

2019 CARIS 1 Preliminary Scenario Results(High/Low Gas Prices and Loads)

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Nov.18th , 2019



2019 CARIS 1 Scenarios

2019 CARIS 1 Scenarios – Results Pending

Scenario	Description
“70 x 30”	Sufficient integration of renewables such that 70% of NY electric load could be served by renewable generation, incorporating specified wind, solar and storage MWs, plus impact of environmental policies impacting coal and peaking units

Scenarios impacting loads will be reflected in modified annual energy, peak demand, and load shapes, as appropriate.

2019 CARIS 1 Scenarios

Scenario	Description
High Load Forecast	Higher penetration of electric vehicles and electric heat pumps
Low Load Forecast	Higher energy efficiency levels achieved
Higher Natural Gas Prices	Derived from 2019 EIA AEO High Forecast
Lower Natural Gas Prices	Derived from 2019 EIA AEO Low Forecast

Scenarios impacting loads will be reflected in modified annual energy, peak demand, and load shapes, as appropriate

Scenario Load Forecast Updates

Updated Zonal Load Forecasts: CARIS Scenarios*

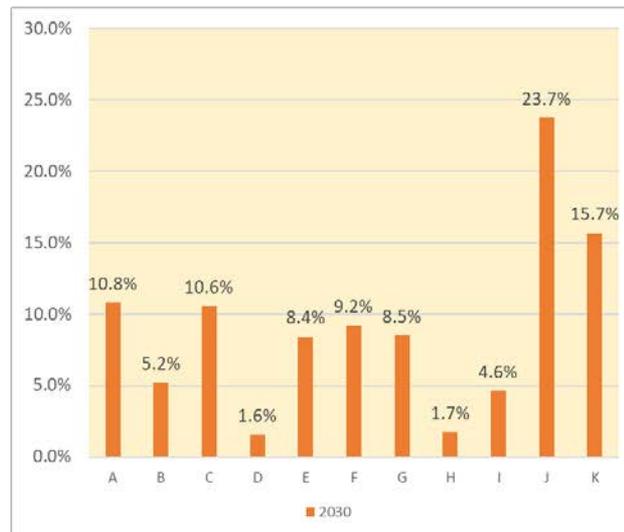
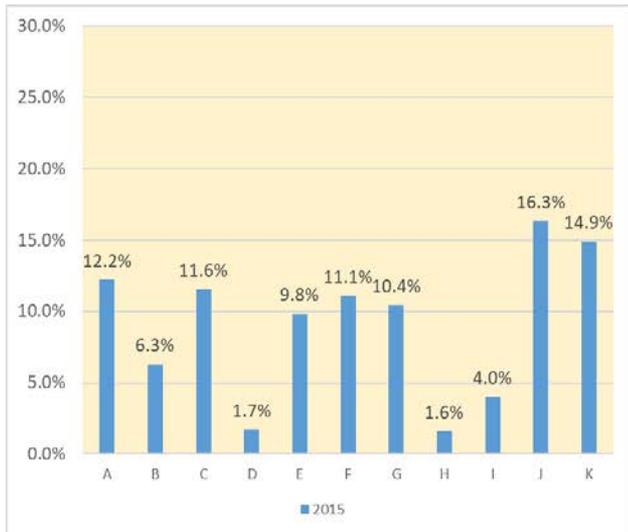
	A	B	C	D	E	F	G	H	I	J	K	NYCA
High Load: 2028	15,433	9,367	15,164	5,332	7,379	11,842	9,646	3,085	6,426	52,109	21,371	157,154
Low Load: 2028	12,555	7,522	12,166	5,011	5,496	9,108	7,376	2,481	5,389	44,122	16,505	127,732
70x30 Scenario: 2030	13,035	7,757	12,628	5,101	5,696	9,654	7,911	2,848	5,951	46,356	19,029	135,969
2019 Gold Book: 2030	14,485	9,684	15,306	5,321	7,023	11,246	9,575	2,848	5,911	52,013	20,037	153,449

The Scenario Forecast figures reflect the impacts obtained from separate zonal forecasts of EE, PV, EV and SpHtg.

