New York ISO
Independent System Operator

2022 RNA Base Case Inclusion Rules Application - Updates

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Agenda

- A preliminary inclusion rules application was presented at the April 1 TPAS/ESPWG
- This is to provide a final application for the 1st pass RNA Base Case
  - Proposed projects
  - Deactivations
  - Generation status changes due to DEC Peaker Rule

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2022 RNA Base Cases and the Inclusion Rules Application

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2022-2023 RPP Background

- **The 2022 Reliability Planning Process (RPP) starts with the 2022 Reliability Needs Assessment (2022 RNA) followed by the 2023-2032 Comprehensive System Plan (CRP)**
  - 2022 RNA Study Period: year 4 = 2026 through year 10 = 2032
  - Note: year 1 through year 5 are assessed quarterly in the Short-Term Reliability Process (STRP)
- **The RPP is part of the Comprehensive System Planning Process and is performed pursuant to the Attachment Y of the NYISO OATT; see Section 31.2.**
  - Additional implementation details, including recently updated RNA Base Case inclusion rules, are captured in the RPP Manual
- **2022 RNA will be based on the information from the Gold Book 2022, the 2022 FERC 715 filing (power flow cases and auxiliary files), historical data, and market participant data**
- **Reliability evaluations on the 2022 RNA Base Case: transmission security and resource adequacy**
  - NERC, NPCC, NYSRC Reliability Rules application on the Bulk Power Transmission Facilities (BPTFs)

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2022 RNA Base Case Development Background

- **Based on the RNA Base Case, the NYISO identifies Reliability Needs of the New York State Bulk Power Transmission Facilities (BPTFs) in accordance with applicable Reliability Criteria (*i.e.*, NERC, NPCC, and NYSRC)**
- **2022 RNA Base Case:**
  - For the transmission security evaluations, the NYISO uses the 2022 FERC Form 715 filing and the information from the 2022 Gold Book as a starting point for developing the base case system models with the application of the inclusion rules.
  - For the resource adequacy evaluation, the models are developed starting with prior resource adequacy models, and are updated with information from the 2022 Gold Book and historical data, with the application of the inclusion rules. Information on modeling of neighboring systems is based on the input received from the NPCC CP-8 working group.
- **The inclusion rules reside in the Reliability Planning Process Manual [link], and are used as guidelines to determine what proposed projects will be included in the RNA Base Case, and also how to treat generator deactivations**

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2022 RNA: Inclusion Rules Application

- **Proposed generation and transmission to be included:**
  - next slide contains a list of projects
- **Generation deactivations: all plant deactivations listed in the 2022 Gold Book Section IV -3, -4, -5 will be out of service**
- **The peakers listed in the 2022 Gold Book Table IV-6 will be modeled with a status reflecting their latest compliance plans the owners filed with DEC under the Peaker Rule**
  - List in this presentation
- **Proposed Local Transmission Owner Plans (LTP) to be included:**
  - All BPTF LTPs listed in the 2022 GB Section VII as firm, with consideration for the in-service date
  - All non-BPTF LTPs listed by the Transmission Owner as firm
- **Existing transmission facilities modeled out-of-service include:**
  - Con Edison's B3402 and C3403 345 kV cables for the entire study period

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Proposed Projects Inclusion: Regulated Transmission

