zone	пр 15	HB 14	пв 15	HB 10	HB 16 HB 17 Payments Payments Iotal Payments		TOTAL Payments	\$/MWh	
G	\$6,446.48	\$14,272.65	\$14,983.78	\$13,208.62	\$9,857.40	\$58,768.93	\$1,127.66	\$59,896.59	\$506.45
Н	\$1,600.82	\$2,398.67	\$2,407.84	\$2,411.73	\$2,040.38	\$10,859.44	\$283.76	\$11,143.20	\$500.20
I	\$2,745.46	\$8,413.05	\$8,757.12	\$8,614.55	\$7,401.75	\$35,931.93	\$451.72	\$36,383.65	\$508.56
J	\$63,331.64	\$117,107.24	\$115,867.92	\$113,666.28	\$94,970.40	\$504,943.48	\$5,258.68	\$510,202.15	\$504.52
К	\$14,040.07	\$24,613.81	\$23,905.56	\$23,145.93	\$19,654.64	\$105,360.01	\$548.99	\$105,909.01	\$504.79
Total	\$88,164.49	\$166,805.42	\$165,922.22	\$161,047.10	\$133,924.56	\$715,863.79	\$7,670.81	\$723,534.60	\$504.86

Table A-4: SCR Energy Payments – July 15, 2013

Table A-5: Energy Response of EDRP Resources and SCRs treated as EDRP – July 15, 2013

15-Jul	MWh							
Zone	HB 13	HB 14	HB 15	HB 16	HB 17	Average Hourly MW	Enrolled (MW)	% Response of Enrolled (MW)
G	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0%
н	0.003	0.000	0.006	0.025	0.015	0.010	1.600	0.6%
I	0.068	0.052	0.042	0.049	0.037	0.050	0.059	83.9%
J	1.5	1.6	1.6	1.6	1.4	1.5	15.9	9.6%
к	0.454	0.346	0.134	0.109	0.033	0.215	2.581	8.3%
Total	2.0	2.0	1.8	1.8	1.5	1.8	20.1	8.9%

 Table A-6: Energy Payments to EDRP Resources and SCRs treated as EDRP – July 15, 2013

15-Jul							
Zone	HB 13	HB 14	HB 15	HB 16	HB 17	Sum of Payments	Average \$/MWh
G	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
н	\$1.45	\$0.00	\$3.10	\$13.37	\$7.50	\$25.42	\$522.05
I	\$34.00	\$27.94	\$22.35	\$26.03	\$18.40	\$128.72	\$519.87
J	\$737.30	\$868.69	\$846.07	\$836.74	\$695.25	\$3,984.04	\$522.94
К	\$227.05	\$190.11	\$71.77	\$58.19	\$16.30	\$563.42	\$524.02
Total	\$999.80	\$1,086.73	\$943.29	\$934.33	\$737.45	\$4,701.61	\$522.98

Combined Hourly Response for July 16th, 2013	Zones	Average Hourly MW	Obligated SCR MW and Available EDRP MW	Response as % of Obligated or Available MW	Event Energy Payments (based on CBL)	Average \$/MWh
SCR (ICAP)	G, H, I, J, K	385.0	536.1	71.8%	\$771,721.35	\$499.97
EDRP (CBL)	G, H, I, J, K	2.1	20.1	10.2%	\$5,150.55	\$500.00
Totals		387.1	556.2	69.6%	\$776,871.90	\$499.97

### Table A-7: Event Summary – July 16, 2013

#### Table A-8: SCR MW Response Based on ICAP Measures – July 16, 2013

			Hourly Respo	nse based on I	CAP/UCAP Mea	isures		
16-Jul								
Zone	HB 13	HB 14	HB 15	HB 16	HB 17	Average Hourly MW	Obligated ICAP MW	% Response of ICAP MW All Event Hours
G	25.0	32.5	33.2	33.5	34.7	31.8	35.9	88.4%
н	4.4	4.8	4.8	4.8	4.9	4.7	4.7	101.5%
I	15.8	19.2	20.0	20.3	21.6	19.4	25.2	77.0%
J	225.0	269.7	280.2	294.6	317.3	277.4	379.2	73.1%
К	41.2	50.0	52.5	56.3	58.7	51.7	91.1	56.8%
Total	311.4	376.2	390.6	409.6	437.2	385.0	536.1	71.8%

