

FERC Order EL13-74 (BTMG in DADRP) Compliance Update

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Topics

- ◆ **Order EL13-74**
- ◆ **Registration of Demand Reduction Providers**
- ◆ **Eligibility of Local Generators**
- ◆ **Enrollment of Demand Side Resources**
- ◆ **Metering**
- ◆ **Measurement & Verification**
- ◆ **Data Reporting**
- ◆ **Other Tariff Revisions**
- ◆ **Next Steps**

FERC's Order in EL13-74

- ◆ **On June 17, 2013, Demand Response Supporters filed a joint complaint against the NYISO requesting that demand response facilitated by behind-the-meter generation be eligible to participate in DADRP**
- ◆ **On November 22, 2013, the Commission granted this complaint in part and directed the NYISO “to develop and file appropriate tariff language for integrating into DADRP demand response facilitated by behind-the-meter generation (Paragraph 31)**

FERC's Order in EL13-74

- ◆ **The Commission required the NYISO to “undertake a stakeholder process and present the Commission within 180 days of this order, tariff provisions that will permit behind-the-meter generation to participate in DADRP.” (Paragraph 38)**
- ◆ **On February 24, 2014, the Commission denied the NYISO’s request for additional time to develop the tariff provisions**
- ◆ **The NYISO’s compliance filing is due on May 21, 2014**

Compliance Obligations

- ◆ **To enable Local Generators to participate in the DADRP, the NYISO is developing revisions to its tariffs and DADRP procedures regarding:**
 - *Registration, Eligibility and Enrollment*
 - *Measurement & Verification*
 - *Data Reporting Requirements*
- ◆ **The proposed revisions in this compliance filing will apply to all DADRP resources**

Registration of DADRP Resources

- ◆ **Registration of the DADRP Resource will be conducted through the DADRP Resource Registration Packet**
 - *Includes a worksheet (new) for providing detail on each Demand Side Resource that is part of the DADRP Resource*
 - *The Demand Side Resource worksheet includes reporting requirements for a Local Generator*

Registration of the Demand Reduction Provider (DRP)

- ◆ **Registration packet**
 - *Contact information*
 - *Communication Plan*
 - Description of the communication process regarding the schedules between the DRP and the respective resources.
 - *Meter Data Management Plan*
 - Including detailed description of totalization methodology for an aggregation enrolled in the DADRP

Enrollment Data Requirements for Demand Side Resources in DADRP

- ◆ Demand Side Resource information as part of the DADRP Resource Registration Packet
 - *Service address of each Demand Side Resource*
 - *Load Serving Entity*
 - Must be same LSE for all Demand Side Resources in an aggregation (existing requirement)
 - *Transmission Owner*
 - *Entity submitting the hourly response data for settlements to the NYISO*
 - *Individual Demand Side Resource Maximum Winter and Summer Reduction MW*
- ◆ Section 24.4 of Attachment R (OATT) will include these data requirements as part of this compliance filing

Resource Eligibility – DRIS Response Types

- ◆ Currently, only demand response that is achieved solely through load curtailment is eligible to participate in the DADRP
 - *Such resources are labeled in DRIS as Resource Type “C”*
- ◆ The NYISO proposes to permit participation in the DADRP of demand response that is achieved by increased output of a Local Generator and/or Load curtailment, where the net load is used to measure performance
 - *Such resources are labeled in DRIS as Resource Type “B”*
- ◆ The NYISO does not propose to permit enrollment of demand side resources with configurations in which the output of the Local Generator is not netted against the load of the demand side resource
 - *Such resources are labeled in DRIS as Resource Type “G”*

Resource Eligibility – Local Generator

- ◆ **Any demand side resource with a Local Generator will be required to provide information about the Local Generator at enrollment**
 - *Information is required for the Local Generator regardless of whether or not the Local Generator is planned to be used for achieving the Load reduction offered in the DADRP*
- ◆ **Local Generator information will be reported on the DSR Worksheet in the DADRP Registration Packet as part of enrollment**

Resource Eligibility – Local Generator Permit - 1

- ◆ A Local Generator will be required to possess one of the following valid NYSDEC Permits to participate in DADRP:
 - *NYSDEC Air Registration Permit;*
 - *NYSDEC State Facility Permit; or*
 - *NYSDEC Title V Federal Permit*
- ◆ Local Generators that are exempt under Section 201.3 of the NYSDEC regulations will not be eligible to participate in DADRP
 - *Section 201.3 exemption only permits the use of generators during Blackouts*

Resource Eligibility – Local Generator Permit - 3

- ◆ **NYISO will require that the DRP provide a copy of the permit to the NYISO, upon request, for any Demand Side Resource with a Local Generator in the DADRP**
 - *Only Local Generators allowed to operate under non-emergency conditions will be eligible to participate in DADRP*

- ◆ **Post-Enrollment Air Permit Status**
 - *Continuing participation in the DADRP, will be deemed as a continuing representation by the DRP that each time the Local Generator is run to support a Demand Reduction for DADRP, it complies with all applicable permits, including any emissions, run-time limit, or other constraint on plant operations that may be imposed by other local, state or federal permits.*

