

CRP: Peaker Scenario

Assessing DEC's NOX Limits (Draft) Ruling for Simple Cycle and Regenerative Combustion Turbines

Con Edison Results

Agenda

- Affected Generation within Con Edison Service Area
- Astoria East/Corona 138kV TLA
- Greenwood/Fox Hills 138kV TLA
- East 75th Area Station Distribution Needs
- Other Impacts on the Con Edison Transmission System

Simple Cycle Combustion Turbine Retirement Scenario

Affected Generation

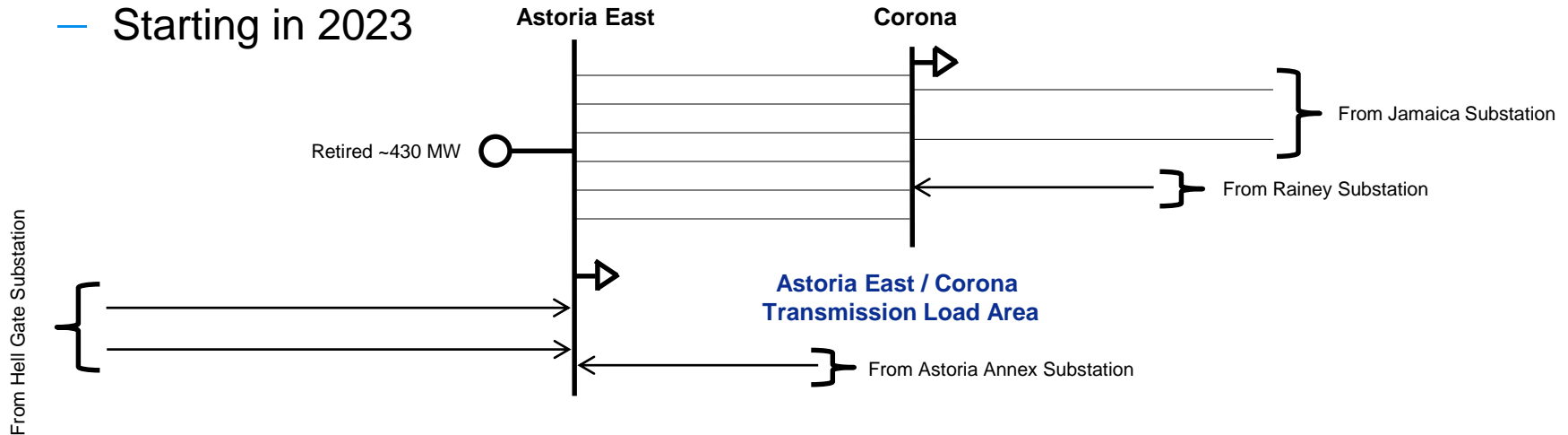
- Affected Generation: 2,058 MW Nameplate / 1,645 MW Summer Capability
- All facilities interconnected within Zone J (NYC)
- Multiple (electrical) locations
- Multiple Facility Owners

Simple Cycle Combustion Turbine Retirement Scenario

Astoria East/Corona 138kV TLA

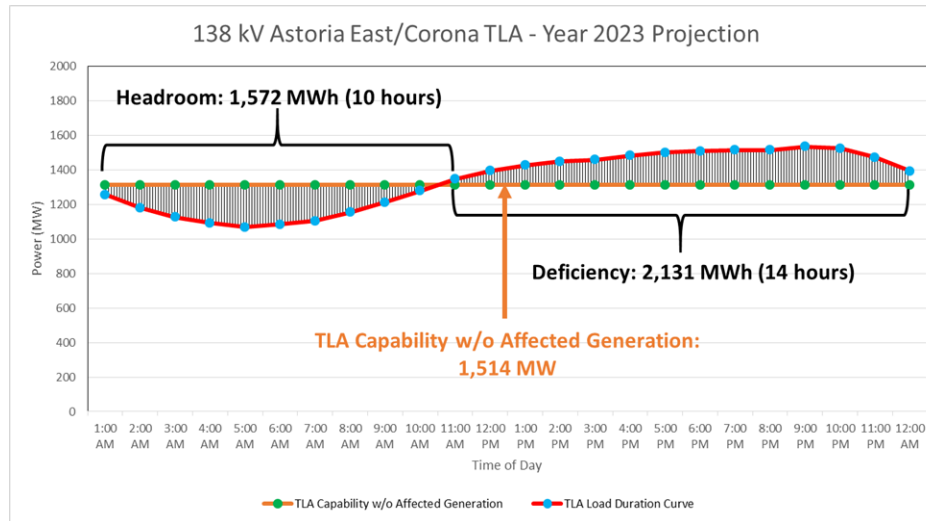
- Astoria East/Corona 138kV TLA is designed for N-1/-1/-0
- Retirement of the affected generators would result in a Design Deficiency of about 220 MW

