THIS FILING LETTER DOES NOT CONTAIN ANY PRIVILEGED OR CONFIDENTIAL INFORMATION. ATTACHMENT I - THE BODY OF REPORT, WHICH INCLUDES REDACTED VERSIONS OF TABLES 2 THROUGH 6 (MARKED PUBLIC), DOES NOT CONTAIN ANY PRIVILEGED OR CONFIDENTIAL INFORMATION. ATTACHMENT II - CONFIDENTIAL TABLES AND DEMAND SIDE ANCILLARY SERVICES PROGRAM DETAILS, INCLUDES THE UNREDACTED TABLES, WHICH CONTAIN PRIVILEGED AND CONFIDENTIAL INFORMATION, AND IS SUBMITTED SEPARATELY.

January 12, 2018

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, D.C. 20426

Re: Annual Report in Docket No. ER01-3001-000;
Request for Privileged Treatment of Attachment II

Dear Ms. Bose:

Enclosed for filing in the above-referenced docket is the New York Independent System Operator Inc.'s ("NYISO") annual report to the Federal Energy Regulatory Commission ("Commission") on the NYISO's Demand Side Management programs. By Order dated February 23, 2010, the Commission directed the NYISO to file this report for informational purposes only, and without Commission notice.[1]

I. List of Documents Submitted

The NYISO submits this filing letter, accompanied by: (i) Attachment I, the NYISO 2017 Annual Report on Demand Response Programs, which includes redactions in Tables 2 through 6 of confidential, commercially sensitive information, and (ii) Confidential Attachment II, which contains the unredacted versions of Tables 2 through 6. Confidential Attachment II also contains an update on the status of resources participating in the NYISO's Demand Side Ancillary Service Program.[2]

[1] *New York Indep. Sys. Operator, Inc.*, Letter Order, Docket Nos. ER01-3001-021, *et al.* (Feb. 23, 2010).

[2] Terms with initial capitalization not defined herein have the meaning set forth in the NYISO's Market Administration and Control Area Services Tariff.

II. Request for Confidential Treatment of Attachment II

In accordance with Sections 388.107 and 388.112 of the Commission's Regulations,[3] Section 6 of the NYISO's Market Administration and Control Area Services Tariff, and Sections 12.1(4) and 12.4 of the NYISO's Code of Conduct in Attachment F of the NYISO Open Access Transmission Tariff, the NYISO requests Privileged and Confidential treatment of the contents of Attachment II to this filing letter. The NYISO also requests that the confidential Attachment II be exempted from public disclosure under the Freedom of Information Act ("FOIA"), 5 U.S.C. §552.[4]

Attachment II includes information regarding the number of demand response resources located in load zones that have five or fewer participating resources.[5] With such a small number of demand response resources in a load zone, the NYISO's aggregation of the data reported for that load zone may not sufficiently mask confidential and commercially sensitive Market Participant information that the NYISO does not otherwise make public. Attachment II also includes a brief discussion of the status of enrollment and registration for the resources seeking to participate in the NYISO's Demand Side Ancillary Services Program. The number of resources addressed is, similarly, small enough that it may not sufficiently mask confidential and commercially sensitive Market Participant information that the NYISO does not otherwise make public.

Attachment II, therefore, contains privileged, commercially sensitive, trade secret information that is exempt from disclosure under 5 U.S.C. §552(b)(4). Disclosure of such information could cause competitive harm to the affected Market Participants, and could adversely affect competition in the markets administered by the NYISO. For this reason, the NYISO requests that the contents of Attachment II receive Privileged and Confidential treatment and be exempt from FOIA disclosure. Attachment II is identified and marked in accordance with the Commission's regulations and rules published by the Secretary's Office for submitting Privileged information.

[3] 18 C.F.R. §§ 388.107 and 388.112 (2017).

[4] The information provided by the NYISO for which the NYISO claims an exemption from FOIA disclosure is labeled "Contains Privileged Information – Do Not Release."

[5] Non-Confidential Attachment I contains data for load zones with more than five participating resources.

III. Correspondence

Copies of correspondence concerning this filing should be addressed to:

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IV. Conclusion

WHEREFORE, the New York Independent System Operator, Inc. respectfully requests that the Commission accept this informational filing and treat the contents of Attachment II as Privileged and Confidential and exempt from FOIA disclosure.

Respectfully submitted,

/s/ Gregory J. Campbell
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Kathleen Schnorf
Gary Will

[6] The NYISO respectfully requests waiver of 18 C.F.R. § 385.203(b)(3) (2011) to permit service on counsel for the NYISO in both Washington, D.C. and Richmond, VA.

CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document upon each person designated on the official service list compiled by the Secretary in this proceeding in accordance with the requirements of Rule 2010 of the Rules of Practice and Procedure, 18 C.F.R. §385.2010.

Dated at Rensselaer, NY this 12th day of January, 2018.

/s/ Mohsana Akter

Mohsana Akter
Regulatory Affairs
New York Independent System Operator, Inc
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PUBLIC

Attachment I

NYISO 2017 Annual Report on Demand Response Programs

NYISO 2017 Annual Report on Demand Response Programs

I. Program Descriptions

The New York Independent System Operator, Inc. ("NYISO") administers four demand response programs to enhance system reliability and reduce overall production costs. The Emergency Demand Response Program ("EDRP")[1] and the Installed Capacity – Special Case Resource ("ICAP/SCR") program support the reliability of the NYISO system. Both programs are designed to reduce power consumption by directing demand response resources to reduce load or to use qualified Local Generators to remove load from the system during grid emergencies or when reserve shortages are anticipated or actually occur. All New York Control Area ("NYCA") Loads are eligible to take part in these programs. Aggregators enroll Demand Side Resources and coordinate with the NYISO to notify resources when the NYISO deploys demand response.

The NYISO also offers two economic demand response programs: the Day-Ahead Demand Response Program ("DADRP") in the Energy market, and the Demand-Side Ancillary Services Program ("DSASP") in the Ancillary Services market. The DADRP allows NYCA Loads to offer their load reductions into the Day-Ahead Market ("DAM") to supply Energy. This program allows flexible loads to effectively increase the amount of supply in the market and moderate Energy prices. The DSASP provides program participants with an opportunity to offer their load curtailment capability into the DAM and/or Real-Time Market ("RTM") to provide Operating Reserves and Regulation Service. Each of these four programs is described in greater detail below.

