



2020 RNA Resource Adequacy Scenarios Draft Results

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July 23, 2020, KCC

Scenarios Background

- One of the objectives of the Reliability Planning Process is to identify, through the development of appropriate scenarios, factors and issues that might adversely impact the reliability of the Bulk Power Transmission Facilities (BPTF)
- This presentation summarizes the results of several Resource Adequacy Scenarios
- Scenarios models are variations of the 2020 RNA Base Cases, unless otherwise identified
- Scenarios are provided for information only (*i.e.*, do not lead to Reliability Needs identification)

Resource Adequacy Scenarios

This presentation summarizes the 2020 RNA Resource Adequacy Scenarios draft results for several scenarios listed below

1. High Load Forecast:

- The 2020 Gold Book High Load forecast was used

2. Different Load Shape:

- The Resource Adequacy Base Cases use historical shapes from 2002, 2006, and 2007. The Climate Change Phase 1 study developed hourly load shapes (*i.e.*, labeled “the reference case” in the Climate Change Phase 1 study).
- We are currently evaluating the applicability of this shape to the MARS models

Resource Adequacy Scenarios, cont.

3. Zonal Resource Adequacy Margins: results in the June 19 ESPWG/TPAS presentation [[link](#)]

- Identification of the maximum level of zonal MW capacity that can be removed without either causing NYCA LOLE violations, or exceeding the zonal capacity

4. “Status-quo” scenario

- Removal of proposed major transmission and generation projects assumed in the RNA Base Case

5. Further Simplified External Areas Model

- A less simplified External Areas Model was used for the RNA Base Case

6. 70x30 CLCPA reliability simulations based on the 2019 CARIS 70x30 scenarios assumptions

1. High Load Forecast Scenario

NYCA High Load vs RNA Base Case Summer Peak

Year	High Load	Baseline Load	Delta (High Load - Baseline Load)
2021	32,502	32,129	373
2022	32,743	32,128	615
2023	32,611	31,918	693
2024	32,623	31,838	785
2025	32,641	31,711	930
2026	32,863	31,670	1,193
2027	33,163	31,673	1,490
2028	33,562	31,756	1,806
2029	33,976	31,865	2,111
2030	34,380	31,992	2,388

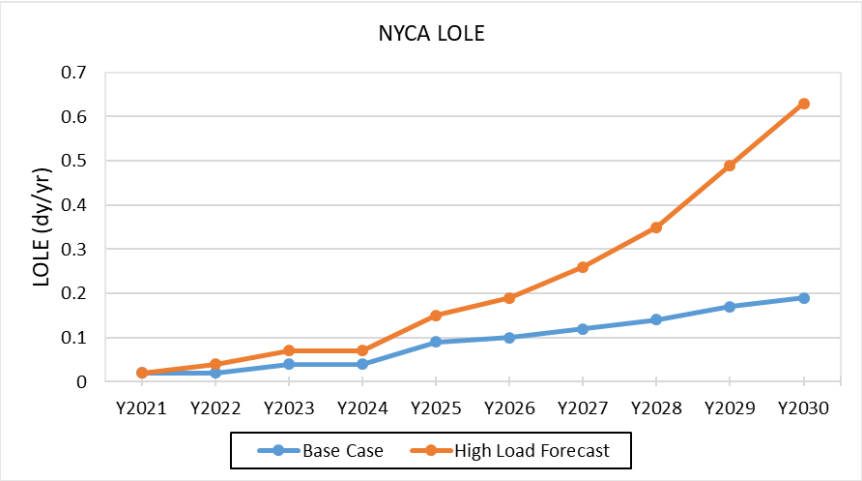
Zone J High Load vs RNA Base Case Summer Peak

Year	High Load	Baseline Load	Delta (High Load - Baseline Load)
2021	11,551	11,460	91
2022	11,723	11,559	164
2023	11,701	11,523	178
2024	11,751	11,557	194
2025	11,775	11,552	223
2026	11,884	11,609	275
2027	12,009	11,667	342
2028	12,158	11,747	411
2029	12,315	11,836	479
2030	12,467	11,924	543

