

2019 CARIS 1

Discussion

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Agenda

- **Generation Update from 6/25 ESPWG Presentation**
- **CARIS 1 Metrics**
- **Proposed Scenarios**
- **Final Assumptions Matrix**
- **Final Fuel Price Forecasts**
- **Preliminary Benchmarking Results**

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Additional Generation Modification

- On June 28th, Cayuga 1 submitted to the NYSPSC and the NYISO a notice of its intention to mothball on or before December 26, 2019; and, therefore, will be excluded from the base case model as of January 1, 2020.
- No other regulatory compliance plans were received as of July 31st

2019 CARIS 1 Metrics

- NYISO Tariff defines primary and additional metrics to be estimated and reported
 - OATT Attachment Y, Section 31.3.1.3.5
- The primary metric is the change in system production cost.
- Additional metrics include estimates of reductions in losses, LBMP load costs, generator payments, ICAP costs, Ancillary Services costs, emission costs, and TCC payments.

Scenarios

- **Attachment Y, Section 31.3.1.5, reads as follows:**
 - The ISO, in consultation with the ESPWG, shall develop congestion and resource integration scenarios addressing the Study Period. Variables for consideration in the development of these congestion and resource integration scenarios include but are not limited to: load forecast uncertainty, fuel price uncertainty, new resources, retirements, emission data, the cost of allowances and potential requirements imposed by proposed environmental and energy efficiency mandates, as well as overall ISO resource requirements. The ISO shall report the results of these scenario analyses in the CARIS.

2017 CARIS 1 Scenarios

Scenario	Description
High Load Forecast	Higher growth rate
Low Load Forecast	Lower growth rate
Higher Natural Gas Prices	Derived from 2017 EIA AEO High Forecast
Lower Natural Gas Prices	Derived from 2017 EIA AEO Low Forecast
National CO ₂ Program	CO ₂ emission allowance costs incorporated in the production costs of generation in non-RGGI regional states
Public Policy	Western NY PPTPN (recommended project) and AC Transmission PPTPN (generic segments A and B) + System Resource Shift Case
System Resource Shift Case	A resource build-out representative of the Clean Energy Standard attainment, large-scale energy efficiency, the retirement of New York coal units and the Indian Point Energy Center.

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Proposed 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
“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, + 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.

Questions?

We are here to help. Let us know if we can add anything.

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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