Enrollment Data Requirements - Local Generators in DADRP- 1

- ◆ **Local Generator Information**
 - ***Local Generator Type***
 - Generator types are: Internal Combustion Engine, Combustion Turbines, Steam Engines and Cogeneration units (this also includes Central Heat and Power units)
 - Others – must specify supply source if not provided in the list above
 - ***Local Generator Fuel Type***
 - The primary fuel type used for each Local Generator :
 - Coal, Diesel, Natural Gas, Oil, Gasoline, Kerosene, Propane, Wood, Landfill Gases and Waste products
 - Other – must specify fuel source if not provided in the list above
- ◆ **Section 24.4 of Attachment R (OATT) will include these data requirements as part of this compliance filing**

Enrollment Data Requirements - Local Generators in DADRP- 2

◆ Local Generator Information (cont.)

- *Generator Vintage - The year (or reasonable estimate if not known) the generator was built (included on nameplate)*
 - *Generator Retrofit Year - If the generator was retrofitted for emission control equipment please include the year of the retrofit*
 - *Nameplate Capacity - MW rated capacity for the generator*
 - *Engine Horsepower*
- ◆ **Section 24.4 of Attachment R (OATT) will include these data requirements as part of this compliance filing**

Metering Requirements for DADRP

- ◆ **Net Load Meter: A PSC-approved revenue grade hourly interval meter that measures the net load of the Demand Side Resource enrolled in DADRP**
- ◆ **Local Generator Meter: A PSC-approved revenue grade hourly interval meter that measures the total output of the Local Generator and any other behind-the-meter supply sources of the Demand Side Resource**
- ◆ **For Demand Side Resources with a Local Generator or other behind-the-meter supply source, both a Net Load Meter and Local Generator Meter are required for participation in DADRP**

Enrollment Data Requirements-Meter Information

- ◆ For each meter (Net Load and Local Generator), information for each Demand Side Resource enrolled:
 - *Required to be a PSC-approved revenue grade meter*
 - *As-left meter test criteria, as prescribed in the New York Department of Public Service 16 NYCRR Part 92 Operating Manual*
 - *Documentation to validate installation of meter equipment*
 - *Interval Metering installation date*
 - *Interval Metering installation individual and company*
 - Name, license number, and company information
 - *Meter Equipment Type*
 - Make and Model of Interval Meter
 - Interval Metering accuracy
 - For CTs or PTs: Type Designation and Ratio
- ◆ **Section 24.4 of Attachment R (OATT) will include these data requirements as part of this compliance filing**

Settlements

- ◆ **Settlement Data Reporting**
 - *Settlements Data Exchange (SDX) is the reporting mechanism for DADRP*
 - *DADRP falls under the 55-day supplier requirements, not the 75-day DR event reporting requirements*
- ◆ **This is an existing procedure for DADRP settlements**

CBLs Analyzed for DADRP

- ◆ **NYISO evaluated four baselines that were included in the SCR Baseline Study:**
 - *NYISO 5 of 10 (Current NYISO DR CBL)*
 - *NYISO 5 of 8 (NYISO developmental CBL)*
 - *NYISO 10 of 10 (NYISO developmental CBL)*
 - *ECBL (Proposed CBL in Order 745 filing)*

- ◆ **Six in-day adjustment variations:**
 - *No adjustment*
 - *Additive adjustment*
 - *Un-capped multiplicative adjustment*
 - *Three multiplicative adjustment caps of +/-20%, +/-50%, and up to 100%*

CBL Analysis for DADRP

- ◆ **Resource segmentation**
 - *Highly variable loads excluded*
 - *Grouped by DRIS Response Type*
- ◆ **Seasonal segmentation**
 - *Summer and Winter seasons analyzed*
- ◆ **Scheduling Scenarios**
 - *Scenario A: Each resource scheduled two days per week per month*
 - *Scenario B: Each resource scheduled four days per week per month*
 - *Scenario AB: Each resource scheduled two days per week per month, then four days per week per month (alternating throughout the year)*

Criterion used for Evaluating the CBLs

- ◆ Analyzed using the same criterion as the SCR Baseline Study:
 - *Accuracy - How closely a baseline method predicts resource actual loads in the sample*
 - *Bias – The systematic tendency of a baseline method to over- or under-predict actual loads*
 - *Variability – The measure of how well the baseline is at predicting hourly load under many different conditions and across many different customers*

Accuracy Results – Part 1

Scenario A Summer Accuracy Statistic Simulated Event Days Type B and G Resources				
Adjustment	ECBL 2 of 10	NYISO 10 of 10	NYISO 5 of 10	NYISO 5 of 8
Unadjusted	0.120	0.120	0.135	0.135
Additive Adjustment	0.090	0.088	0.097	0.097
Multiplicative Adjustment	0.100	0.094	0.101	0.101
Multiplicative Adjustment 20% Cap	0.096	0.096	0.100	0.100
Multiplicative Adjustment 50% Cap	0.100	0.094	0.100	0.100
Multiplicative Adjustment 100% Cap	0.099	0.094	0.101	0.101