* These updated figures incorporate recalibration of Zone D load and adjustments made to the zonal distribution of Space Heating load from prior ESPWG presentations

https://www.nyiso.com/documents/20142/8834637/04%202019_CARIS_ScenarioLoad_Forecasts_Details.pdf/a9a4a5c2-d603-29f4-15c2-be0a91ac92e6

Updated Zonal Distribution of NYCA Space Heating Load*



The Scenario forecasts assume that GWh used for Space Heating grows by around 50% (~ 6,000 GWh) between 2015 and 2030

* These figures were updated to reflect end-use shares for Downstate utilities' energy usage

Preliminary Scenario Results

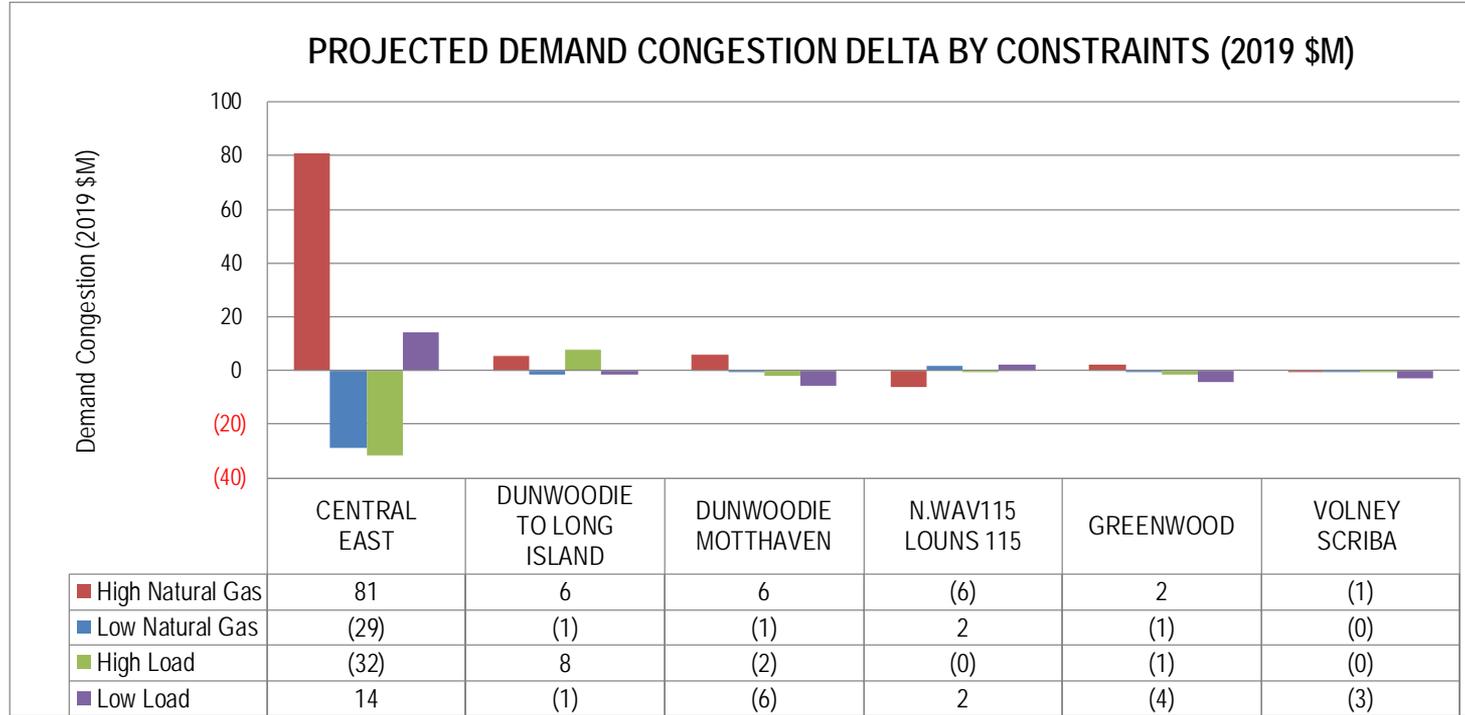
Demand Congestion Delta (2019 \$M)

PROJECTED DEMAND CONGESTION DELTA BY ZONE (2019 \$M)