NYISO Interconnection Queue #	Project Name/(Owner)	Summer Peak MW	POI	Zone	Type	Queue COD or I/S	Interconnection Status / Class Year	Reliability Base Case Inclusion Status
0545A	Empire State Line (NextEra)	*n/a*	Dysinger - Stolle 345kV	A	Transmission	06/2022	TIP Facility Study and Interconnection Agreement completed (Western NY PPTPP)	2018-2019 RPP
0543	Segment B Knickerbocker-Pleasant Valley 345 kV (National Grid, NY Transco, O&R, ConEdison)	*n/a*	Greenbush - Pleasant Valley 345kV	F,G	Transmission	12/2023	TIP Facility Study and Interconnection Agreement completed (AC PPTPP)	2020-2021 RPP
0556	Segment A Double Circuit (LS Power, National Grid, NYPA)	*n/a*	Edic - New Scotland 345kV	E, F	Transmission	12/2023	TIP Facility Study and Interconnection Agreement completed (AC PPTPP)	
0430	Cedar Rapids Transmission Upgrade (HQ Energy Services US)	+80	Dennison - Alcoa 115kV	D	Transmission	I/S	CY2017	
0631	NS Power Express (CHPE LLC)	1000	Hertel 735kV (Quebec)-Astoria Annex 345kV (NYC)	J	DC Transmission	12/2025	CY21 in progress	2022 RNA
0887	CH Uprate (CHPE LLC)	250						2022 RNA
1125	Northern New York Priority Transmission Project (NNYPTP) (NYPA, National Grid)	n/a	Moses/Adirondack/Porter Path	D, E	Transmission	12/2025	TIP Facility Study in progress	2022 RNA

Note: brown color shows projects added since the April 1 TPAS/ESPWG presentation

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Proposed Projects Inclusion: Large Generation

Project Category	NYISO Interconnection Queue #	Project Name/(Owner)	Summer Peak MW	POI	Zone	Type	Queue COD or I/S	Interconnection Status / Class Year	Reliability Base Case Inclusion *Starting With*
Large Gens	678	Calverton Solar Energy Center (LI Solar Generation, LLC)	22.9	Edwards Substation 138kV	K	S	Jun-22	CY2019	2020-2021 RPP
	422	Eight Point Wind Enery Center (NextEra Energy Resources, LLC)	101.8	Bennett 115kV	B	W	Sep-22	CY2017	2020-2021 RPP
	505	Ball Hill Wind (Ball Hill Wind Energy, LLC)	100.0	Dunkirk - Gardenville 230kV	A	W	Nov-22	CY2017	2020-2021 RPP
	396	Baron Winds (Baron Winds, LLC)	238.4	Hillside - Meyer 230kV	C	W	Dec-23	CY2017	2020-2021 RPP
	531	Number 3 Wind Energy (Invenergy Wind Development LLC)	103.9	Taylorville - Boonville 115kV	E	W	Oct-22	CY2019	2021 Q3 STAR
	758	Independence GS1 to GS4 (Dynegy Marketing and Trade, LLC)	+9	Scriba 345 kV	C	Gas	I/S	CY21 in progress - ERIS only	2022 RNA
	579	Bluestone Wind (Bluestone Wind, LLC)	111.8	Afton - Stilesville 115kV	E	W	Oct-22	CY2019	2022 RNA
	721	Excelsior Energy Center (Excelsior Energy Center, LLC)	280.0	N. Rochester - Niagara 345 kV	A	S	Nov-22	CY2019	2022 RNA
	618	High River Solar (High River Energy Center, LLC)	90.0	Inghams - Rotterdam 115kV	F	S	Nov-22	CY2019	2022 RNA
	619	East Point Solar (East Point Energy Center, LLC)	50.0	Cobleskill - Marshville 69kV	F	S	Nov-22	CY2019	2022 RNA
	612	South Fork Wind Farm (South Fork Wind, LLC)	96.0	East Hampton 69kV	K	OSW	Aug-23	CY2019	2022 RNA
	695	South Fork Wind Farm II (South Fork Wind, LLC)	40.0	East Hampton 69kV	K	OSW	Aug-23	CY2019	2022 RNA
	637	Flint Mine Solar (Flint Mine Solar LLC)	100.0	LaFarge - Pleasant Valley 115kV, Feura Bush - North Catskill 115kV	G	S	Sep-23	CY2019	2022 RNA
	720	Trelina Solar Energy Center (Trelina Solar Energy Center, LLC)	80.0	Border City - Station 168 115 KV	C	S	Nov-23	CY2019	2022 RNA
	617	Watkins Glen Solar Watkins Glen Energy Center, LLC	50.0	Bath - Montour Falls 115kV	C	S	Nov-23	CY2019	2022 RNA
	495	Mohawk Solar (Mohawk Solar LLC)	90.5	St. Johnsville - Marshville 115kV	F	W	Nov-24	CY2019	2022 RNA