Scenario A Summer Accuracy Statistic Simulated Event Days Type C Resources				
Adjustment	ECBL 2 of 10	NYISO 10 of 10	NYISO 5 of 10	NYISO 5 of 8
Unadjusted	0.177	0.176	0.200	0.200
Additive Adjustment	0.121	0.115	0.126	0.126
Multiplicative Adjustment	0.128	0.119	0.127	0.127
Multiplicative Adjustment 20% Cap	0.130	0.126	0.132	0.132
Multiplicative Adjustment 50% Cap	0.128	0.120	0.127	0.127
Multiplicative Adjustment 100% Cap	0.127	0.119	0.127	0.127

Scenario A Winter Accuracy Statistic Simulated Event Days Type B and G Resources				
Adjustment	ECBL 2 of 10	NYISO 10 of 10	NYISO 5 of 10	NYISO 5 of 8
Unadjusted	0.086	0.088	0.102	0.102
Additive Adjustment	0.076	0.072	0.075	0.075
Multiplicative Adjustment	0.076	0.074	0.079	0.079
Multiplicative Adjustment 20% Cap	0.075	0.072	0.077	0.077
Multiplicative Adjustment 50% Cap	0.077	0.074	0.080	0.080
Multiplicative Adjustment 100% Cap	0.076	0.074	0.079	0.079

Scenario A Winter Accuracy Statistic Simulated Event Days Type C Resources				
Adjustment	ECBL 2 of 10	NYISO 10 of 10	NYISO 5 of 10	NYISO 5 of 8
Unadjusted	0.139	0.141	0.153	0.153
Additive Adjustment	0.105	0.102	0.105	0.105
Multiplicative Adjustment	0.107	0.103	0.106	0.106
Multiplicative Adjustment 20% Cap	0.111	0.109	0.115	0.115
Multiplicative Adjustment 50% Cap	0.108	0.104	0.106	0.106
Multiplicative Adjustment 100% Cap	0.108	0.103	0.106	0.106

Accuracy Results – Part 2

Scenario B Summer Accuracy Statistic Simulated Event Days Type B and G Resources					Scenario B Summer Accuracy Statistic Simulated Event Days Type C Resources				
Adjustment	ECBL 2 of 10	NYISO 10 of 10	NYISO 5 of 10	NYISO 5 of 8	Adjustment	ECBL 2 of 10	NYISO 10 of 10	NYISO 5 of 10	NYISO 5 of 8
Unadjusted	0.151	0.143	0.153	0.153	Unadjusted	0.227	0.212	0.250	0.250
Additive Adjustment	0.088	0.093	0.096	0.096	Additive Adjustment	0.124	0.122	0.132	0.132
Multiplicative Adjustment	0.094	0.096	0.100	0.100	Multiplicative Adjustment	0.127	0.125	0.130	0.130
Multiplicative Adjustment 20% Cap	0.095	0.097	0.101	0.101	Multiplicative Adjustment 20% Cap	0.146	0.139	0.158	0.158
Multiplicative Adjustment 50% Cap	0.095	0.093	0.096	0.096	Multiplicative Adjustment 50% Cap	0.129	0.127	0.132	0.132
Multiplicative Adjustment 100% Cap	0.094	0.095	0.100	0.100	Multiplicative Adjustment 100% Cap	0.128	0.125	0.130	0.130

Scenario B Winter Accuracy Statistic Simulated Event Days Type B and G Resources					Scenario B Winter Accuracy Statistic Simulated Event Days Type C Resources				
Adjustment	ECBL 2 of 10	NYISO 10 of 10	NYISO 5 of 10	NYISO 5 of 8	Adjustment	ECBL 2 of 10	NYISO 10 of 10	NYISO 5 of 10	NYISO 5 of 8
Unadjusted	0.108	0.099	0.117	0.117	Unadjusted	0.160	0.149	0.184	0.184
Additive Adjustment	0.080	0.077	0.080	0.080	Additive Adjustment	0.110	0.106	0.115	0.115
Multiplicative Adjustment	0.081	0.079	0.082	0.082	Multiplicative Adjustment	0.111	0.107	0.114	0.114
Multiplicative Adjustment 20% Cap	0.080	0.078	0.083	0.083	Multiplicative Adjustment 20% Cap	0.116	0.111	0.127	0.127
Multiplicative Adjustment 50% Cap	0.081	0.079	0.081	0.081	Multiplicative Adjustment 50% Cap	0.112	0.107	0.116	0.116
Multiplicative Adjustment 100% Cap	0.081	0.079	0.082	0.082	Multiplicative Adjustment 100% Cap	0.112	0.107	0.114	0.114