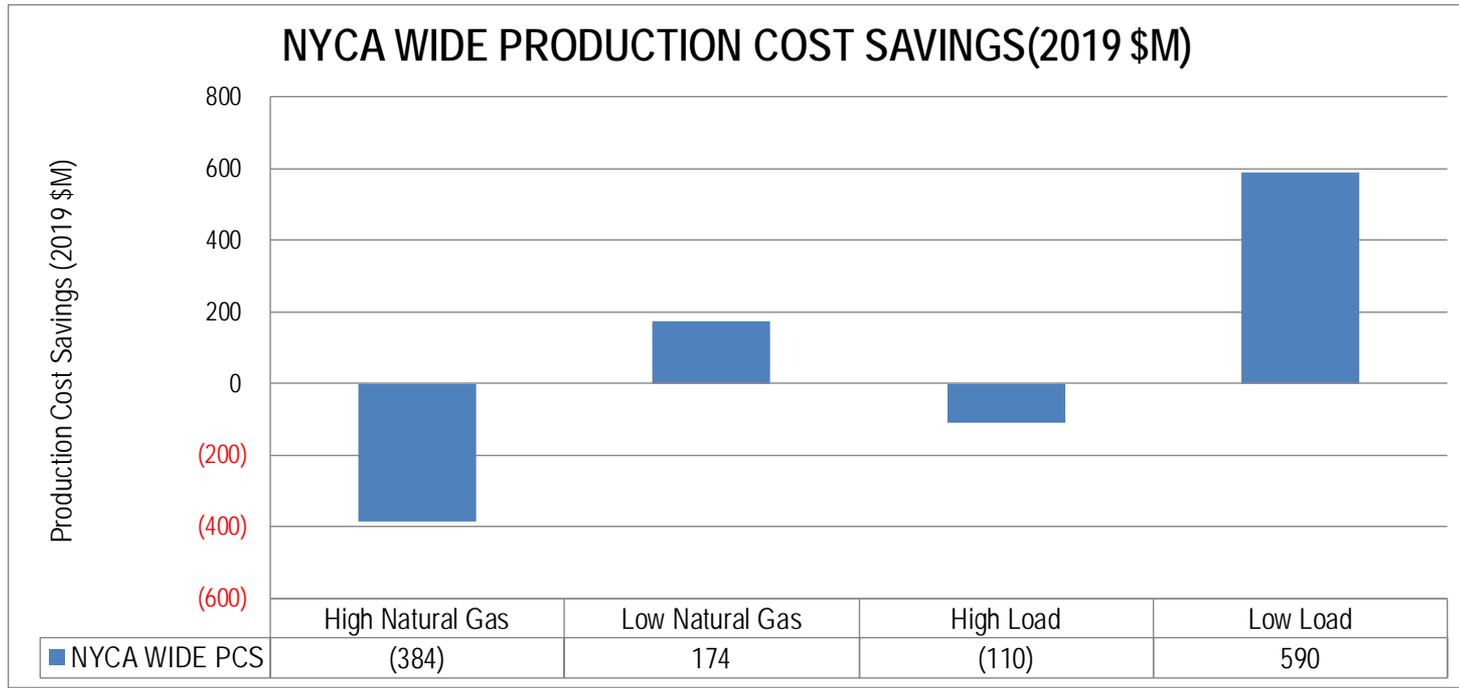


	West	Genesee	Central	North	Mohawk Valley	Capital	Hudson Valley	Millwood	Dunwoodie	NY City	Long Island	NYCA Total
High Natural Gas	5	3	3	0	1	12	9	2	5	54	29	124
Low Natural Gas	(1)	(0)	(1)	(0)	(1)	(4)	(3)	(1)	(2)	(18)	(9)	(40)
High Load	2	1	(1)	0	(0)	(4)	(3)	(1)	(1)	(22)	12	(18)
Low Load	(2)	(1)	(2)	(0)	(0)	2	(0)	0	1	(12)	(4)	(20)

Demand Congestion Delta by Constraint (2019 \$M)



NYCA Wide Production Cost Savings (PCS) (2019 \$M)



Feedback/Comments?

- Email additional feedback to: CYang@nyiso.com

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