Note: all of the proposed Large Gens in this table have both Capacity Resource Interconnection Service (CRIS) and Energy Resource Interconnection Service (ERIS), unless otherwise noted

Proposed Projects Inclusion: Small Generation

NYISO Interconnection Queue #	Project Name/(Owner)	Summer Peak MW	POI	Zone	Type	Queue COD or I/S	Interconnection Status/ Class Year	Reliability Base Case Inclusion Status
572	Greene County 1 (Hecate Energy Greene 1 LLC)	20	Coxsackie - North Catskill 69kV	G	S	01/2023	IA Executed*	2021 Q3 STAR
573	Greene County 2 (Hecate Energy Greene 2 LLC)	10	Coxsackie Substation 13.8kV	G	S	03/2023	IA Executed*	2021 Q3 STAR
768	Janis Solar (Janis Solar, LLC)	20	Willet 34.5kV	C	S	04/2022	IA Executed*	2021 Q3 STAR
775	Puckett Solar (Puckett Solar, LLC)	20	Chenango Forks Substation 34.5kV	E	S	04/2022	IA Executed*	2021 Q3 STAR
670	Skyline Solar (SunEast Skyline Solar LLC)	20	Campus Rd - Clinton 46kV	E	S	04/2022	IA Executed*	2021 Q3 STAR
584	Dog Corners Solar (SED NY Holdings LLC)	20	Aurora Substation 34.5kV	C	S	05/2022	IA Executed*	2021 Q3 STAR
592	Niagara Solar (Duke Energy Renewables Solar, LLC)	20	Bennington 34.5kV Substation	B	S	05/2023	IA Executed	2021 Q3 STAR
590	Scipio Solar (Duke Energy Renewables Solar, LLC)	18	Scipio 34.5kV Substation	C	S	05/2023	IA Executed	2021 Q3 STAR
682	Grissom Solar (Grissom Solar, LLC)	20	Ephratah - Florida 115kV	F	S	06/2022	IA Executed*	2021 Q3 STAR
748	Regan Solar (Regan Solar, LLC)	20	Market Hill - Johnstown 69kV	F	S	06/2022	IA Executed*	2021 Q3 STAR
545	Sky High Solar (Sky High Solar, LLC)	20	Tilden -Tully Center 115kV	C	S	06/2023	IA Executed*	2021 Q3 STAR
586	Watkins Road Solar (SED NY Holdings LLC)	20	Watkins Rd - Ilion 115kV	E	S	06/2023	IA Executed*	2021 Q3 STAR

- Note: the proposed Small Gens have Energy Resource Interconnection Service (ERIS) rights; those labeled with a "*" also have Capacity Resource Interconnection Service (CRIS) rights

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Proposed Projects Inclusion: Small Generation (cont.)