Accuracy Results – Part 3

Scenario AB Summer Accuracy Statistic Simulated Event Days Type B and G Resources					Scenario AB Summer Accuracy Statistic Simulated Event Days Type C Resources				
Adjustment	ECBL 2 of 10	NYISO 10 of 10	NYISO 5 of 10	NYISO 5 of 8	Adjustment	ECBL 2 of 10	NYISO 10 of 10	NYISO 5 of 10	NYISO 5 of 8
Unadjusted	0.128	0.127	0.133	0.133	Unadjusted	0.178	0.177	0.196	0.196
Additive Adjustment	0.089	0.087	0.093	0.093	Additive Adjustment	0.115	0.112	0.121	0.121
Multiplicative Adjustment	0.091	0.089	0.094	0.094	Multiplicative Adjustment	0.121	0.116	0.123	0.123
Multiplicative Adjustment 20% Cap	0.096	0.092	0.094	0.094	Multiplicative Adjustment 20% Cap	0.128	0.127	0.133	0.133
Multiplicative Adjustment 50% Cap	0.094	0.093	0.095	0.095	Multiplicative Adjustment 50% Cap	0.123	0.120	0.126	0.126
Multiplicative Adjustment 100% Cap	0.091	0.089	0.094	0.094	Multiplicative Adjustment 100% Cap	0.121	0.117	0.123	0.123

Scenario AB Winter Accuracy Statistic Simulated Event Days Type B and G Resources					Scenario AB Winter Accuracy Statistic Simulated Event Days Type C Resources				
Adjustment	ECBL 2 of 10	NYISO 10 of 10	NYISO 5 of 10	NYISO 5 of 8	Adjustment	ECBL 2 of 10	NYISO 10 of 10	NYISO 5 of 10	NYISO 5 of 8
Unadjusted	0.096	0.095	0.105	0.105	Unadjusted	0.144	0.142	0.161	0.161
Additive Adjustment	0.082	0.078	0.081	0.081	Additive Adjustment	0.106	0.103	0.110	0.110
Multiplicative Adjustment	0.082	0.079	0.082	0.082	Multiplicative Adjustment	0.109	0.106	0.112	0.112
Multiplicative Adjustment 20% Cap	0.080	0.079	0.080	0.080	Multiplicative Adjustment 20% Cap	0.114	0.111	0.120	0.120
Multiplicative Adjustment 50% Cap	0.079	0.079	0.081	0.081	Multiplicative Adjustment 50% Cap	0.109	0.107	0.113	0.113
Multiplicative Adjustment 100% Cap	0.082	0.079	0.082	0.082	Multiplicative Adjustment 100% Cap	0.109	0.107	0.113	0.113

Bias Results – Part 1

Scenario A Summer Bias Statistic Simulated Event Days Type B and G Resources					Scenario A Summer Bias Statistic Simulated Event Days Type C Resources				
Adjustment	ECBL 2 of 10	NYISO 10 of 10	NYISO 5 of 10	NYISO 5 of 8	Adjustment	ECBL 2 of 10	NYISO 10 of 10	NYISO 5 of 10	NYISO 5 of 8
Unadjusted	0.006	0.006	0.060	0.060	Unadjusted	0.013	0.008	0.088	0.088
Additive Adjustment	0.004	0.004	0.016	0.016	Additive Adjustment	0.005	0.005	0.029	0.029
Multiplicative Adjustment	0.005	0.004	0.013	0.013	Multiplicative Adjustment	0.007	0.005	0.024	0.024
Multiplicative Adjustment 20% Cap	0.005	0.003	0.019	0.019	Multiplicative Adjustment 20% Cap	0.004	0.003	0.037	0.037
Multiplicative Adjustment 50% Cap	0.004	0.003	0.015	0.015	Multiplicative Adjustment 50% Cap	0.004	0.003	0.024	0.024
Multiplicative Adjustment 100% Cap	0.004	0.004	0.013	0.013	Multiplicative Adjustment 100% Cap	0.006	0.004	0.024	0.024
Scenario A Winter Bias Statistic Simulated Event Days Type B and G Resources					Scenario A Winter Bias Statistic Simulated Event Days Type C Resources				
Adjustment	ECBL 2 of 10	NYISO 10 of 10	NYISO 5 of 10	NYISO 5 of 8	Adjustment	ECBL 2 of 10	NYISO 10 of 10	NYISO 5 of 10	NYISO 5 of 8
Unadjusted	0.002	0.001	0.038	0.038	Unadjusted	0.002	0.002	0.060	0.060
Additive Adjustment	0.004	0.004	0.009	0.009	Additive Adjustment	0.004	0.004	0.015	0.015
Multiplicative Adjustment	0.003	0.003	0.009	0.009	Multiplicative Adjustment	0.003	0.004	0.015	0.015
Multiplicative Adjustment 20% Cap	0.002	0.002	0.011	0.011	Multiplicative Adjustment 20% Cap	0.001	0.002	0.022	0.022
Multiplicative Adjustment 50% Cap	0.003	0.004	0.009	0.009	Multiplicative Adjustment 50% Cap	0.003	0.004	0.016	0.016
Multiplicative Adjustment 100% Cap	0.003	0.003	0.009	0.009	Multiplicative Adjustment 100% Cap	0.004	0.004	0.014	0.014