Emergency Demand Response Program

The EDRP offers Demand Side Resources the opportunity to earn the greater of $500/MWh or the prevailing Locational-Based Marginal Price ("LBMP") for curtailing energy consumption when called upon to reduce Load by the NYISO. EDRP resources are enrolled by Curtailment Service Providers ("CSPs"), which serve as the interface between the NYISO and resource.[2] Load curtailment by EDRP resources during NYISO-called events is voluntary.

Installed Capacity – Special Case Resource Program

Special Case Resources ("SCRs") are a type of Demand Side Resource that may offer Unforced Capacity ("UCAP") into the NYISO's ICAP market as ICAP Suppliers. SCRs are

[1] Capitalized terms not defined herein have the meaning ascribed to them in the NYISO's Market Administration and Control Area Services Tariff ("Services Tariff").

[2] An individual EDRP resource may, if it meets the applicable registration requirements, act as its own CSP.

enrolled by Responsible Interface Parties ("RIPs") which may aggregate multiple SCRs and which serve as the interface between the NYISO and the resources.[3] Resources may be enrolled in either the EDRP or the ICAP/SCR program, but not both. SCRs that have sold ICAP are obligated to reduce their load when called upon by the NYISO with two or more hours in-day notice, and with day-ahead notice from the NYISO.

In addition to receiving a capacity payment for the SCRs they enroll, RIPs are eligible to receive Energy payments during an event or test, based on hourly market prices, plus a Bid Production Cost Guarantee ("BPCG") payment to make up for any difference between the market price received and their block offer price across the day. Energy payments are calculated using the same performance calculation used by the NYISO to pay for the performance of EDRP resources.

Enrolled SCRs must verify their enrolled load reduction capability in each Capability Period through actual performance in an event or test. Failure of an SCR to reduce load during an event or test may result in penalties being assessed to the applicable RIP in accordance with the NYISO's Services Tariff and the ICAP/SCR program rules and procedures.

Targeted Demand Response Program

The Targeted Demand Response Program ("TDRP"), introduced in July 2007, is a third NYISO reliability-based demand response program that deploys existing wholesale market EDRP resources and SCRs on a voluntary basis in targeted sub-load pockets to solve local reliability problems at the request of a Transmission Owner. The TDRP program is currently available only in Load Zone J (New York City). RIPs are eligible to receive Energy payments during an event or test based on hourly market prices plus a BPCG. Energy payments are calculated using the same performance calculation used by the NYISO to pay for the performance of EDRP resources.

Day-Ahead Demand Response Program

The DADRP allows Demand Side Resources to offer load curtailment into the DAM as an Energy supply resource. Resources participating in the DADRP submit offers by 5:00 a.m. specifying the hours and amount of load curtailment for the following day, and the price at which they are willing to curtail. The current offer floor price is $75/MWh.

DADRP offers are structured like those of generation resources: they specify minimum and maximum run times and the hours in which they are available. Demand Side Resources with Load reductions scheduled in the DAM are obligated to curtail the next day. DADRP resources are also

[3] An individual SCR may, if it meets the applicable registration requirements, act as its own RIP.

eligible for BPCG payments. Failure of a DADRP resource to curtail its Load may result in penalties being assessed to the applicable resource in accordance with the NYISO's Services Tariff and the DADRP program rules and procedures.

Demand-Side Ancillary Services Program

The DSASP provides Demand Side Resources (that meet telemetry and other qualification requirements) an opportunity to offer their load curtailment capability into the DAM and/or RTM to provide Operating Reserves and Regulation Service. Resources must qualify through standard resource testing requirements in order to provide these services. Offers are submitted through the same process as generation resources: resources participating in the DAM submit offers by 5:00 a.m. specifying the Ancillary Service they are offering (Operating Reserves, and/or Regulation Service) along with the hours and amount of load curtailment for the following day, and the price at which they are willing to curtail. DSASP resources are not eligible to be scheduled to provide Energy in the DAM. DSASP resources may also submit RTM offers up to 75 minutes before the hour of the offer.

The dispatch of the DSASP resources' Operating Reserves to Energy is determined in the RTM by the Real-Time Dispatch ("RTD") software. When RTD instructs a DSASP resource to provide Energy, the DSASP resource must decrease the Load being served by the NYISO. The dispatch of Regulation Service into Energy is issued in the RTM via an Automatic Generation Control ("AGC") signal. Depending on system needs, the AGC may instruct DSASP resources to either increase or decrease the NYISO-scheduled Energy they are consuming.

DSASP resources that are converted to Energy in real-time are not paid for that Energy. Instead, DSASP resources are eligible to receive a Day-Ahead Margin Assurance Payment ("DAMAP") to make up for any balancing differences between their Day-Ahead Operating Reserves or Regulation Service schedule and their real-time dispatch. Eligibility to receive DAMAP is subject to performance requirements. Performance indices are calculated on an interval basis for both Operating Reserves and Regulation Service. DAMAPs are adjusted by the performance index for the services provided.

II. 2017 Program Summary

EDRP and ICAP/SCR Program

As of July 31, 2017, a total of 26 CSPs and RIPs had eligible resources enrolled in the NYISO's EDRP and ICAP/SCR program.[4] Participating CSPs and RIPs include:

[4] For several years, the date customarily used for reporting the NYISO's demand response program participation statistics was August 31. In 2011, the NYISO changed its reporting date from August 31 to July 31 to better align with

- 2 Transmission Owners ("TOs");
- 7 Competitive Load Serving Entities ("LSEs") that are not TOs;
- 14 Aggregators that are not a LSE or TO; and
- 3 EDRP or ICAP/SCR direct participation resources that both provide the service and perform the function of the CSP/RIP

These figures represent a net decrease of two CSPs/RIPs from 2016. This was a result of reduction of two TOs, one direct participant, and an increase of one LSE.

As of July 31, 2017, a total of 3,631 end-use locations were enrolled in the NYISO's EDRP and ICAP/SCR programs. These locations were capable of providing a total of 1,236.9 MW of demand response. This corresponded to a 2.36% decrease in the enrolled MW versus 2016, and represents 4.2% of the 2017 Summer Capability Period peak demand of 29,700.9 MW. Of the 3,631 end-use locations, 92 participated in the EDRP program, seven were ICAP/SCR resources with unsold capacity,[5] and the remaining 3,532 end-use locations participated in the NYISO's ICAP/SCR program. The ICAP/SCR program represents 97.5% of the total resources enrolled in the NYISO's reliability-based demand response programs and 98.7% of the total MW enrolled in those programs.