Table A-9: SCR Energy Response Based on CBL – July 16, 2013

		Ηοι	urly CBL Respo	nse for SCRs Re	eporting Energy	Response		
16-Jul	MWh							
Zone	HB 13	HB 14	HB 15	HB 16	HB 17	Average Hourly	Obligated ICAP MW of SCRs	CBL Response as
Zone	110 13	110 14		HB 10 HB 17	110 17	MW	Reporting CBL Data	% of ICAP
G	22.7	30.8	29.7	25.5	22.1	26.2	34.2	76.5%
Н	4.5	4.9	4.9	4.8	4.4	4.7	4.5	104.4%
I	15.5	18.5	18.9	18.3	18.0	17.8	22.8	78.4%
J	194.7	234.2	233.0	226.9	208.1	219.4	326.7	67.1%
К	36.2	43.2	42.8	41.6	39.5	40.6	76.0	53.5%
Total	273.5	331.6	329.2	317.1	292.0	308.7	464.1	66.5%

 Table A-10: SCR Energy Payments – July 16, 2013

16-Jul									
7000	LID 12			UP 16	UD 17	Sum of LBMP	Sum of BPCG	Total Paymonts	Average
20116	110 13	11D 14	110 13	11B 10	IIB 17	Payments	Payments	Total Payments	\$/MWh
G	\$8,795.42	\$14,003.14	\$8,426.46	\$5,813.64	\$7,497.55	\$44,536.21	\$20,884.14	\$65,420.35	\$500.00
н	\$1,727.87	\$2,212.97	\$1,381.38	\$1,095.86	\$1,500.03	\$7,918.11	\$3,794.99	\$11,713.10	\$500.00
I	\$5,963.32	\$8,397.21	\$5,340.57	\$4,161.86	\$6,104.39	\$29,967.35	\$14,628.45	\$44,595.80	\$500.00
J	\$74,913.64	\$106,217.28	\$70,864.53	\$59,801.37	\$74,747.05	\$386,543.87	\$161,864.43	\$548,408.30	\$499.95
К	\$13,993.03	\$19,660.96	\$12,135.42	\$9,521.60	\$14,491.83	\$69,802.83	\$31,780.97	\$101,583.80	\$500.00
Total	\$105,393.29	\$150,491.56	\$98,148.36	\$80,394.32	\$104,340.85	\$538,768.37	\$232,952.98	\$771,721.35	\$499.97

16-Jul	MWh							
Zone	HB 13	HB 14	HB 15	HB 16	HB 17	Average Hourly MW	Enrolled (MW)	% Response of Enrolled (MW)
G	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0%
н	0.00	0.03	0.00	0.02	0.02	0.013	1.6	0.8%
I	0.09	0.09	0.08	0.07	0.06	0.079	0.4	21.9%
J	1.8	1.8	1.9	1.8	1.8	1.8	15.6	11.7%
К	0.2	0.1	0.1	0.1	0.1	0.1	2.6	5.7%
Total	2.1	2.0	2.1	2.0	2.0	2.1	20.1	10.2%

 Table A-11: Energy Response of EDRP Resources – July 16, 2013

 Table A-12: Energy Payments to EDRP Resources – July 16, 2013

16-Jul							
Zone	HB 13	HB 14	HB 15	HB 16	HB 17	Sum of Payments	Average \$/MWh
G	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Н	\$0.00	\$13.75	\$0.00	\$8.25	\$10.40	\$32.40	\$500.00
I	\$46.00	\$45.00	\$40.00	\$33.40	\$32.40	\$196.80	\$500.00
J	\$918.75	\$899.30	\$955.80	\$901.75	\$877.60	\$4,553.20	\$500.00
К	\$100.00	\$59.75	\$74.70	\$72.80	\$60.90	\$368.15	\$500.00
Total	\$1,064.75	\$1,017.80	\$1,070.50	\$1,016.20	\$981.30	\$5,150.55	\$500.00