Bias Results – Part 2

Scenario B Summer Bias Statistic Simulated Event Days Type B and G Resources					Scenario B Summer Bias Statistic Simulated Event Days Type C Resources				
Adjustment	ECBL 2 of 10	NYISO 10 of 10	NYISO 5 of 10	NYISO 5 of 8	Adjustment	ECBL 2 of 10	NYISO 10 of 10	NYISO 5 of 10	NYISO 5 of 8
Unadjusted	0.005	0.004	0.069	0.069	Unadjusted	0.013	0.007	0.118	0.118
Additive Adjustment	0.002	0.001	0.013	0.013	Additive Adjustment	0.000	0.000	0.022	0.022
Multiplicative Adjustment	0.002	0.003	0.011	0.011	Multiplicative Adjustment	0.001	0.000	0.016	0.016
Multiplicative Adjustment 20% Cap	0.003	0.003	0.021	0.021	Multiplicative Adjustment 20% Cap	0.001	0.003	0.047	0.047
Multiplicative Adjustment 50% Cap	0.002	0.003	0.011	0.011	Multiplicative Adjustment 50% Cap	0.004	0.004	0.017	0.017
Multiplicative Adjustment 100% Cap	0.002	0.002	0.010	0.010	Multiplicative Adjustment 100% Cap	0.002	0.002	0.015	0.015
Scenario B Winter Bias Statistic Simulated Event Days Type B and G Resources					Scenario B Winter Bias Statistic Simulated Event Days Type C Resources				
Adjustment	ECBL 2 of 10	NYISO 10 of 10	NYISO 5 of 10	NYISO 5 of 8	Adjustment	ECBL 2 of 10	NYISO 10 of 10	NYISO 5 of 10	NYISO 5 of 8
Unadjusted	0.005	0.003	0.051	0.051	Unadjusted	0.013	0.007	0.084	0.084
Additive Adjustment	0.001	0.001	0.012	0.012	Additive Adjustment	0.005	0.003	0.024	0.024
Multiplicative Adjustment	0.001	0.001	0.011	0.011	Multiplicative Adjustment	0.004	0.003	0.024	0.024
Multiplicative Adjustment 20% Cap	0.001	0.001	0.015	0.015	Multiplicative Adjustment 20% Cap	0.007	0.004	0.038	0.038
Multiplicative Adjustment 50% Cap	0.001	0.000	0.011	0.011	Multiplicative Adjustment 50% Cap	0.003	0.003	0.024	0.024
Multiplicative Adjustment 100% Cap	0.003	0.001	0.011	0.011	Multiplicative Adjustment 100% Cap	0.003	0.002	0.023	0.023

Bias Results – Part 3

Scenario AB Summer Bias Statistic Simulated Event Days Type B and G Resources					Scenario AB Summer Bias Statistic Simulated Event Days Type C Resources				
Adjustment	ECBL 2 of 10	NYISO 10 of 10	NYISO 5 of 10	NYISO 5 of 8	Adjustment	ECBL 2 of 10	NYISO 10 of 10	NYISO 5 of 10	NYISO 5 of 8
Unadjusted	0.003	0.006	0.043	0.043	Unadjusted	0.004	0.009	0.071	0.071
Additive Adjustment	0.002	0.001	0.014	0.014	Additive Adjustment	0.002	0.000	0.024	0.024
Multiplicative Adjustment	0.003	0.001	0.011	0.011	Multiplicative Adjustment	0.003	0.001	0.020	0.020
Multiplicative Adjustment 20% Cap	0.001	0.000	0.016	0.016	Multiplicative Adjustment 20% Cap	0.003	0.006	0.026	0.026
Multiplicative Adjustment 50% Cap	0.002	0.000	0.011	0.011	Multiplicative Adjustment 50% Cap	0.000	0.002	0.018	0.018
Multiplicative Adjustment 100% Cap	0.003	0.001	0.011	0.011	Multiplicative Adjustment 100% Cap	0.002	0.000	0.019	0.019
Scenario AB Winter Bias Statistic Simulated Event Days Type B and G Resources					Scenario AB Winter Bias Statistic Simulated Event Days Type C Resources				
Adjustment	ECBL 2 of 10	NYISO 10 of 10	NYISO 5 of 10	NYISO 5 of 8	Adjustment	ECBL 2 of 10	NYISO 10 of 10	NYISO 5 of 10	NYISO 5 of 8
Unadjusted	0.003	0.003	0.042	0.042	Unadjusted	0.001	0.003	0.066	0.066
Additive Adjustment	0.001	0.000	0.010	0.010	Additive Adjustment	0.001	0.001	0.020	0.020
Multiplicative Adjustment	0.002	0.001	0.009	0.009	Multiplicative Adjustment	0.002	0.002	0.020	0.020
Multiplicative Adjustment 20% Cap	0.000	0.001	0.013	0.013	Multiplicative Adjustment 20% Cap	0.000	0.000	0.027	0.027
Multiplicative Adjustment 50% Cap	0.000	0.000	0.010	0.010	Multiplicative Adjustment 50% Cap	0.001	0.000	0.020	0.020
Multiplicative Adjustment 100% Cap	0.001	0.001	0.009	0.009	Multiplicative Adjustment 100% Cap	0.002	0.001	0.020	0.020