Aggregators, competitive LSEs, and direct customers currently represent 95.9% of enrolled MW in EDRP and ICAP/SCR, up from 82.3% of enrolled MW in 2016. The remaining 4.1% of MW are enrolled by TOs. In 2017, three non-TO market participants enrolled resources in the EDRP (out of five total EDRP participants), all other EDRP resources were enrolled through their TO. In the ICAP/SCR program, one participant enrolled through its TO, while all other ICAP/SCR resources were enrolled through other sources. Direct customers represented 3.37% of total MW in the ICAP/SCR program.

The TDRP, which deploys EDRP and ICAP/SCR resources in the various sub-load pockets in Zone J for local reliability, includes 47.83% of the total New York Control Area ("NYCA") EDRP end-use locations and 7.6% of total NYCA EDRP MW. The TDRP also includes 54.5% of total NYCA ICAP/SCR end-use locations, representing 32.1% of the total NYCA ICAP/SCR MW.

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several other reliability and planning reporting requirements. A July 31 reporting date also provides better transparency with other reporting requirements for the NYISO's demand response programs. The NYISO has evaluated the difference in enrollment between July and August and found it to be *de minimis* (2-3%). The data provided herein is based on a snapshot of the programs on July 31, 2017.

[5] ICAP/SCR Resources with unsold capacity are those resources that did not sell their full available capacity.

Since 2003, when participation in EDRP and ICAP/SCR became mutually exclusive, the number of EDRP end-use locations and enrolled MW have declined.

Day-Ahead Demand Response Program

DADRP enrollment has been static for several years and enrolled resources have not submitted demand reduction offers for more than four years. DADRP enrollment remained unchanged since the January 2017 Report.

Demand-Side Ancillary Service Program

There are three Demand Side Resources actively participating in the DSASP as providers of Operating Reserves. These resources represent 116.5 MW of capability and had an average performance of 137.1% during the analysis period of May 2017 through October 2017.

Additional detailed information on participation in the DSASP is found in confidential Attachment II.

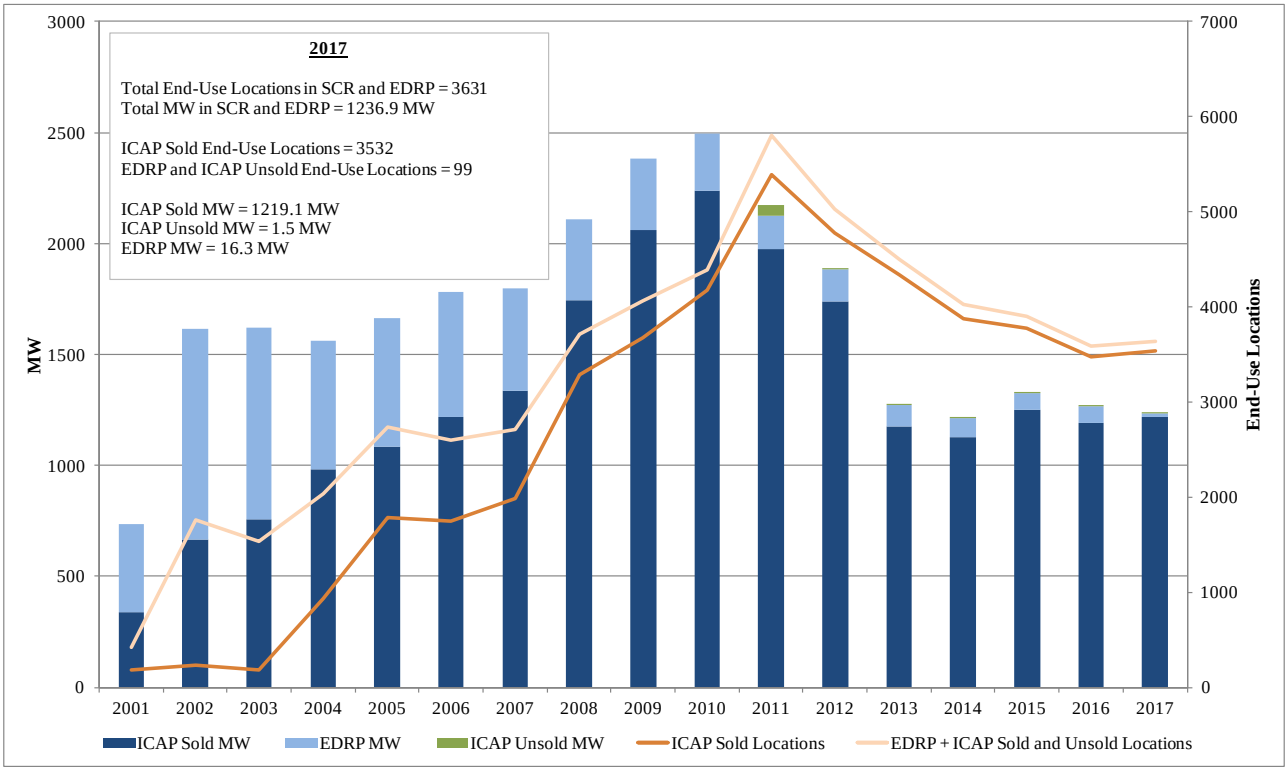
III. Reliability Program Participation Detail

Historical Enrollment Data

Historical enrollment data for the NYISO's reliability demand response programs is presented in Figure 1. The figure plots the enrollment in the NYISO's reliability-based programs from inception through July 2017. The stacked bar charts plot enrolled MW by program and year, and the lines plot the number of end-use locations by program and year.

From May 2001 through July 2017, combined enrollment in EDRP and ICAP/SCR has grown from approximately 200 MW to 1236.9.7 MW. The total number of end-use locations has increased from approximately 200 in March 2001 to 3,631 in July 2017. Since participation in EDRP and ICAP/SCR program became mutually exclusive in 2003, the number of participating EDRP resources, and the MW they contribute, has decreased.