July 17, 2013: SCR Response was mandatory for all deployed zones

Table A-13: Event Summary – July 17, 2013

Combined Hourly Response for July 17th, 2013	Zones	Average Hourly MW	Obligated SCR MW and Available EDRP MW	Response as % of Obligated or Available MW	Event Energy Payments (based on CBL)	Average \$/MWh
SCR (ICAP)	G, H, I, J, K	359.4	536.1	67.0%	\$879,394.09	\$570.67
EDRP (CBL)	G, H, I, J, K	1.7	20.1	8.4%	\$5,128.48	\$607.40
Totals		361.0	556.2	64.9%	\$884,522.57	\$570.87

		ŀ	Hourly Respor	nse based on l	CAP/UCAP M	leasures		
17-Jul								
Zone	HB 13	HB 14	HB 15	HB 16	HB 17	Average Hourly MW	Obligated ICAP MW	% Response of ICAP MW All Event Hours
G	21.8	27.9	28.2	29.4	29.7	27.4	35.9	76.2%
Н	4.5	4.8	4.8	4.9	4.8	4.8	4.7	101.8%
_	15.4	19.1	20.0	20.5	22.8	19.5	25.2	77.6%
J	204.3	247.4	258.5	272.8	300.7	256.7	379.2	67.7%
К	39.0	48.9	51.9	56.2	58.6	50.9	91.1	55.9%
Total	284.9	348.0	363.4	383.8	416.7	359.4	536.1	67.0%

Table A-14: SCR MW Response Based on ICAP Measures – July 17, 2013

Table A-15: SCR Energy Response Based on CBL – July 17, 2013

		Hour	ly CBL Respor	ise for SCRs R	eporting Ener	gy Response		
17-Jul	MWh							
Zone	HB 13	HB 14	HB 15	HB 16	HB 17	Average Hourly MW	Obligated ICAP MW of SCRs Reporting CBL	CBL Response as % of ICAP
							Data	
G	19.7	26.8	25.3	21.8	18.0	22.3	32.7	68.2%
Н	4.7	5.0	5.0	5.0	4.5	4.8	4.6	105.0%
I	16.4	19.6	20.1	19.6	20.3	19.2	23.9	80.3%
J	192.7	232.3	232.0	226.2	214.0	219.5	331.9	66.1%
К	37.6	44.5	44.7	43.8	41.5	42.4	78.3	54.1%
Total	271.1	328.1	327.1	316.4	298.3	308.2	471.4	65.4%

Table A-16: SCR Energy Payments – July 17, 2013

17-Jul									
7000	LID 12				UD 17	Sum of LBMP	Sum of BPCG	Total	Average
Zone	UD 12	ND 14	пр 15	HP 10	пр 17	Payments	Payments	Payments	\$/MWh
G	\$5,679.87	\$13,854.81	\$16,132.96	\$16,308.03	\$8,676.95	\$60,652.63	\$396.98	\$61,049.60	\$546.86
Н	\$1,352.49	\$2,572.68	\$3,326.89	\$4,164.60	\$2,176.91	\$13,593.57	\$1.82	\$13,595.38	\$564.04
I	\$4,717.70	\$10,101.49	\$13,415.87	\$16,733.36	\$9,783.57	\$54,751.99	\$32.91	\$54,784.91	\$571.25
J	\$56,516.48	\$120,116.06	\$155,122.88	\$192,718.60	\$103,365.25	\$627,839.28	\$815.82	\$628,655.10	\$572.91
К	\$10,871.34	\$22,996.81	\$29,897.97	\$37,312.59	\$20,079.36	\$121,158.06	\$151.04	\$121,309.10	\$572.07
Total	\$79,137.88	\$169,641.85	\$217,896.57	\$267,237.19	\$144,082.04	\$877,995.53	\$1,398.56	\$879,394.09	\$570.67