NYISO Interconnection Queue #	Project Name/(Owner)	Summer Peak MW	POI	Zone	Type	Queue COD or I/S	Interconnection Status/ Class Year	Reliability Base Case Inclusion Status
735	ELP Stillwater Solar (ELP Stillwater Solar LLC)	20	Luther Forest - Mohican 115kV	F	S	09/2022	IA Executed	2021 Q3 STAR
666	Martin Solar (Martin Solar LLC)	20	Arcade - Five Mile 115kV	A	S	10/2022	IA Executed*	
667	Bakerstand Solar (Bakerstand Solar LLC)	20	Machias - Maplehurst 34.5kV	A	S	10/2022	IA Executed*	
565	Tayandenega Solar (Tayandenega Solar, LLC)	20	St. Johnsville - Inghams 115kV	F	S	10/2022	IA Executed*	
570	Albany County 1 (Hecate Energy Albany 1 LLC)	20	Long Lane - Lafarge 115kV	F	S	12/2022	IA Executed*	
598	Albany County 2 (Hecate Energy Albany 2 LLC)	20	Long Lane - Lafarge 115kV	F	S	12/2022	IA Executed*	
638	Pattersonville (Pattersonville Solar Facility, LLC)	20	Rotterdam - Meco 115kV	F	S	12/2022	IA Executed*	
730	Darby Solar (Darby Solar, LLC)	20	Mohican - Schaghticoke 115kV	F	S	12/2022	IA Executed*	
564	Rock District Solar (Rock District Solar, LLC)	20	Sharon - Cobleskill 69kV	F	S	12/2022	IA Executed*	
731	Branscomb Solar (Branscomb Solar, LLC)	20	Battenkill - Eastover 115kV	F	S	I/S	IA Executed*	
759	KCE NY6	20	Gardenville - Bethlehem Steel Wind 115kV	A	ES	04/2022	IA Executed*	2022 RNA
734	Ticonderoga Solar (ELP Ticonderoga Solar LLC)	20	ELP Ticonderoga Solar LLC	F	S	8/1/2022	IA Executed*	
848	Fairway Solar (SunEast Fairway Solar LLC.)	20	McIntyre - Colton 115kV	E	S	10/1/2023	IA Executed	
855	NY13 Solar (Bald Mountain Solar LLC)	20	Mohican - Schaghticoke 115kV	F	S	11/1/2023	IA Executed	
769	North County Energy Storage (New York Power Authority)	20	Willis 115kV	D	ES	03/2022	IA Executed	
807	Hilltop Solar (SunEast Hilltop Solar LLC)	20	Eastover - Schaghticoke 115kV	E	S	07/2023	IA Executed	
581	Hills Solar (SunEast Hills Solar LLC)	20	Fairfield - Inghams 115kV	E	S	08/2023	IA Executed	

Note: the proposed Small Gens have ERIS rights; those labeled with a "*" also have CRIS rights

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DEC's Peaker Rule Impacts on the 2022 RNA Base Case

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DEC Peaker Rule Background

- New York State Department of Environmental Conservation (DEC) adopted a regulation to limit nitrogen oxides (NOx) emissions from simple-cycle combustion turbines ("Peaking Units") (referred to as the "Peaker Rule")
- The Peaker Rule required all impacted plant owners to file compliance plans by March 2, 2020
- NYISO has been considering generators' compliance plans in the development of the 2020 Reliability Needs Assessment Base Case, and will continue to consider and update the assumptions for the 2022 RNA Base Cases

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Status Changes Due to DEC Peaker List