Figure 1: Historical Enrollment of
End-Use Locations and MW in NYISO Reliability Programs



Changes in Program Enrollment – 2016-2017

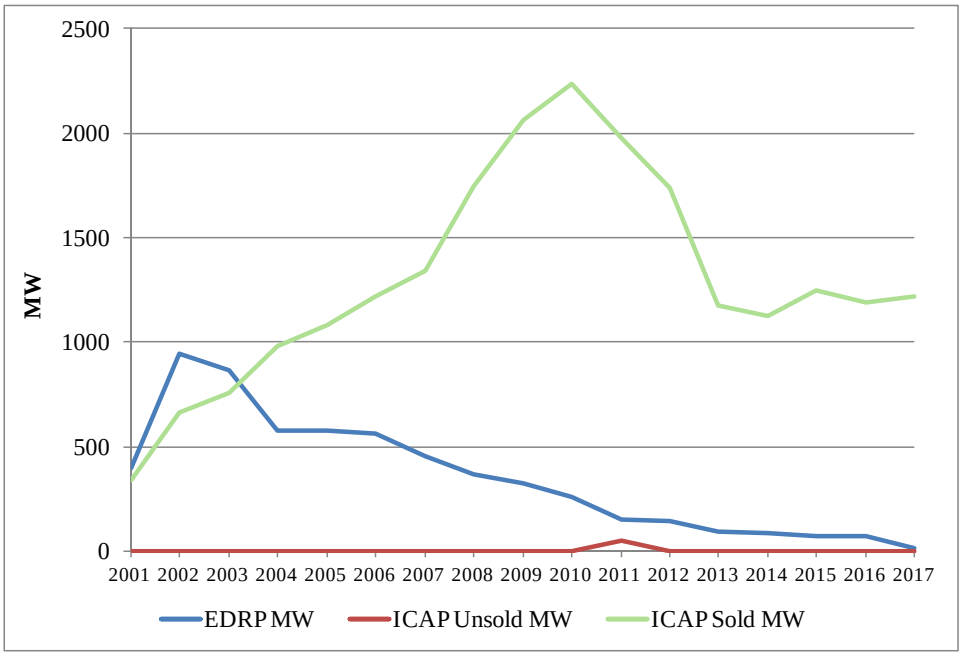
Enrollment data for the NYISO's reliability-based demand response programs for 2016 - 2017 is provided in Table 1. The number of ICAP/SCR end-use locations and the enrolled MW have increased since the 2016 report. The number of EDRP end-use locations and the enrolled MW have declined over the past year.

Table 1: Program Enrollment by End-Use Location – 2016-2017

	2017		2016			Percent Change From 2016 to 2017		MW per End-Use Location		
	Count	MW	Count	MW	MW Change	End-Use Location Count	Enrolled MW	2017	2016	Percent Change
EDRP	92	16.3	112	74.8	-58.6	-18%	-78%	0.2	0.67	-73.6%
ICAP Unsold	7	1.50	5	0.1	1.4	40%	1400%	0.21	0.02	971.4%
ICAP Sold	3532	1219.1	3476	1191.8	27.3	2%	2%	0.3	0.34	0.7%

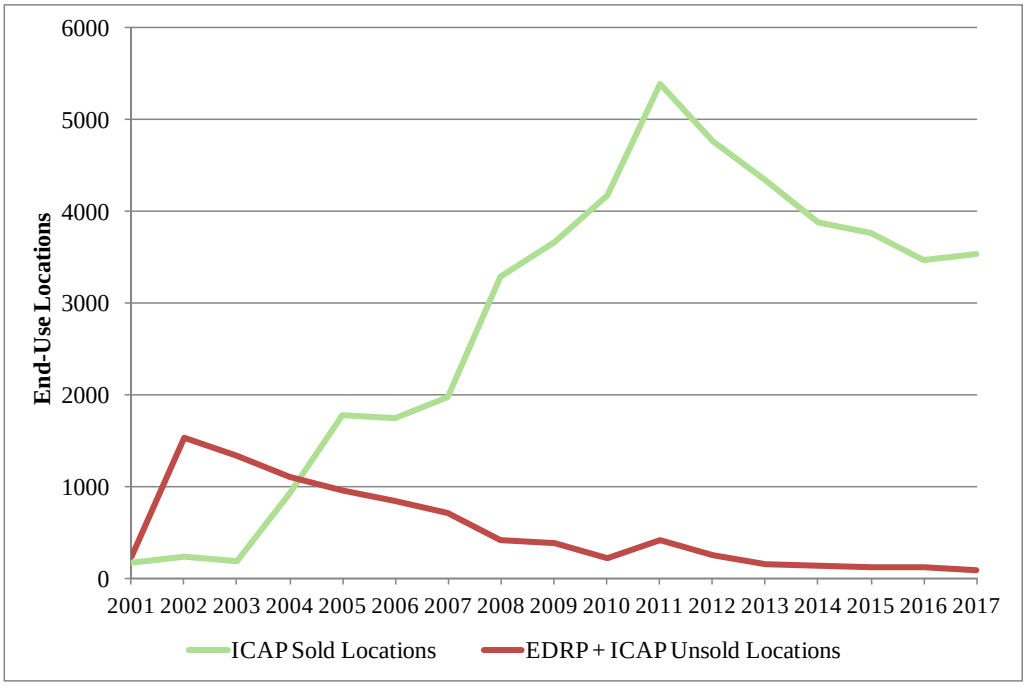
Figures 2 and 3 present enrollment statistics in the EDRP and ICAP/SCR program from 2001 – 2017. Figure 2 presents the data by MW enrolled, while Figure 3 presents the data by number of end-use locations.[6] Since making the EDRP and ICAP/SCR program mutually exclusive, there has been a general decline in the number of enrolled MW and resources in the EDRP.

Figure 2: Enrollment in the NYISO's EDRP and ICAP/SCR Program by MW, 2001-2017



[6] ICAP/SCR program enrollment of individual end-use locations began in 2004. In 2001 and 2002 end-use locations could enroll in both the EDRP and ICAP/SCR program, but beginning in 2003, resources were prohibited from simultaneously enrolling in both programs.

Figure 3: Enrollment in the NYISO's EDRP and ICAP/SCR Program by End-Use Location, 2001-2017



2016-2017 EDRP and ICAP/SCR Program Enrollments

At the end of July 2017, 3,631 end-use locations, with a total of 1,236.9 MW of demand response capability, were enrolled in NYISO's EDRP and ICAP/SCR program. This represents a 2.36% decrease from the total enrolled demand response capability in 2016. Of the 3,631 end-use locations, 92 were enrolled in the EDRP and 3,539 were enrolled in the ICAP/SCR program. ICAP/SCR resources represent 97.47% of the total reliability program end-use locations and 98.68% of the total reliability program MW. Table 2, below, provides summary data for the EDRP and ICAP/SCR program.