17-Jul	MWh							
Zone	HB 13	HB 14	HB 15	HB 16	HB 17	Average Hourly MW	Enrolled (MW)	% Response of Enrolled (MW)
G	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0%
Н	0.067	0.007	0.000	0.000	0.000	0.015	1.6	0.9%
I	0.110	0.134	0.146	0.114	0.032	0.107	0.4	29.8%
J	1.6	1.7	1.6	1.4	1.3	1.5	15.6	9.7%
К	0.09	0.06	0.03	0.09	0.03	0.06	2.6	2.3%
Total	1.8	1.9	1.8	1.6	1.3	1.7	20.1	8.4%

Table A-17: Energy Response of EDRP Resources – July 17, 2013

 Table A-18: Energy Payments to EDRP Resources – July 17, 2013

17-Jul							
Zone	HB 13	HB 14	HB 15	HB 16	HB 17	Sum of Payments	Average \$/MWh
G	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
н	\$33.65	\$3.78	\$0.00	\$0.00	\$0.00	\$37.43	\$501.73
I	\$55.00	\$69.22	\$97.54	\$96.91	\$15.90	\$334.57	\$624.67
J	\$777.90	\$861.53	\$1,077.05	\$1,212.67	\$641.95	\$4,571.10	\$606.21
К	\$43.30	\$29.43	\$20.25	\$79.65	\$12.75	\$185.38	\$633.34
Total	\$909.85	\$963.95	\$1,194.85	\$1,389.23	\$670.60	\$5,128.48	\$607.40

July 18, 2013: SCR Response was mandatory for all deployed zones

Combined Hourly Response for July 18th, 2013	Zones	Average Hourly MW	Obligated SCR MW and Available EDRP MW	Response as % of Obligated or Available MW	Event Energy Payments (based on CBL)	Average \$/MWh
SCR (ICAP)	A, B, C, D, E, F, G, H, I, J, K	884.0	1175.2	75.2%	\$2,238,029.59	\$519.33
EDRP (CBL)	A, B, C, D, E, F, G, H, I, J, K	14.8	94.3	15.7%	\$39,197.72	\$516.34
Totals		898.8	1269.5	70.8%	\$2,277,227.31	\$519.28

Table A-19: Event Summary – July 18, 2013

			Hourly Re	sponse based o	n ICAP/UCAP N	leasures			
18-Jul	MWh								
Zone	HB 12	HB 13	HB 14	HB 15	HB 16	HB 17	Average Hourly MW	Obligated ICAP MW	% Response of ICAP MW All Event Hours
А		256.9	278.6	292.1	294.7	299.0	284.3	311.4	91.3%
В		38.1	54.5	56.8	58.2	60.2	53.6	64.4	83.2%
С		78.4	93.8	97.5	100.0	100.6	94.1	114.6	82.1%
D		6.4	7.0	7.4	7.4	6.6	7.0	9.2	76.0%
E		17.8	23.1	25.4	27.5	28.7	24.5	35.3	69.4%
F		79.9	86.5	96.6	101.3	103.4	93.5	104.2	89.7%
G	18.7	22.3	28.7	30.2	31.4	31.3	27.1	35.9	75.4%
Н	3.4	4.5	4.6	4.6	4.6	4.6	4.4	4.7	93.6%
I	9.8	15.9	17.3	16.5	20.0	21.6	16.8	25.2	66.9%
J	169.3	190.7	231.2	246.3	261.9	285.8	230.9	379.2	60.9%
К	32.5	40.8	49.0	52.0	55.6	57.5	47.9	91.1	52.6%
Total	233.6	751.6	874.4	925.5	962.6	999.2	884.0	1175.2	75.2%