Owner/Operator	Station	Zone	Nameplate (MW)	CRIS (MW) (1)		Capability (MW) (1)		Status Change Date (2)	STAR Evaluation or Other Assessment
				Summer	Winter	Summer	Winter		
National Grid	West Babylon 4	K	52.4	49.0	64.0	41.2	63.0	12/12/2020 (R)	Other (6)
Astoria Generating Company, L.P.	Gowanus 1-8	J	20.0	16.1	21.0	16.0	21.0	2/1/2021 (IIFO)	2021 Q1/2022 Q2 (5)
National Grid	Glenwood GT 01 (4)	K	16.0	14.6	19.1	13.0	15.3	2/28/2021 (R)	2020 Q3
Helix Ravenswood, LLC	Ravenswood 11	J	25.0	20.2	25.7	16.1	22.4	12/1/2021 (IIFO)	2022 Q1
Helix Ravenswood, LLC	Ravenswood 01	J	18.6	8.8	11.5	7.7	11.1	1/1/2022 (IIFO)	2022 Q1
Astoria Generating Company, L.P.	Gowanus 1-1 through 1-7	J	140.0	122.6	160.1	117.1	161.2	11/1/2022 (R)	2022 Q2
Astoria Generating Company, L.P.	Gowanus 4-1 through 4-8	J	160.0	140.1	182.9	138.8	183.4	11/1/2022 (R)	2022 Q2
Central Hudson Gas & Elec. Corp.	Coxsackie GT	G	21.6	21.6	26.0	19.2	24.0	5/1/2023	
Central Hudson Gas & Elec. Corp.	South Cairo	G	21.6	19.8	25.9	18.9	23.0	5/1/2023	
Consolidated Edison Co. of NY, Inc.	74 St. GT 1 & 2	J	37.0	39.1	49.2	39.3	45.2	5/1/2023	2022 Q2
Astoria Generating Company, L.P.	Astoria GT 01	J	16.0	15.7	20.5	13.6	19.0	5/1/2023	
NRG Power Marketing, LLC	Astoria GT 2-1, 2-2, 2-3, 2-4	J	186.0	165.8	204.1	141.6	183.7	5/1/2023 (R)	2022 Q2
NRG Power Marketing, LLC	Astoria GT 3-1, 3-2, 3-3, 3-4	J	186.0	170.7	210.0	140.5	182.8	5/1/2023 (R)	2022 Q2
NRG Power Marketing, LLC	Astoria GT 4-1, 4-2, 4-3, 4-4	J	186.0	167.9	206.7	138.3	180.3	5/1/2023 (R)	2022 Q2

Notes

1. MW values are from the draft 2022 Load and Capacity Data Report

2. Unless otherwise noted, these dates are those identified by generators in their DEC Peaker Rule compliance plan submittals for transitioning the facility to Retired, Blackstart, or will be out-of-service in the summer ozone season or the date in which the generator entered (or proposed to enter in their Generator Deactivation Notice) Retired (R) or Mothball Outage (MO) or the date on which the generator entered ICAP Ineligible Forced Outage (IIFO)

3. Long Island Power Authority (LIPA) has submitted notifications to the DEC per part 227-3 of the peaker rule stating that these units are needed for reliability allowing these units to operate until at least May 1, 2025. Due to the future nature of these units being operated only as designated by the operator as an emergency operating procedure the NYISO will continue to plan for these units be unavailable starting May 2023

4. These units have indicated they will be out-of-service during the ozone season (May through September) in their compliance plans in response to the DEC peaker rule.

5. The IIFO status for this unit was evaluated in the 2021 Q1 STAR. The proposed Retirement for this unit will be evaluated in the 2022 Q2 STAR.

6. This unit was evaluated in a stand-alone generator deactivation assessment prior to the creation of the Short-Term Reliability Process

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Status Changes Due to DEC Peaker List

Owner/Operator	Station	Zone	Nameplate (MW)	CRIS (MW) (1)		Capability (MW) (1)		Status Change Date (2)	STAR Evaluation or Other Assessment
				Summer	Winter	Summer	Winter		
Consolidated Edison Co. of NY, Inc.	Hudson Ave 3	J	16.3	16.0	20.9	12.3	15.6	5/1/2023	2022 Q2
Consolidated Edison Co. of NY, Inc.	Hudson Ave 5	J	16.3	15.1	19.7	15.3	18.6	5/1/2023	2022 Q2
Helix Ravenswood, LLC	Ravenswood 10	J	25.0	21.2	27.0	16.0	22.3	5/1/2023	
National Grid	Glenwood GT 03 (3)	K	55.0	54.7	71.5	44.7	66.5	5/1/2023	
National Grid	Northport GT	K	16.0	13.8	18.0	12.0	15.7	5/1/2023	
National Grid	Port Jefferson GT 01	K	16.0	14.1	18.4	12.6	17.3	5/1/2023	
National Grid	Shoreham 1 (3)	K	52.9	48.9	63.9	44.7	64.6	5/1/2023	
National Grid	Shoreham 2 (3)	K	18.6	18.5	23.5	15.7	20.0	5/1/2023	
Consolidated Edison Co. of NY, Inc.	59 St. GT 1	J	17.1	15.4	20.1	13.1	18.8	5/1/2025	
NRG Power Marketing, LLC	Arthur Kill GT 1	J	20.0	16.5	21.6	12.1	15.1	5/1/2025	
Astoria Generating Company, L.P.	Gowanus 2-1 through 2-8 (4)	J	160.0	152.8	199.6	145.5	186.9	5/1/2025	
Astoria Generating Company, L.P.	Gowanus 3-1 through 3-8 (4)	J	160.0	146.8	191.7	137.4	183.5	5/1/2025	
Astoria Generating Company, L.P.	Narrows 1-1 through 2-8 (4)	J	352.0	309.1	403.6	291.5	382.0	5/1/2025	
	Prior to May 2023		432.0	371.4	484.3	349.9	477.4		
	2023 Total		870.3	802.9	1,005.3	684.7	898.6		
	2025 Total		709.1	640.6	41.7	599.6	33.9		
	Total		2,011.4	1,814.9	1,531.3	1,634.2	1,409.9		