Table 2: 2017 Program Enrollment Summary by CSP and RIP Type

		EDRP			ICAP Unsold			ICAP Sold		
No. of Unique MPs	Agent Type	No. of CSPs	No. of End-Use Locations	MW	No. of RIPs	No. of End-Use Locations	MW	No. of RIPs	No. of End-Use Locations	MW
14	Aggregator	2	48	1.7	3	7	1.50	12	3423	1056.9
3	Direct Customer	0	0	0.0	0	0	0.00	3	*	41.1
7	Competitive Load Serving Entity	1	*	8.7	0	0	0.00	7	101	76.7
2	Transmission Owner/LSE	2	*	5.9	0	0	0.00	1	*	44.5
26	Total	5	92	16.3	3	7	1.50	23	3532	1219.1

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

2017 EDRP enrollments were predominantly through TOs, contrasted with the ICAP/SCR program where non-TOs provided 99.9% of participating end-use locations and 96.4% of the enrolled MW.

Table 3 provides additional program enrollment details by Load Zone. Although the NYISO does not collect specific resource class data, demand response 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.

Table 3: 2017 Program Enrollment by Load Zone

	EDRP		ICAP Unsold		ICAP Sold	
Zone	No. of End-Use Locations	MW	No. of End-Use Locations	MW	No. of End-Use Locations	MW
A	7	1.5	0	0.00	259	299.6
B	*	0.3	*	0.10	190	55.2
C	15	2.2	0	0.00	236	129.5
D	*	0.6	0	0.00	25	58.2
E	11	2.9	0	0.00	121	37.7
F	*	7.0	0	0.00	179	115.8
G	0	0.0	0	0.00	144	50.8
H	*	0.1	*	0.10	23	7.3
I	*	0.4	*	0.10	98	24.6
J	44	1.2	*	0.20	1925	392.2
K	0	0.0	*	1.00	332	48.1
Total	92	16.3	7	1.50	3532	1219.1

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

ICAP/SCR Resource Aggregations

NYISO identifies ICAP/SCR resource enrollments by end-use location, and they may represent either individually enrolled end-use locations or aggregations of end-use locations that are enrolled as a single demand response resource. Table 4 contains data on ICAP/SCR program participation. As of July 31, 2017, 3,494 end-use locations were enrolled in aggregations. These aggregations provided 1,049.6 MW of the 1,219.1 MW enrolled in the ICAP/SCR program. The remaining 171 MW of demand response capacity in the ICAP/SCR program came from 43 individually enrolled resources.

Table 4: Detail of 2017 ICAP/SCR Program Participation Level by Resource Type

Resource Type	ICAP Sold		ICAP Unsold	
	No. of End-Use Locations	MW	No. of End-Use Locations	MW
Individual Resources	38	170.5	*	0.50
Aggregated Resources	3494	1048.6	*	1.00
Total	3532	1219.1	7	1.50

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

Table 4 also provides information for ICAP/SCR resources that did not sell any capacity in the July 2017 capacity market auctions. This information is included because when an ICAP/SCR resource offers its load reduction in a NYISO auction and that load reduction is not sold (or when a resource's derated MW value is zero), the resource's enrolled capacity is automatically included in the EDRP.[7]

TDRP Enrollment

Load Zone J is currently the only Load Zone with resources participating in the TDRP. This Load Zone has been divided into sub-load pockets designated by Consolidated Edison Company of New York, Inc. ("Con Edison"). Resources enrolled in the EDRP and ICAP/SCR program are assigned to one of the various sub-load pockets based on their location.[8] Resources that are not assigned to a particular sub-load pocket remain in the general Zone J category. Tables 5 and 6 provide EDRP and ICAP/SCR end-use locations and MW enrolled in the TDRP by sub-load pocket.

Table 5: EDRP End-Use Locations Enrolled in TDRP

Zone/sub-load pocket	J	J1	J2	J3	J4	J5	J6	J7	J8	J9	Total
MW	0.0	0.0	0.0	0.5	0.6	0.0	0.0	0.1	0.0	0.0	1.2
No. of End-Use Locations	0	*	*	13	*	*	7	11	7	0	44

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

[7] The resource will remain in the EDRP until it clears in a subsequent auction, or the resource confirms a bilateral transaction with an LSE. The EDRP enrollment totals and event response data included in this report include the offered, but unsold, MW of enrolled ICAP/SCR resources.

[8] The Load Zone J sub-load pockets are: J1 – Sherman Creek/Parkchester/E 179th; J2 – Astoria West/Queensbridge; J3 – Vernon/Greenwood; J4 – Staten Island; J5 – Astoria East/Corona/Jamaica; J6 – W 49th; J7 – East 13th/East River; J8 – Farragut/Rainey; and J9 – Shared sub-load pocket.

Table 6: ICAP/SCR End-Use Locations Enrolled in TDRP

Zone/sub-load pocket	J	J1	J2	J3	J4	J5	J6	J7	J8	J9	Total
MW	2.9	28.0	32.2	55.4	31.7	35.4	66.7	48.3	91.8	0.1	392.4
No. of End-Use Locations	22	168	144	359	95	204	231	249	455	*	1928

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

Analysis of ICAP/SCR Strike Prices

Starting in 2003, resources participating in the ICAP/SCR program were required to provide a curtailment strike price – between $0 and $500/MWh – to the NYISO at the time of enrollment. Strike Prices are used by the NYISO in the calculation of Energy payments.

The NYISO has analyzed strike price curves for all resources enrolled as of July 2017 and compared the most recent strike price curves to prior years. Figures 4 and 5 below map the percentage of enrolled ICAP/SCR MW at a given strike price. Figure 4 illustrates the strike price curves for the period 2003 to 2017, the entire period in which resources were required to provide strike prices. The steep slope of the strike price curves indicate that strike prices are clustered close to the offer ceiling of $500/MWh. The data indicates that, as the program has evolved since 2003, the number of resources providing strike prices at or near $500/MWh has increased, with greater than 93.4% of enrolled ICAP/SCR MW submitting a strike price at the $500/MWh limit in 2017; the remaining 6.6% ICAP/SCR MW submitted a strike price of $499/MWh.