 Table A-20: SCR MW Response Based on ICAP Measures – July 18, 2013

 Table A-21: SCR Energy Response Based on CBL – July 18, 2013

			Hourly CBL Re	esponse for S	CRs Reporting	Energy Respo	onse		
18-Jul	MWh								
Zone	HB 12	HB 13	HB 14	HB 15	HB 16	HB 17	Average Hourly MW	Obligated ICAP MW of SCRs Reporting CBL Data	CBL Response as % of ICAP
A		215.9	272.7	273.5	267.1	258.9	257.6	301.6	85.4%
В		34.7	51.0	49.1	44.6	41.1	44.1	59.7	73.9%
С		87.5	98.4	96.6	88.8	83.4	90.9	110.9	82.0%
D		5.9	6.4	6.8	6.8	6.0	6.4	8.8	72.5%
E		24.8	27.8	26.4	24.0	22.4	25.1	33.7	74.3%
F		75.5	82.6	90.4	91.6	89.7	85.9	102.5	83.8%
G	18.8	23.2	29.5	29.1	25.6	21.1	24.6	32.7	75.0%
Н	3.4	4.5	4.7	4.7	4.6	4.1	4.3	4.6	95.0%
I	10.8	17.7	18.7	17.4	19.9	20.0	17.4	23.2	75.0%
J	163.0	187.1	224.1	227.0	222.6	205.3	204.8	328.2	62.4%
К	32.5	40.1	45.9	45.7	44.2	41.9	41.7	76.1	54.9%
Total	228.6	717.1	861.8	866.6	839.8	794.0	803.0	1082.1	74.2%

18-Jul										
Zone	HB 12	HB 13	HB 14	HB 15	HB 16	HB 17	Sum of LBMP Payments	Sum of BPCG Payments	Total Payments to SCRs Reporting CBL	Average \$/MWh
Α		\$107,260.46	\$169,762.91	\$135,781.74	\$132,601.19	\$139,849.51	\$685,255.81	\$2.46	\$685,258.26	\$531.98
В		\$17,493.86	\$26,931.28	\$24,652.32	\$22,399.24	\$19,972.56	\$111,449.27	\$2.24	\$111,451.50	\$505.28
С		\$44,103.06	\$52,657.79	\$48,551.15	\$44,639.74	\$40,851.00	\$230,802.74	\$3.44	\$230,806.18	\$507.60
D		\$2,920.25	\$3,181.43	\$3,338.16	\$3,375.20	\$2,749.34	\$15,564.38	\$422.47	\$15,986.85	\$500.00
E		\$12,590.33	\$14,640.18	\$13,372.32	\$12,151.57	\$10,905.10	\$63,659.50	\$4.08	\$63,663.58	\$508.02
F		\$38,460.68	\$43,725.18	\$45,993.33	\$46,628.69	\$44,222.11	\$219,029.99	\$0.28	\$219,030.28	\$509.67
G	\$9,700.55	\$12,004.87	\$16,121.06	\$14,986.92	\$13,191.46	\$10,641.20	\$76,646.07	\$0.00	\$76,646.07	\$520.10
н	\$1,744.07	\$2,343.01	\$2,567.00	\$2,423.64	\$2,380.24	\$2,086.49	\$13,544.44	\$0.00	\$13,544.44	\$519.21
I	\$5,559.16	\$9,132.14	\$10,155.11	\$8,981.64	\$10,238.75	\$10,039.83	\$54,106.62	\$0.00	\$54,106.62	\$517.54
J	\$83,855.40	\$96,517.54	\$122,030.22	\$116,922.33	\$114,578.80	\$103,244.60	\$637,148.90	\$0.00	\$637,148.90	\$518.41
К	\$16,812.57	\$20,783.49	\$25,153.53	\$23,621.49	\$22,818.71	\$21,197.13	\$130,386.92	\$0.00	\$130,386.92	\$520.80
Total	\$117,671.75	\$363,609.69	\$486,925.68	\$438,625.04	\$425,003.60	\$405,758.87	\$2,237,594.63	\$434.96	\$2,238,029.59	\$519.33