Variability Results – Part 1

Scenario A Summer Variability Statistic Simulated Event Days Type B and G Resources					Scenario A Summer Variability Statistic Simulated Event Days Type C Resources				
Adjustment	ECBL 2 of 10	NYISO 10 of 10	NYISO 5 of 10	NYISO 5 of 8	Adjustment	ECBL 2 of 10	NYISO 10 of 10	NYISO 5 of 10	NYISO 5 of 8
Unadjusted	0.119	0.119	0.120	0.120	Unadjusted	0.175	0.174	0.176	0.176
Additive Adjustment	0.090	0.087	0.092	0.092	Additive Adjustment	0.120	0.115	0.120	0.120
Multiplicative Adjustment	0.098	0.094	0.100	0.100	Multiplicative Adjustment	0.127	0.119	0.124	0.124
Multiplicative Adjustment 20% Cap	0.096	0.096	0.098	0.098	Multiplicative Adjustment 20% Cap	0.129	0.125	0.127	0.127
Multiplicative Adjustment 50% Cap	0.099	0.094	0.097	0.097	Multiplicative Adjustment 50% Cap	0.127	0.119	0.123	0.123
Multiplicative Adjustment 100% Cap	0.098	0.094	0.100	0.100	Multiplicative Adjustment 100% Cap	0.127	0.119	0.123	0.123

Scenario A Winter Variability Statistic Simulated Event Days Type B and G Resources					Scenario A Winter Variability Statistic Simulated Event Days Type C Resources				
Adjustment	ECBL 2 of 10	NYISO 10 of 10	NYISO 5 of 10	NYISO 5 of 8	Adjustment	ECBL 2 of 10	NYISO 10 of 10	NYISO 5 of 10	NYISO 5 of 8
Unadjusted	0.086	0.088	0.096	0.096	Unadjusted	0.139	0.140	0.140	0.140
Additive Adjustment	0.074	0.072	0.075	0.075	Additive Adjustment	0.105	0.101	0.104	0.104
Multiplicative Adjustment	0.076	0.074	0.079	0.079	Multiplicative Adjustment	0.106	0.102	0.105	0.105
Multiplicative Adjustment 20% Cap	0.075	0.072	0.077	0.077	Multiplicative Adjustment 20% Cap	0.111	0.108	0.111	0.111
Multiplicative Adjustment 50% Cap	0.077	0.074	0.080	0.080	Multiplicative Adjustment 50% Cap	0.107	0.103	0.105	0.105
Multiplicative Adjustment 100% Cap	0.076	0.074	0.079	0.079	Multiplicative Adjustment 100% Cap	0.106	0.103	0.105	0.105

Variability Results – Part 2

Scenario B Summer Variability Statistic Simulated Event Days Type B and G Resources					Scenario B Summer Variability Statistic Simulated Event Days Type C Resources				
Adjustment	ECBL 2 of 10	NYISO 10 of 10	NYISO 5 of 10	NYISO 5 of 8	Adjustment	ECBL 2 of 10	NYISO 10 of 10	NYISO 5 of 10	NYISO 5 of 8
Unadjusted	0.145	0.141	0.139	0.139	Unadjusted	0.214	0.205	0.216	0.216
Additive Adjustment	0.087	0.091	0.094	0.094	Additive Adjustment	0.123	0.120	0.127	0.127
Multiplicative Adjustment	0.093	0.095	0.098	0.098	Multiplicative Adjustment	0.125	0.124	0.128	0.128
Multiplicative Adjustment 20% Cap	0.095	0.095	0.097	0.097	Multiplicative Adjustment 20% Cap	0.142	0.137	0.149	0.149
Multiplicative Adjustment 50% Cap	0.094	0.092	0.094	0.094	Multiplicative Adjustment 50% Cap	0.126	0.125	0.129	0.129
Multiplicative Adjustment 100% Cap	0.093	0.095	0.098	0.098	Multiplicative Adjustment 100% Cap	0.126	0.124	0.127	0.127
Scenario B Winter Variability Statistic Simulated Event Days Type B and G Resources					Scenario B Winter Variability Statistic Simulated Event Days Type C Resources				
Adjustment	ECBL 2 of 10	NYISO 10 of 10	NYISO 5 of 10	NYISO 5 of 8	Adjustment	ECBL 2 of 10	NYISO 10 of 10	NYISO 5 of 10	NYISO 5 of 8
Unadjusted	0.104	0.096	0.104	0.104	Unadjusted	0.152	0.144	0.161	0.161
Additive Adjustment	0.079	0.076	0.078	0.078	Additive Adjustment	0.108	0.104	0.111	0.111
Multiplicative Adjustment	0.079	0.078	0.080	0.080	Multiplicative Adjustment	0.110	0.106	0.111	0.111
Multiplicative Adjustment 20% Cap	0.079	0.077	0.082	0.082	Multiplicative Adjustment 20% Cap	0.115	0.110	0.120	0.120
Multiplicative Adjustment 50% Cap	0.080	0.079	0.078	0.078	Multiplicative Adjustment 50% Cap	0.111	0.107	0.112	0.112
Multiplicative Adjustment 100% Cap	0.079	0.078	0.080	0.080	Multiplicative Adjustment 100% Cap	0.111	0.106	0.111	0.111