Figure 4: ICAP/SCR Curtailment Strike Price Bid Curves, 2003-2017

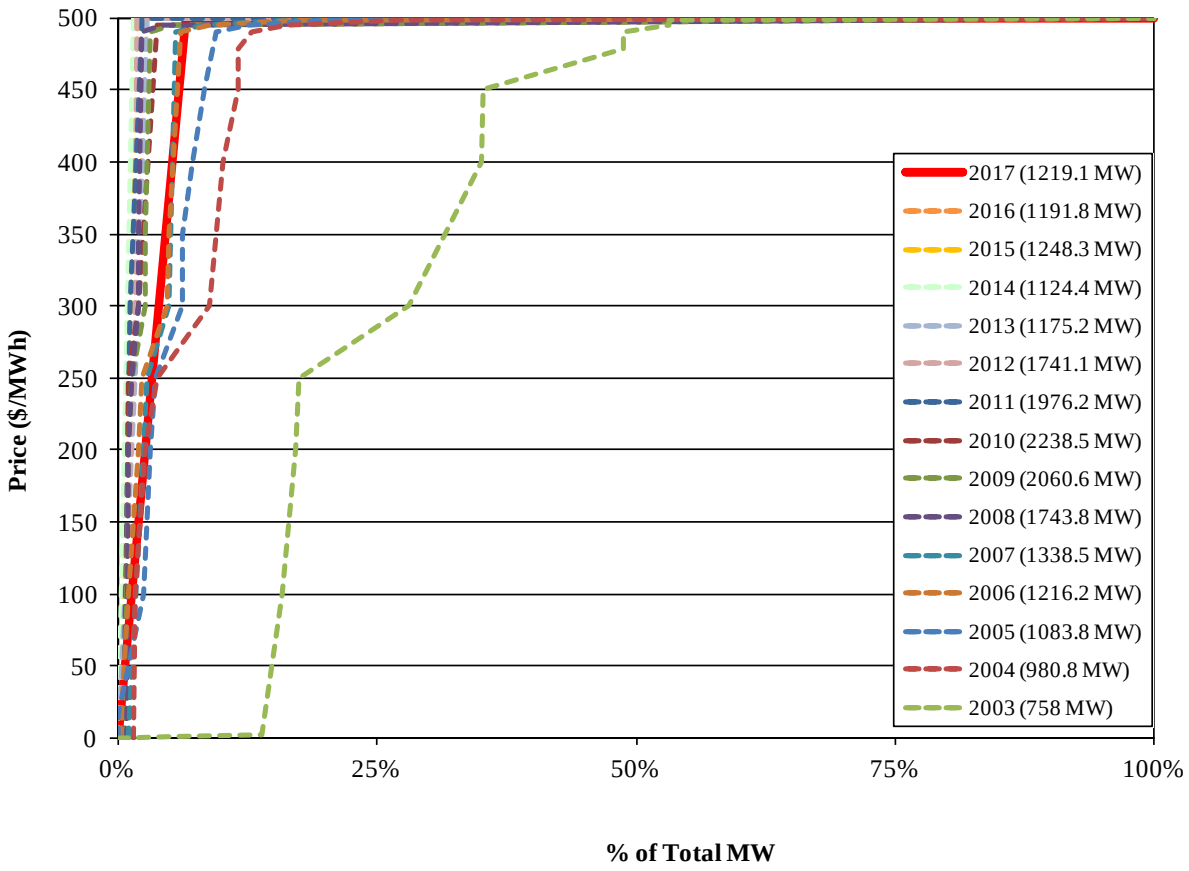
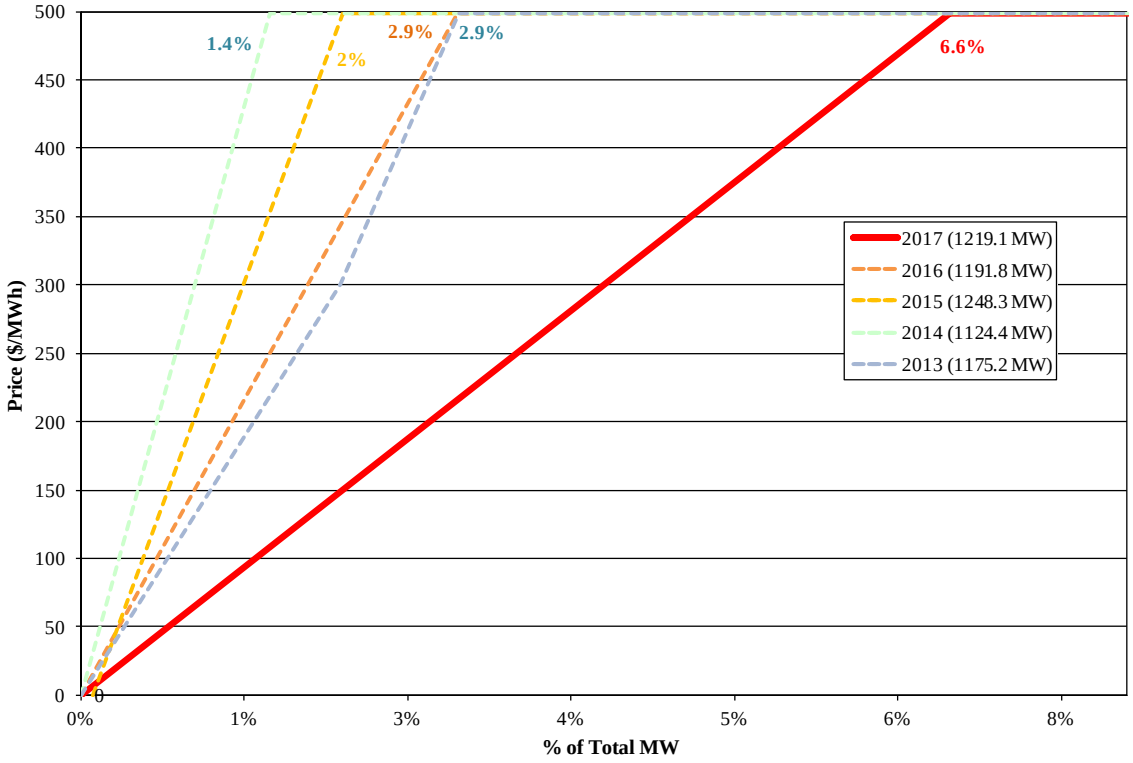


Figure 5 provides a detailed view of the strike price curves for 2013 through 2017, and shows the percentage of offers made below the $500/MWh ceiling. As stated above, 93.4% of enrolled ICAP/SCR MW submitted a strike price at the $500/MWh limit in 2017; the remaining 6.6% ICAP/SCR MW submitted a strike price of $499/MWh.

Figure 5: ICAP/SCR Curtailment Strike Price Bid Curves, 2013-2017



IV. 2017 Event and Test Performance: EDRP and ICAP/SCR Program

NYISO did not activate the EDRP or ICAP/SCR for events during the Winter 2016-2017 or Summer 2017 Capability Period.

