

Key Study Assumptions for: Cayuga 2 IIFO

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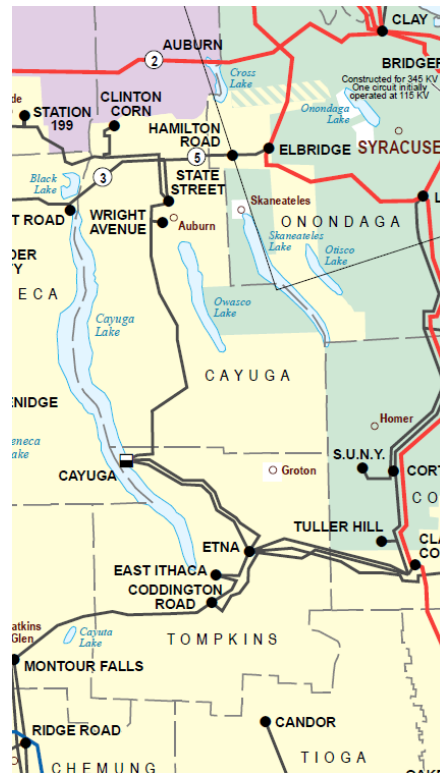
ESPWG

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Cayuga 2 Information

- Zone C
- Nameplate 167.2 MW



Deactivation Assumptions

- The cases used for the analysis are those used for the 2018 RNA (discussed at the June 22, 2018 ESPWG/TPAS)
- Major Assumptions from the RNA are provided at the end of this presentation for your reference

Deactivation Process

- The study period for this assessment will be through summer 2024
- The NYISO is performing the analysis on the BPTF
- The analysis on the non-BPTF will be performed by:
 - NYSEG
 - National Grid
- The NYISO will complete the Generator Deactivation Assessment by September 29, 2018

The Mission of the New York Independent System Operator, in collaboration with its stakeholders, is to serve the public interest and provide benefits to consumers by:

- Maintaining and enhancing regional reliability
- Operating open, fair and competitive wholesale electricity markets
- Planning the power system for the future
- Providing factual information to policy makers, stakeholders and investors in the power system



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RNA Major Assumptions

2018 RNA Summer Peak Load Forecast Assumptions

Topline (former Econometric), Baseline and Adjusted Summer Peak Forecast

Annual MW	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
2018 Topline* Forecast	33,763	34,099	34,367	34,554	34,727	34,946	35,132	35,442	35,750	35,982	36,154
2018 Gold Book Baseline**	32,904	32,857	32,629	32,451	32,339	32,284	32,276	32,299	32,343	32,403	32,469
+ 2018 Solar PV	440	566	689	774	843	889	928	963	989	1,017	1,038
2018 RNA RA Base Case***	33,344	33,423	33,318	33,225	33,182	33,173	33,204	33,262	33,332	33,420	33,507

Comparison of Base Case Peak Forecasts - 2016 & 2018 RNA (MW)

Annual MW	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
2016 RNA RA Base Case***	33,618	33,726	33,825	33,948	34,019	34,120	34,256	34,393	34,515	34,646	34,803		
2018 RNA RA Base Case***			33,344	33,423	33,318	33,225	33,182	33,173	33,204	33,262	33,332	33,420	33,507
Change from 2016 RNA			-481	-525	-701	-895	-1,074	-1,220	-1,311	-1,384	-1,471	NA	NA

* The topline forecast will be used for the resource adequacy scenario

** The transmission security power flow RNA base cases use this Gold Book baseline forecast

***For the resource adequacy (RA) study RNA Base Case, the 2018 Gold Book baseline load forecast was modified by removing the behind-the-meter solar PV impacts in order to model the solar PV explicitly as a generation resource to account for the intermittent nature of its availability

The Gold Book 2018 contains additional details on the load forecast:

http://www.nyiso.com/public/webdocs/markets_operations/services/planning/Documents_and_Resources/Planning_Data_and_Reference_Docs/Data_and_Reference_Docs/2018-Load-Capacity-Data-Report-Gold-Book.pdf