Variability Results – Part 3

Scenario AB Summer Variability Statistic Simulated Event Days Type B and G Resources					Scenario AB Summer Variability Statistic Simulated Event Days Type C Resources				
Adjustment	ECBL 2 of 10	NYISO 10 of 10	NYISO 5 of 10	NYISO 5 of 8	Adjustment	ECBL 2 of 10	NYISO 10 of 10	NYISO 5 of 10	NYISO 5 of 8
Unadjusted	0.127	0.126	0.125	0.125	Unadjusted	0.176	0.175	0.181	0.181
Additive Adjustment	0.089	0.087	0.091	0.091	Additive Adjustment	0.115	0.111	0.116	0.116
Multiplicative Adjustment	0.091	0.089	0.093	0.093	Multiplicative Adjustment	0.120	0.116	0.119	0.119
Multiplicative Adjustment 20% Cap	0.095	0.092	0.093	0.093	Multiplicative Adjustment 20% Cap	0.128	0.126	0.129	0.129
Multiplicative Adjustment 50% Cap	0.094	0.093	0.095	0.095	Multiplicative Adjustment 50% Cap	0.121	0.119	0.122	0.122
Multiplicative Adjustment 100% Cap	0.091	0.089	0.093	0.093	Multiplicative Adjustment 100% Cap	0.121	0.117	0.120	0.120
Scenario AB Winter Variability Statistic Simulated Event Days Type B and G Resources					Scenario AB Winter Variability Statistic Simulated Event Days Type C Resources				
Adjustment	ECBL 2 of 10	NYISO 10 of 10	NYISO 5 of 10	NYISO 5 of 8	Adjustment	ECBL 2 of 10	NYISO 10 of 10	NYISO 5 of 10	NYISO 5 of 8
Unadjusted	0.096	0.094	0.099	0.099	Unadjusted	0.142	0.141	0.145	0.145
Additive Adjustment	0.080	0.078	0.080	0.080	Additive Adjustment	0.105	0.103	0.108	0.108
Multiplicative Adjustment	0.082	0.079	0.080	0.080	Multiplicative Adjustment	0.108	0.106	0.110	0.110
Multiplicative Adjustment 20% Cap	0.080	0.078	0.079	0.079	Multiplicative Adjustment 20% Cap	0.113	0.111	0.116	0.116
Multiplicative Adjustment 50% Cap	0.079	0.078	0.079	0.079	Multiplicative Adjustment 50% Cap	0.109	0.107	0.110	0.110
Multiplicative Adjustment 100% Cap	0.082	0.079	0.080	0.080	Multiplicative Adjustment 100% Cap	0.109	0.106	0.110	0.110

Overall Results

- ◆ **No statistically significant differences across the combinations evaluated**
 - *No combination was substantially more or less accurate than the others*
 - *Degradation of the baselines with increased economic scheduling was relatively small*

Measurement for DADRP

- ◆ **The CBL for measuring response to a DADRP schedule will be calculated using the Net Load meter that measures the total load that is supplied by the NYS Transmission and/or distribution system**
 - *Base-load supply is not eligible to be paid for this activity*
 - *Base-load supply must be excluded from the development of the CBL*
- ◆ **A CBL will be defined for determining incremental output of the Local Generator and other behind-the-meter supply**
- ◆ **Response in the hour used for DADRP settlements shall be based on the CBL value calculated for that hour based on the Net Load Meter**

CBLs for DADRP

- ◆ NYISO proposes to retain the “High 5 of 10” CBL for DADRP with the following changes:
 - *Changes to the exclusion rules*
 - *Changes to the number of days required to calculate the CBL*
- ◆ A CBL for determining incremental output of the Local Generator and other behind-the-meter supply source
 - *This CBL will be used to exclude average base-load generation from the metered generator output*
 - *Used for monitoring purposes only, not used for billing purposes*
- ◆ NYISO will be inserting the existing CBL, as modified in the presentation, in Attachment R of the OATT and evaluate the revised CBL following FERC’s determination regarding the proposed ECBL.

Proposed Changes to Exclusion Rules for DADRP

- ◆ **No exclusion for low usage days**
 - *Days when the Local Generator is operating for reasons other than DADRP schedule will reflect low net usage from the NYS Transmission and/or distribution system and would allow for improper exclusion of those days, incorrectly raising the CBL*
- ◆ **No exclusion for the day before a day with a DADRP schedule**
- ◆ **Exclusions permitted for SCR or EDRP event days and the weekday immediately before the SCR or EDRP event days in which the DADRP resource was required to respond.**

Minimum Number of Days to Calculate A CBL

- ◆ **NYISO proposes to revise the minimum number of days to calculate a weekday CBL for DADRP to five days**
 - *To be consistent with the minimum number of days required to calculate a weekday CBL previously provided in the EDRP and SCR programs*
 - *If 5 or more days are currently selected in the CBL window when the 30 day look back is reached, those 5 or more days may be used to calculate the CBL*

CBL for Local Generator and other Behind-the-Meter Supply Sources

- ◆ **The CBL for the Local Generator and other behind-the-meter supply sources shall be calculated by:**
 - *Determining the Local Generator's output during same hours over the past 10 weekdays, beginning two days prior to the curtailment event and excluding days where curtailment due to participation in the EDRP/SCR occurred.*
 - *Sum the MWh for each day over the past 10 weekdays*
 - *Select the 5 lowest values of daily Local Generator output and use those days to calculate the CBL.*
 - *Calculate the CBL for each hour as the average of the five hourly MWh's corresponding with the scheduled hours.*