Notes

1. MW values are from the draft 2022 Load and Capacity Data Report

2. Unless otherwise noted, these dates are those identified by generators in their DEC Peaker Rule compliance plan submittals for transitioning the facility to Retired, Blackstart, or will be out-of-service in the summer ozone season or the date in which the generator entered (or proposed to enter in their Generator Deactivation Notice) Retired (R) or Mothball Outage (MO) or the date on which the generator entered ICAP Ineligible Forced Outage (IIFO)

3. Long Island Power Authority (LIPA) has submitted notifications to the DEC per part 227-3 of the peaker rule stating that these units are needed for reliability allowing these units to operate until at least May 1, 2025. Due to the future nature of these units being operated only as designated by the operator as an emergency operating procedure the NYISO will continue to plan for these units be unavailable starting May 2023

4. These units have indicated they will be out-of-service during the ozone season (May through September) in their compliance plans in response to the DEC peaker rule.

5. The IIFO status for this unit was evaluated in the 2021 Q1 STAR. The proposed Retirement for this unit will be evaluated in the 2022 Q2 STAR.

6. This unit was evaluated in a stand-alone generator deactivation assessment prior to the creation of the Short-Term Reliability Process

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Other Proposed Deactivations

Does not include status changes due to DEC Peaker Rule

Owner/ Operator	Plant Name	Zone	PTID	Nameplate	CRIS (MW)		Capability (MW)			Deactivation date
				(MW)	Summer	Winter	Summer	Winter	Status	
Seneca Power Partners. L.P.	Allegheny Cogen (1)	B	23514	67	62.9	82.2	62.0	62.7	R	05/02/2022
Seneca Power Partners. L.P.	Sithe Batavia (1)	B	24024	67.3	57.1	71.7	48.7	59.0	R	05/02/2022
Seneca Power Partners. L.P.	Sithe Sterling (1)	B	23777	65.3	57.4	72.1	49.2	61.9	R	05/02/2022
ENGIE Energy Marketing NA, Inc.	Nassau Energy Corporation (2)	K	323695	55	51.6	60.1	38.5	51.0	R	03/31/2022
Exelon Generation Company, LLC.	Madison County LF (2)	E	323628	1.6	1.6	1.6	1.6	1.6	IIFO	04/01/2022
			Total	256.2	230.6	287.7	200	236.2		

Notes
(1) This deactivation is assessed in the 2022 Quarter 1 Short-Term Assessment of Reliability
(2) This deactivation is assessed in the 2022 Quarter 2 Short-Term Assessment of Reliability

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Questions?

Our Mission & Vision

Mission

Ensure power system reliability and competitive markets for New York in a clean energy future

Vision

Working together with stakeholders to build the cleanest, most reliable electric system in the nation

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