18-Jul	MWh								
Zone	HB 12	HB 13	HB 14	HB 15	HB 16	HB 17	Average Hourly MW	Enrolled (MW)	% Response of Enrolled (MW)
А		2.8	3.4	2.7	2.9	1.9	2.7	13.5	20.3%
В		0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0%
С		1.3	1.1	3.0	4.0	1.9	2.2	13.9	16.0%
D		0.61	0.61	0.04	0.62	0.61	0.50	3.7	13.5%
E		1.7	1.5	1.5	1.5	1.5	1.5	15.0	10.1%
F		4.5	7.2	6.9	6.4	5.4	6.1	26.8	22.6%
G	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0%
н	0.008	0.000	0.000	0.003	0.000	0.000	0.002	1.600	0.1%
I	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4	25.8%
J	0.9	1.8	1.5	2.1	2.0	1.7	1.7	15.6	10.9%
К	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.3%
Total	1.0	12.8	15.4	16.3	17.6	13.0	14.8	94.3	15.7%

Table A-23: Energy Response of EDRP Resources – July 18, 2013

Table A-24: Energy Payments to EDRP Resources – July 18, 2013

	-							
18-Jul								
Zone	HB 12	HB 13	HB 14	HB 15	HB 16	HB 17	Sum of LBMP Payments	Average \$/MWh
Α		\$1,394.50	\$2,119.83	\$1,369.20	\$1,463.65	\$1,009.83	\$7,357.01	\$535.85
В		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
С		\$636.83	\$562.84	\$1,511.69	\$1,992.32	\$925.35	\$5,629.02	\$505.44
D		\$303.10	\$306.25	\$22.05	\$308.70	\$305.75	\$1,245.85	\$500.00
E		\$847.13	\$783.37	\$736.19	\$760.27	\$731.40	\$3,858.36	\$509.87
F		\$2,287.66	\$3,800.50	\$3,487.29	\$3,274.03	\$2,680.05	\$15,529.54	\$512.38
G	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
н	\$3.91	\$0.00	\$0.00	\$1.55	\$0.00	\$0.00	\$5.46	\$515.16
I	\$28.07	\$45.36	\$64.72	\$54.06	\$66.78	\$29.52	\$288.50	\$519.64
J	\$486.49	\$953.73	\$829.81	\$1,070.99	\$1,040.78	\$874.98	\$5,256.78	\$517.45
К	\$0.72	\$23.62	\$1.10	\$0.72	\$0.93	\$0.10	\$27.19	\$518.93
Total	\$519.20	\$6,491.92	\$8,468.41	\$8,253.74	\$8,907.46	\$6,556.98	\$39,197.72	\$516.34

July 19, 2013: SCR Response was voluntary for all deployed zones

Combined Hourly			Obligated SCR MW	Response as %	Event Energy	Avorago
Response for July	Zones	MW	and Available EDRP	of Obligated or	Payments (based	ć /M/M/b
19th, 2013			MW	Available MW	on CBL)	Ş/ IVI VVI I
SCR (ICAP)	A, B, C, D, E, F, G, H, I, J, K	898.1	1175.2	76.4%	\$2,276,118.93	\$527.81
EDRP (CBL)	A, B, C, D, E, F, G, H, I, J, K	17.0	94.3	18.1%	\$46,738.25	\$536.50
Totals		915.2	1269.5	72.1%	\$2,322,857.18	\$527.98