High Load Scenario Results

NYCA LOLE

Study Year	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
2020 RNA Base Case	0.02	0.02	0.04	0.04	0.08	0.10	0.12	0.14	0.17	0.19
High Load Scenario	0.02	0.04	0.07	0.07	0.15	0.19	0.26	0.35	0.49	0.63



Observation

- Using the Gold Book High Load forecast, LOLE criterion violation would occur starting in Y2025 and the violation increases through the remainder of Study Period.

2. Different Load Shape

- The Climate Change Phase 1 study developed hourly load shapes (*i.e.*, labeled “the reference case” in the Climate Change Phase 1 study)
- Time permitting, we are evaluating the applicability of this shape to the MARS models

3. ZRAM

- **Zonal Resource Adequacy Margins: results in the June 19 ESPWG/TPAS presentation [[link](#)]**
 - Identification of the maximum level of zonal MW capacity that can be removed without either causing NYCA LOLE violations, or exceeding the zonal capacity

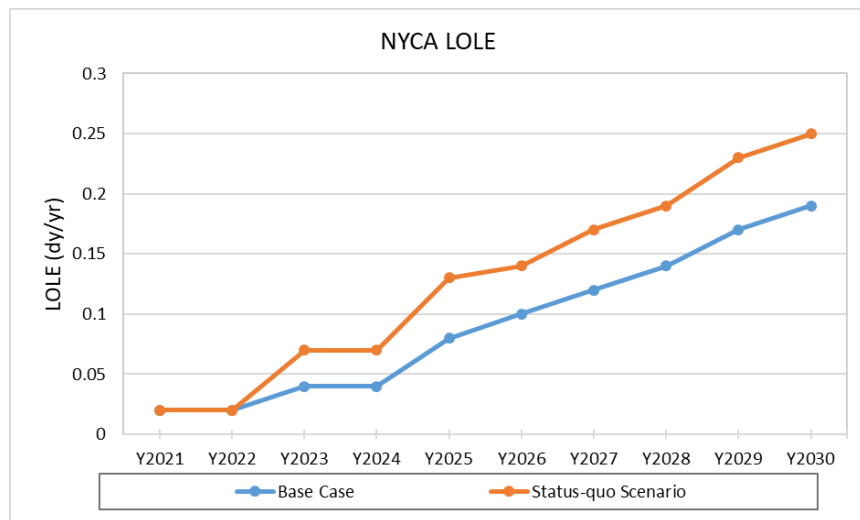
4. Status-quo Scenario Assumptions

- Starting from the 2020 RNA 1st pass Base Case
- Changes:
 - Removal of all the proposed transmission and generation projects that met 2020 RNA 1st pass Base Case Inclusion Rules
 - presented at June 19 ESPWG/TPAS [[link](#)]
 - Removal of generators that require modifications to comply with DEC's Peaker Rule
 - 2023: 997 MW in Zone K, 69 MW in Zone G, in 2023
 - 2025: additional 235 MW in Zone K

Status-quo Scenario Results

NYCA LOLE

Study Year	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
2020 RNA Base Case	0.02	0.02	0.04	0.04	0.08	0.10	0.12	0.14	0.17	0.19
Status-quo Scenario	0.02	0.02	0.07	0.07	0.13	0.14	0.16	0.18	0.23	0.25



Observation

- LOLE criterion violation starting in study year 2025 and increases through the remainder of Study Period.

5. Further Simplified External Area

- As detailed in a separate presentation posted under today's meeting materials

6. 70x30 CLCPA

- Targeting August 7 TPAS/ESPPWG

Questions?

Our mission, in collaboration with our stakeholders, is to serve the public interest and provide benefit 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 policymakers, stakeholders and investors in the power system