Table 7 below provides the date, time, and zone for each performance test conducted during the Winter 2016-2017 and Summer 2017 Capability Periods

Table 7: ICAP/SCR SCR Performance Tests

Capability Period	Deployment Type	Program	Event/Test Start Time	Event/Test End Time	Zones/Sub-load Pockets
Winter 2016-2017	First Performance Test	SCR	2/23/2017 16:00	2/23/2017 17:00	A, B
Winter 2016-2017	First Performance Test	SCR	2/23/2017 17:00	2/23/2017 18:00	C, D, E, F, G, H, I
Winter 2016-2017	First Performance Test	SCR	2/23/2017 18:00	2/23/2017 19:00	J, K
Winter 2016-2017	Second Performance Test	SCR	4/6/2017 18:00	4/6/2017 19:00	J
Summer 2017	First Performance Test	SCR	8/24/2017 13:00	8/24/2017 14:00	F, G, H, I, K
Summer 2017	First Performance Test	SCR	8/24/2017 14:00	8/24/2017 15:00	J
Summer 2017	First Performance Test	SCR	8/24/2017 15:00	8/24/2017 16:00	B, C, D, E
Summer 2017	First Performance Test	SCR	8/24/2017 16:00	8/24/2017 17:00	A
Summer 2017	Second Performance Test	SCR	10/5/2017 13:00	10/5/2017 14:00	A, E, J, K

Test Performance

Each resource participating in the ICAP/SCR program is required to demonstrate its ability to meet its obligated MW once in each Capability Period. The NYISO therefore schedules a one-hour performance test in which all SCRs are called to demonstrate their ability (the "First Performance Test"). RIPs have the option to use a SCR's performance in a mandatory event as a proxy for its test value in certain circumstances but, because there were no mandatory events in the Winter 2016-2017 or Summer 2017 Capability Periods, participation in the First Performance Test was mandatory for both Capability Periods. The NYISO also schedules a Second Performance Test for resources that change certain operational characteristics within a Capability Period (*e.g.*, a Change of Load).

Measurement of performance test response is based on the ICAP/SCR reporting rules contained in the NYISO's ICAP Manual.

For SCRs that meet their Load reduction obligation solely through curtailment or through a combination of curtailment and the use of a Local Generator, ICAP/SCR response is determined by comparing the actual hourly interval metered load with the Average Coincident Load ("ACL"):

$$ICE\_RED\_MW_{gn} = (ACL_{gm} - METER\_MW_{gn}) * (1+TLF_{gm})$$

Load reduction response for SCRs that meet their Load reduction obligation solely through the use of a Local Generator is determined by the actual hourly interval metered load:

$$ICE\_RED\_MW_{gn} = METER\_MW_{gn} * (1+TLF_{gm})$$

where:

- $ICE\_RED\_MW_{gn}$ is the Installed Capacity Equivalent of Response MW that Resource *g* supplies during hour *n* of an SCR event or test;
- ACL_{gm} is the ACL for Resource *g* applicable to month *m*, using data submitted in its Special Case Resource certification;
- $METER\_MW_{gn}$ is the metered hourly-integrated load for Resource *g* in hour *n* of an SCR event or test; and
- TLF_{gm} is the Transmission Loss Factor for Resource *g* applicable to month *m*, using data submitted in its Special Case Resource certification

The resource's Installed Capacity Equivalent response is then compared with the resource's Installed Capacity Equivalent of the maximum registered megawatt value to determine the resource's performance.

Tables 8 and 9 provide a summary of ICAP/SCR program performance test response compared to the Obligated MW for the zones deployed during the tests; Table 8 summarizes response on a NYCA-wide basis, and Table 9 summarizes response by Zone. Obligated MW is defined as the Installed Capacity Equivalent of the maximum registered MW value that each SCR is required to demonstrate once in every Capability Period. ICAP Equivalent of Response MW, reported for each Capability Period, includes MW responses for both First and Second Performance Tests if data is available. For resources that are required to demonstrate performance in both the First and Second Performance Tests, the maximum MW response is reported.[9]

Table 8: Summary of ICAP/SCR Program Performance Test MW Response Based on ACL Baseline - NYCA-Wide

Program	Capability Period	Zone	ICAP Equivalent of Response MW	Obligated ICAP MW	% Response of Obligated ICAP MW
SCR (ICAP)	Winter (2016-2017)	A,B,C,D,E,F,G,H,I,J,K	936.4	788.8	118.7%
SCR (ICAP)	Summer (2017)	A,B,C,D,E,F,G,H,I,J,K	1631.5	1220.2	133.7%

[9] If Verified ACL data is not available at the time of reporting for a resource enrolled with either a Provisional ACL or an Incremental ACL, the ACL with which the resource enrolled in the SCR program is used for reporting performance data.

Table 9: ICAP/SCR Program Performance Test MW Response Based on ACL Baseline – By Zone

Program	Capability Period	Zone	ICAP Equivalent of Response MW	Obligated ICAP MW	% Response of Obligated ICAP MW
SCR (ICAP)	Winter (2016-2017)	A	257.1	254.6	101.0%
		B	44.0	40.7	108.0%
		C	98.9	81.0	122.1%
		D	68.8	63.1	109.0%
		E	53.5	40.0	133.9%
		F	90.4	78.7	114.9%
		G	35.0	32.5	107.8%
		H	4.6	4.0	115.5%
		I	15.5	12.8	120.9%
		J	346.9	255.8	135.6%
		K	33.6	31.7	105.8%
		Total	1048.3	894.9	117.1%

Program	Capability Period	Zone	ICAP Equivalent of Response MW	Obligated ICAP MW	% Response of Obligated ICAP MW
SCR (ICAP)	Summer (2017)	A	348.6	310.2	112.4%
		B	79.0	65.9	120.0%
		C	163.4	135.9	120.2%
		D	59.4	58.2	102.0%
		E	47.5	39.0	121.7%
		F	135.2	116.8	115.7%
		G	62.1	52.2	118.9%
		H	9.3	7.7	121.4%
		I	31.5	26.0	121.0%
		J	694.5	430.5	161.3%
		K	52.9	52.1	101.5%
		Total	1683.4	1294.6	130.0%

In addition to receiving a capacity payment for committing to reduce energy consumption, RIPs with resources enrolled in the ICAP/SCR program are eligible to receive Energy payments for reductions made by those resources during a performance test or event, provided that the RIP submits the required performance data. The amount of load reduction eligible for an Energy payment is computed using a Customer Baseline Load ("CBL"). Unlike the ACL baseline which

uses a SCR's Load data from a prior like Capability Period, the CBL uses data from the previous 30 days to establish a baseline which is likely to be a more accurate representation of the resource's Load during a performance test or event but for the resource's response to the NYISO's deployment directive. The Energy payment is the difference between the hourly CBL and the corresponding interval meter readings during performance test hours, multiplied by the applicable LBMP.