Table A-25: Event Summary – July 19, 2013

			Houi	rly Response	based on ICA	P/UCAP Meas	sures		
19-Jul	MWh								
Zone	HB 12	HB 13	HB 14	HB 15	HB 16	HB 17	Average Hourly MW	Obligated ICAP MW	% Response of ICAP MW All Event Hours
Α		252.2	281.2	292.5	295.6	300.0	284.3	311.4	91.3%
В		36.5	53.0	55.8	58.4	60.8	52.9	64.4	82.2%
С		77.0	92.9	97.0	99.0	98.7	92.9	114.6	81.1%
D		3.5	3.5	3.5	3.6	3.5	3.5	9.2	38.5%
E		17.2	22.5	25.8	26.4	28.4	24.1	35.3	68.1%
F		83.2	97.9	97.7	98.8	97.6	95.0	104.2	91.2%
G	18.9	22.6	29.7	30.5	30.3	30.2	27.1	35.9	75.3%
Н	4.5	4.5	4.6	4.5	4.4	4.4	4.5	4.7	96.1%
Ι	13.9	14.9	16.5	17.3	17.8	19.6	16.7	25.2	66.2%
J	172.7	199.8	245.3	267.6	287.0	316.0	248.1	379.2	65.4%
К	33.4	41.1	50.0	53.3	57.4	59.2	49.1	91.1	53.9%
Total	243.5	752.5	897.3	945.7	978.7	1018.5	898.1	1175.2	76.4%

 Table A-26: SCR MW Response Based on ICAP Measures – July 19, 2013

Table A-27: SCR Energy Response Based on CBL – July 19, 2013

			Hourly C	BL Response f	for SCRs Repo	orting Energy	Response		
19-Jul	MWh	MWh							
Zone	HB 12	HB 13	HB 14	HB 15	HB 16	HB 17	Average Hourly MW	Obligated ICAP MW of SCRs Reporting CBL Data	CBL Response as % of ICAP
А		208.0	232.6	272.3	265.9	258.4	247.5	302.4	81.8%
В		32.2	48.8	47.9	44.7	41.7	43.1	60.2	71.5%
С		78.7	90.5	89.3	82.6	77.2	83.7	108.7	77.0%
D		3.4	3.4	3.3	3.4	3.3	3.3	8.8	38.1%
E		23.0	26.4	25.8	21.9	20.5	23.5	32.8	71.8%
F		81.3	96.8	92.3	89.8	86.2	89.3	103.1	86.6%
G	18.9	22.9	30.5	29.2	24.5	19.8	24.3	35.3	68.9%
Н	4.5	4.7	4.8	4.7	4.5	4.0	4.5	4.6	97.6%
Ι	14.3	16.2	17.3	17.6	17.1	16.8	16.5	23.2	71.3%
J	172.5	198.7	240.8	250.1	247.3	230.3	223.3	332.4	67.2%
К	34.9	41.7	48.1	48.1	46.7	44.0	43.9	82.8	53.0%
Total	245.1	710.7	840.0	880.5	848.4	802.1	802.9	1094.3	73.4%

	I I									
19-Jul										
									Total Payments	
-	110.42	110.40	115.4.4	110.45	110.46	110.47	Sum of LBMP	Sum of BPCG	to SCRs	Average
Zone	HB12	HB 13	HB 14	HB 15	HB 16	HB17	Payments	Payments	Reporting CBL	\$/MWh
							•	·	Data	
Α		\$103,264.85	\$115,351.13	\$135,086.41	\$142,706.14	\$118,349.64	\$614,758.17	\$3,762.72	\$618,520.88	\$499.91
В		\$16,096.06	\$24,391.57	\$23,921.66	\$22,335.47	\$19,228.26	\$105,973.04	\$1,668.06	\$107,641.10	\$500.00
С		\$39,351.56	\$45,273.63	\$44,698.54	\$41,726.02	\$35,654.21	\$206,703.96	\$2,451.15	\$209,155.11	\$500.04
D		\$1,671.99	\$1,665.43	\$1,628.53	\$1,677.09	\$1,502.61	\$8,145.64	\$207.71	\$8,353.35	\$500.00
E		\$11,556.29	\$13,284.31	\$12,951.54	\$11,084.13	\$9,535.66	\$58,411.93	\$400.50	\$58,812.43	\$500.27
F		\$41,005.86	\$48,834.87	\$47,766.62	\$53,332.85	\$40,271.88	\$231,212.08	\$2.00	\$231,214.08	\$518.05
G	\$9,555.44	\$11,581.25	\$15,479.62	\$16,057.63	\$16,327.16	\$9,579.13	\$78,580.23	\$0.02	\$78,580.25	\$538.86
н	\$2,292.60	\$2,377.96	\$2,424.20	\$2,656.83	\$3,286.64	\$1,969.69	\$15,007.92	\$0.00	\$15,007.92	\$551.43
I	\$7,262.06	\$8,174.52	\$8,752.20	\$10,032.01	\$12,600.07	\$8,155.42	\$54,976.28	\$0.01	\$54,976.29	\$554.01
J	\$87,383.88	\$100,581.00	\$122,001.45	\$142,233.72	\$182,792.34	\$112,127.09	\$747,119.48	\$11.96	\$747,131.44	\$557.72
К	\$17,702.42	\$21,148.53	\$24,395.78	\$27,378.77	\$34,620.91	\$21,476.18	\$146,722.59	\$3.48	\$146,726.07	\$556.76
Total	\$124,196.40	\$356,809.87	\$421,854.20	\$464,412.28	\$522,488.82	\$377,849.74	\$2,267,611.32	\$8,507.60	\$2,276,118.93	\$527.81