Determining Incremental Output of the Local Generator and other Behind-the-Meter Supply Sources

- ◆ **The incremental output of the Local Generator and other behind-the-meter supply sources shall be calculated as the difference between the metered output of the Local Generator and other behind-the-meter supply sources and the CBL of the Local Generator and other behind-the-meter supply sources**

Additional Data Reporting Requirements – Hourly Interval Data

- ◆ **Following data is required from both Net Load Meter and Local Generator Meter**
 - *Hourly response for the actual hourly Demand Reduction provided by the DADRP resource for the scheduled period*
 - In the format required for reporting to the NYISO’s Settlement Data Exchange application
 - This data is used for DADRP settlements
 - *Hourly interval data for all Demand Side Resources that are enrolled as the DADRP resource (all hours of each day that the DADRP resource is scheduled)*
 - *Hourly interval data for all Demand Side Resources enrolled as the DADRP resource for the 30 days (all hours of each day) preceding the day the DADRP resource is scheduled.*

Additional Data That May Be Requested by NYISO

- ◆ **Additional Data that may be requested by the NYISO as deemed necessary to verify participation as a Demand Side Resource in NYISO’s energy market or comply with Section 3.4 of the Market Services Tariff**
- ◆ **The following additional data may be requested related to the Net Load Meter and/or Local Generator meter:**
 - *Historical Load Documentation*
 - *Load data history for Pre and Post Validation, Edit and Estimation (VEE) load data*
 - *Historical Load Data (provide a minimum of up to three months hourly interval metering data, as requested, when registering new DADRP resources)*
 - *New and Existing Metering Documentation*
 - *Time Check – time clock within +/- two minutes of true time (NIST)*
 - *Sum Check – the sum of the intervals when compared to the totalized load over the same period must agree within +/- 2%*
 - *High/Low Check – minimum and maximum expected values for the facility*
 - *Zero Value Check – identification and verification of hours with “0” values.*
- ◆ **Section 24.4 of Attachment R (OATT) will include these data requirements as part of this compliance filing**

Existing Obligations of Demand Reduction Providers - 1

- ◆ Demand Reduction Providers or the entity submitting the hourly response data shall comply with the Settlement reporting requirements of:
 - *Section 7.4.1 of the Market Services Tariff for Suppliers*
 - *Meter Data Management Protocols*
 - Located on the NYISO Financial Services webpage, under Billing and Settlement

Existing Obligations of Demand Reduction Providers - 2

- ◆ Demand Reduction Providers shall comply with the requirements of Attachments H and O (ISO MST), including but not limited to:
 - *Production Costs*
 - *Opportunity Costs*
 - *Operational Logs (for outage verification)*
 - *Bidding Agreements (for Financially Responsible Party or Scheduling Service Provider Agreements)*
 - *Ownership and Control*
 - *Other Cost and Risk Data Supporting Reference Levels or Going-Forward Costs and any other information*
 - *necessary to establish a reference price or offer floor for mitigation purposes*
 - *Any additional data, defined in Attachment O to the ISO MST, which may be requested by the NYISO as deemed necessary to verify the Demand Side Resource's participation in NYISO's energy market*

Other Tariff Revisions

- ◆ **Definition of Demand Side Resource will be modified to include a reference to a Local Generator**
- ◆ **Definition of the Demand Reduction Incentive Payment will be modified to remove the exclusion for demand reductions supplied from a Local Generator**
- ◆ **Reviewing MST Section 5.12.11.1 and Attachment G for possible clarifications regarding demand side resources' eligibility to participate simultaneously in multiple economic and reliability demand response programs**

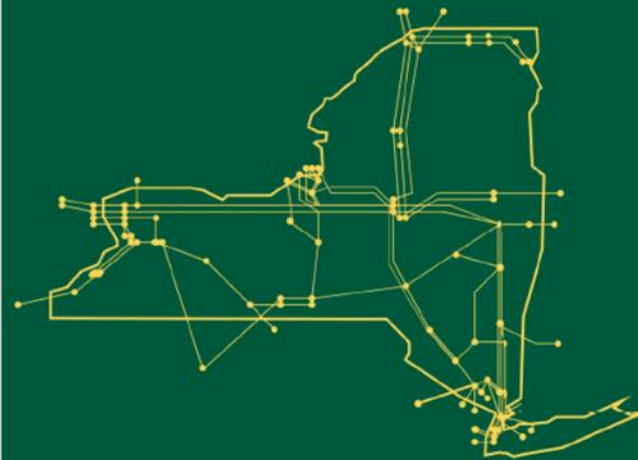
Next Steps

- ◆ *May 21, 2014*
 - *Compliance filing*
- ◆ *Begin updating the DADRP Manual*

Questions



The New York Independent System Operator (NYISO) is a not-for-profit corporation responsible for operating the state's bulk electricity grid, administering New York's competitive wholesale electricity markets, conducting comprehensive long-term planning for the state's electric power system, and advancing the technological infrastructure of the electric system serving the Empire State.



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