Table 10 presents a summary of voluntarily reported CBL data by zone and hour for ICAP/SCR resources for the Winter 2016-2017 and Summer 2017 Capability Period performance tests. The information reported in Table 10 only includes the CBL performance during the performance test that is used for Energy payments. Since the ICAP/SCR ACL values described above are based on the prior like Capability Period, and the CBL is determined from data up to 30 days prior to performing the tests, the NYISO expects different resource response rates. Contributing to the difference between the ICAP/SCR ACL response and the CBL response is the fact that not all RIPs submit CBL energy performance data. The NYISO has observed that some RIPs report CBL data only for their larger resources, and they are more likely to report CBL data for resources in Load Zone J, where energy prices are typically higher than in the rest of the NYCA.

Table 10: ICAP/SCR Program Performance Test MW Response
Based on CBL Baseline

Program	Capability Period	Zone	ICAP Equivalent of Response MW	Obligated ICAP MW of SCRs Reporting CBL Data	% Response of Obligated ICAP MW
SCR (ICAP)	Winter (2016-2017)	A	226.9	251.7	90.2%
		B	31.5	38.8	81.2%
		C	88.2	80.7	109.3%
		D	59.5	63.1	94.3%
		E	33.7	27.0	124.9%
		F	65.2	73.8	88.4%
		G	28.6	30.3	94.2%
		H	3.5	3.4	104.5%
		I	10.5	9.4	111.2%
		J	175.3	190.6	92.0%
		K	15.9	20.1	79.4%
		Total	738.9	788.8	93.7%

Program	Capability Period	Zone	ICAP Equivalent of Response MW	Obligated ICAP MW of SCRs Reporting CBL Data	% Response of Obligated ICAP MW
SCR (ICAP)	Summer (2017)	A	301.8	306.4	98.5%
		B	46.6	59.5	78.3%
		C	142.2	131.2	108.4%
		D	60.5	58.2	103.8%
		E	42.5	37.8	112.5%
		F	125.3	116.2	107.8%
		G	46.1	51.1	90.2%
		H	6.3	7.3	85.9%
		I	13.6	22.1	61.8%
		J	343.5	395.5	86.9%
		K	33.8	35.0	96.7%
		Total	1162.2	1220.2	95.2%

V. Economic Demand Response Programs

Day-Ahead Demand Response Program

There have been no offers submitted by DADRP Resources since December 2010. There is, therefore, nothing to report for this period.

Demand Side Ancillary Services Program

Because there are very few providers of this service, detailed information on the DSASP is provided in Confidential Attachment II.

VI. Update on 2017 Demand Response Initiatives

This section provides an update on the status of 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. In particular, the NYISO has focused on:

- Continued Development of the Demand Response Information System ("DRIS");
- Compliance with Order No. 745; and
- Enhancing Demand Response in the Real-Time Energy Market by developing a Distributed Energy Resources Roadmap for New York's Wholesale Electricity Markets

Continued Development of the Demand Response Information System

The NYISO successfully deployed several software improvements to DRIS in Q2, Q3, and Q4 2017. These deployments resolved several minor software issues and improved the user interface.

NYISO's Compliance with Order No. 745

FERC issued an order on January 30, 2017,[10] granting rehearing on, and accepted, the NYISO's 2011 cost allocation proposal for the Day-Ahead Demand Response Program ("DADRP"), and accepted the NYISO's tariff revisions related to the Net Benefits Test, DADRP Offer Floor, and the use of a new baseline methodology. On March 31, 2017 the NYISO submitted a compliance filing containing a complete "clean" copy of its tariff amendments in compliance with

[10] *New York Indep. Sys. Operator, Inc.*, 158 FERC ¶ 61,081 (Jan. 30, 2017).

Order No. 745. The NYISO also requested a flexible effective date for these tariff provisions of no later than October 31, 2018.[11]

Demand Response in the Real-Time Energy Market via the NYISO's Distributed Energy Resources Roadmap for New York's Wholesale Electricity Markets

The NYISO initiated a project in 2016 to integrate Distributed Energy Resources (DER), including demand response, into its real-time Energy markets. The primary outcome of this initiative will be the integration of dispatchable DER.[12] In 2017 the NYISO published a DER Roadmap[13] describing NYISO's vision for integrating these resources into the wholesale markets and proposed a market design concept to its stakeholders.[14] The NYISO expects to develop the tariff enhancements to facilitate dispatachable DER integration in 2018.

VII. 2018 Demand Response Initiatives

This section provides an overview of the projects that the NYISO has planned for its demand response programs for 2018.

NYISO's Implementation of tariff amendments in compliance with Order No. 745

In 2018 the NYISO will implement three major tariff enhancements in compliance with Order No. 745: 1) the Net Benefits Test and DADRP offer floor, 2) the Economic Customer Baseline Load (ECBL) for DADRP measurement and verification, and 3) the allocation of costs of DADRP to transmission customers.

[11] New York Indep. Sys. Operator, Inc. March 31, 2017 Compliance Filing, Docket No. ER11-4338-001.

[12] The NYISO's initiative to integrate distributed energy resources will also include concepts for participation in the NYISO's capacity and ancillary services markets.

[13] New York Indep. Sys. Operator, Inc., *Distributed Resources Roadmap for New York's Wholesale Electricity Markets* (Feb. 2017), http://www.nyiso.com/public/webdocs/markets_operations/market_data/demand_response/DER_Roadmap/Distributed_Energy_Resources_Roadmap.pdf.

[14] New York Indep. Sys. Operator, Inc., *Distributed Resources Market Design Concept Proposal* (Dec. 2017), http://www.nyiso.com/public/webdocs/markets_operations/committees/bic_miwg/meeting_materials/2017-12-19/Distributed%20Energy%20Resources%202017%20Market%20Design%20Concept%20Proposal.pdf.

Demand Response in the Real-Time Energy Market via the Distributed Energy Resources Roadmap for New York's Wholesale Electricity Markets

The integration of DER into the NYISO's markets will continue to be the main driver in demand response innovation for 2018. The NYISO intends to work with its stakeholders to develop a detailed market design and market rules.