 Table A-28: SCR Energy Payments – July 19, 2013

 Table A-29: Energy Response of EDRP Resources – July 19, 2013

19-Jul	MWh								
Zone	HB 12	HB 13	HB 14	HB 15	HB 16	HB 17	Average Hourly MW	Enrolled (MW)	% Response of Enrolled (MW)
А		1.5	1.9	1.8	2.6	1.5	1.9	13.5	13.9%
В		0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0%
С		1.4	1.1	0.9	1.2	1.2	1.2	13.9	8.4%
D		0.7	0.7	0.1	0.7	0.6	0.5	3.7	14.7%
E		2.5	2.0	2.0	1.9	1.8	2.0	15.0	13.5%
F		7.3	8.6	8.1	8.0	7.3	7.9	26.8	29.3%
G	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0%
н	0.01	0.04	0.02	0.03	0.01	0.00	0.02	1.60	1.2%
I	0.13	0.16	0.16	0.15	0.16	0.22	0.16	0.36	45.3%
J	3.1	3.4	3.1	3.8	3.7	3.4	3.4	15.6	21.8%
К	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.1%
Total	3.2	17.0	17.5	16.9	18.2	16.0	17.0	94.3	18.1%

 Table A-30: Energy Payments to EDRP Resources – July 19, 2013

19-Jul								
Zone	HB 12	HB 13	HB 14	HB 15	HB 16	HB 17	Sum of LBMP Payments	Average \$/MWh
А		\$770.15	\$938.70	\$908.60	\$1,392.56	\$772.85	\$4,782.86	\$510.13
В		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
С		\$718.68	\$558.13	\$454.06	\$590.74	\$592.85	\$2,914.46	\$501.21
D		\$327.95	\$330.65	\$59.10	\$328.60	\$314.30	\$1,360.60	\$500.00
E		\$1,280.42	\$994.90	\$980.90	\$950.85	\$878.85	\$5,085.93	\$502.87
F		\$3,665.65	\$4,322.81	\$4,209.14	\$4,769.84	\$3,627.15	\$20,594.60	\$524.68
G	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
н	\$6.59	\$19.19	\$11.00	\$14.81	\$9.38	\$0.00	\$60.97	\$546.81
I	\$63.59	\$82.48	\$82.55	\$84.75	\$117.27	\$107.90	\$538.54	\$552.23
J	\$1,573.86	\$1,710.30	\$1,562.22	\$2,139.17	\$2,707.98	\$1,699.25	\$11,392.77	\$558.69
К	\$1.62	\$1.12	\$1.83	\$1.03	\$1.33	\$0.60	\$7.52	\$545.19
Total	\$1,645.66	\$8,575.93	\$8,802.79	\$8,851.55	\$10,868.57	\$7,993.75	\$46,738.25	\$536.50