Queue #	Project Name	Zone	CRIS Request	SP MW	Interconnection Status
Proposed Generation Additions					
251	CPV Valley Energy Center	G	680.0	677.6	CY11
349	Taylor Biomass	G	19.0	19.0	CY11
395	Copenhagen Wind	E	79.9	79.9	CY15
403	Bethlehem Energy Center Uprate	F	78.1	72.0	CY15
387	Cassadaga Wind	A	126.0	126.0	CY17
421	Arkwright Summit	A	78.4	78.0	CY17
444	Cricket Valley Energy Center II	G	1020.0	1020.0	CY17
461	East River 1 Uprate	J	n/a	2.0	CY17
462	East River 2 Uprate	J	n/a	2.0	CY17
467	Shoreham Solar	K	24.9	25.0	CY17
510	Bayonne Energy Center II	J	120.4	120.4	CY17
511	Ogdensburg	E	79.0	79.0	CY17
N/A	Nine Mile Point 2	C	63.4	63.4	CY17 (CRIS only)
N/A	East River 6	J	8.0	N/A	CY17 (CRIS only)
MW additions from 2016 RNA			1,598	1,588	
Total MW gen. additions			2,377	2,364	

Proposed Generation Projects Included in the 2018 RNA preliminary Base Case

Also included in the
2016 RNA

Proposed Transmission Projects Included in the 2018 RNA Base Case

- All firm LTPs from the Gold Book 2018 were included in the 2018 RNA preliminary Base Case
- The Q545A Western NY - Empire State Line is also included

Assumed Generation Deactivations

Owner/Operator	Plant Name	Zone	CRIS	2018 RNA Base Case Status*	2016 RNA Base Case Status
Helix Ravenswood LLC	Ravenswood 04	J	15.2	out	out
	Ravenswood 05	J	15.7	out	out
	Ravenswood 06	J	16.7	out	out
International Paper Company	Ticonderoga	F	7.6	out	in
Niagara Generation LLC	Niagara Bio-Gen	A	50.5	out	out
NRG Power Marketing LLC	Dunkirk 2	A	97.2	out	out
	Huntley 67	A	196.5	out	out
	Huntley 68	A	198.0	out	out
	Astoria GT 05	J	16.0	out	out
	Astoria GT 07	J	15.5	out	out
	Astoria GT 08	J	15.3	out	out
	Astoria GT 10	J	24.9	out	out
	Astoria GT 11	J	23.6	out	out
	Astoria GT 12	J	22.7	out	out
	Astoria GT 13	J	24.0	out	out
	ReEnergy Black River LLC	Fort Drum	E	55.6	out
Chateaugay Power		D	18.6	out	out
Binghamton BOP, LLC	Binghamton	C	43.8	out	in
Helix Ravenswood, LLC	Ravenswood 09	J	21.7	out	in
Entergy Nuclear Power Marketing, LLC	Indian Point 2	H	1027.0	out	in
	Indian Point 3	H	1040.0	out	in
Selkirk Cogen Partners, LP	Selkirk 1	F	82.1	out	in
	Selkirk 2	F	291.3	out	in
J- Power USA Generation, LP Edgewood Energy, LLC	PPL Pilgrim ST GT1	K	45.6	out	in
	PPL Pilgrim ST GT2	K	46.2		
Helix Ravenswood, LLC	Ravenswood 2-1	J	40.4	out	in
	Ravenswood 2-2	J	37.6		
	Ravenswood 2-3	J	39.2		
	Ravenswood 2-4	J	39.8		
	Ravenswood 3-1	J	40.5		
	Ravenswood 3-2	J	38.1		
	Ravenswood 3-4	J	35.8		
Lyonsdale Biomass, LLC	Lyonsdale (Burrows)	E	20.2	out	in
R.E. Ginna Nuclear Power Plant, LLC	Ginna	B	582.0	in	out
Cayuga Operating Company, LLC	Cayuga 1	C	154.1	in	out
	Cayuga 2	C	154.7	in	out
Entergy Nuclear Power Marketing LLC	Fitzpatrick 1	C	858.9	in	out
change in status	Changes in deactivations since 2016 RPP		1,203		
	Total 2018 RNA MW assumed as deactivated		3,703		

* Consistent with the deactivation dates