— Starting in 2023



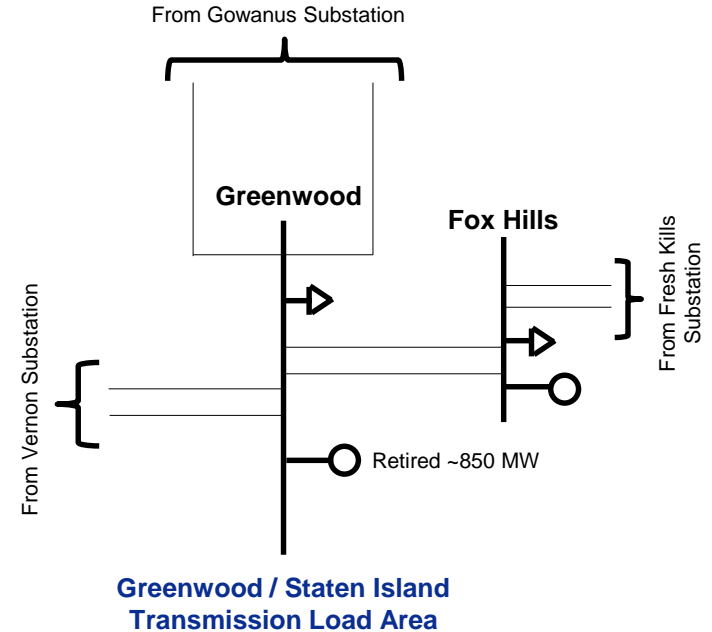
Simple Cycle Combustion Turbine Retirement Scenario Astoria East/Corona 138kV TLA

- The TLA does not peak coincident with system peak
 - TLA's peak can be established at a 'continuous' 14 hours
 - The 220 MW peak-hour deficiency can be translated to an approximate 2,131 MWh deficiency



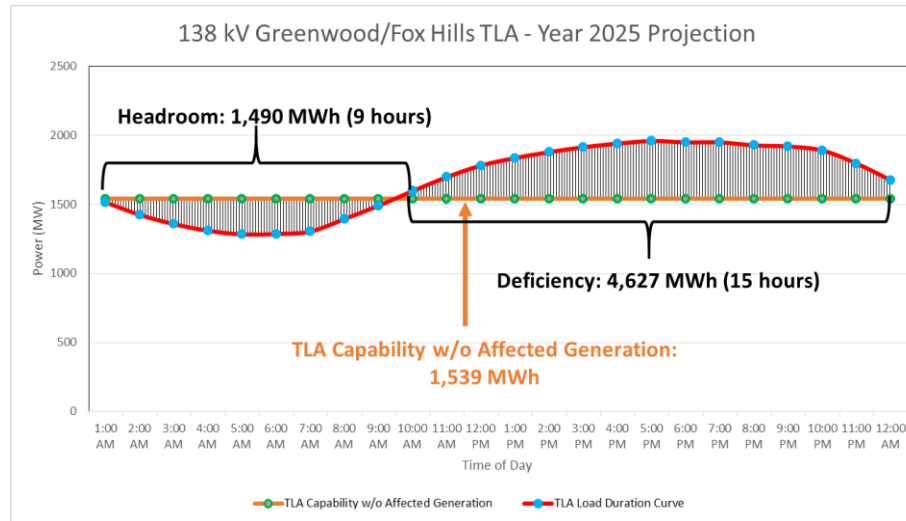
Simple Cycle Combustion Turbine Retirement Scenario Greenwood/Fox Hills 138kV TLA

- Greenwood/Fox Hills 138kV TLA
 - Designed for N-1/-1
- Retirement of the affected generators would result in:
 - Thermal and voltage violations in the steady state condition (N-0)
 - Approximate transmission overload of about 160 MW above the feeders' *normal rating*
 - N-1/-1 Design Deficiency of about 420 MW
- Starting in 2025



Simple Cycle Combustion Turbine Retirement Scenario Greenwood/Fox Hills 138kV TLA

- The TLA does not peak coincident with system peak
 - TLA's peak can be established at a 'continuous' 15 hours
 - The 420 MW peak-hour deficiency can be translated to an approximate 4,627 MWh deficiency



Simple Cycle Combustion Turbine Retirement Scenario East 75th Area Station

- The retirement of the affected generators would result in N-1/-1 Design Deficiency of about 20 MW
 - Starting in 2023

Year	2023	2024	2025	2026	2027	2028
Deficiency (MW)	17	17	18	18	18	17

Simple Cycle Combustion Turbine Retirement Scenario

Conclusions

- Affected Generation: 2,058 MW Nameplate / 1,645 MW Summer Capability
- Design Deficiency (660 MW total):
 - Result in a 220 MW N-1/-1/-0 design deficiency in the Astoria East/Corona 138 kV TLA (starting in 2023);
 - Result in a 420 MW N-1/-1 design deficiency in the Greenwood/Fox Hills 138 kV TLA (starting in 2025); and
 - Result in a 20 MW distribution deficiency in the East 75th Street Area Station (starting in 2023)

Simple Cycle Combustion Turbine Retirement Scenario

Other Impacts

- The retirement of the affected generators would have no impact or marginal impact on the:
 - Con Edison System Restoration Plan (SRP);
 - Minimum Oil Burn (MOB) / Loss of Gas (LOG) Program; and
 - Storm Watch Procedure
- Concerns:
 - Off-Peak Maintenance Outage Needs
 - 10-Minute Reserves