Generator Deactivation Assessment

James A. FitzPatrick
Nuclear Generating Facility

Superseded by updated assessment on April 22, 2016

February 11, 2016

Purpose

Entergy Nuclear FitzPatrick, LLC ("Entergy") provided a Generator Deactivation Notice for the proposed retirement of the James A. FitzPatrick Nuclear Generating Facility ("FitzPatrick") to the New York Independent System Operator, Inc. (NYISO), which the NYISO determined to be complete on November 13, 2015. Entergy reported that the deactivation of the 882 MW facility is intended to occur at the end of the current fuel cycle (i.e., Quarter 4 of 2016 – Quarter 1 of 2017).

Pursuant to Section 31.2.11.2.4 of Attachment Y to the Open Access Transmission Tariff (OATT)[1], the NYISO performed, in coordination with National Grid and New York Power Authority (NYPA), resource adequacy and transmission security analysis to determine whether a Reliability Need would result from the deactivation of Fitzpatrick. As further detailed below, the NYISO has identified a statewide resource deficiency that constitutes a Reliability Need that would occur starting in 2019.

Assumptions

The NYISO evaluated the near-term period from 2016 through 2020 using the most recent reliability planning process base case[2], with updates including the load forecasts consistent with the 2015 Load and Capacity Data Report ("Gold Book"), capacity resource deactivations and additions (Appendix Table 1 and Table 2), and planned transmission facilities modifications (Appendix Table 3).

On January 1, 2016, the NYISO received notice from NRG Energy of its intent to mothball Astoria GTs 8, 10, and 11. Also on January 1, NRG Energy Astoria GTs 5, 7, 12, and 13 and Niagara Generation, LLC Niagara Bio-Gen transitioned from Forced Outages into ICAP Ineligible Forced Outages (IIFO). Full assessments for these units will be completed no later than March 31, 2016; however, these generator deactivations were modeled as out-of-service in the resource adequacy analysis for this Generator Deactivation Assessment.

Accordingly, the resource adequacy analysis in this assessment assumes all generators that are currently mothballed (including Mothball Outage), in an IIFO, or have issued a notice of intent to mothball or retire are out of service. If any such generator returns to service or rescinds its notice, then the NYISO would evaluate the impact of that return on the findings and conclusions from this assessment in accordance with the Gap Solution process, Section 31.2.11 of the OATT.

Findings

The NYISO assessed the resource adequacy of the overall system, per the one-day-in-ten-years (0.1 per year) Loss of Load Expectation (LOLE) criterion, which measures the probability of disconnecting

[1] All references to Section 31.2.11 of Attachment Y of the OATT refer to the pending revisions to the Reliability Planning Process contained in NYISO's Reliability Must Run (RMR) compliance filing that was submitted to the Federal Energy Regulatory Commission (FERC) in Docket No. ER16-120-000. The RMR compliance filing requested that the NYISO's proposed RMR rules be permitted to become effective on October 20, 2015.

[2] The 2014 Comprehensive Reliability Plan (CRP) base case is the most recent reliability planning process base case.

firm load due to a resource deficiency.[3] The NYISO has identified a statewide resource deficiency resulting in an LOLE criterion violation that would occur starting in 2019. The resource deficiency equates to approximately 325 MW statewide, but would likely require more than 325 MW of new or retained capacity resources to resolve, depending on forced outage rates and the location of the resources. Due to transmission system limitations between Zones A and B, capacity added in Zone A is not as effective as capacity added in other locations, unless that capacity also improves the transfer limitations.

Additionally, the NYISO performed a transmission security assessment for the Bulk Power Transmission Facilities (BPTFs), and National Grid and NYPA each performed a transmission security assessment of their non-BPTFs. The NYISO reviewed and verified the analysis performed by National Grid and NYPA. No transmission security related Reliability Needs were identified in the near-term period.

Conclusions

The NYISO has identified a statewide resource deficiency that constitutes a Reliability Need that would occur starting in 2019. A statewide resource deficiency in year 2019 cannot be timely addressed within the biennial reliability planning process; therefore the NYISO will commence the Gap Solution process to address the Reliability Need in accordance with Section 31.2.11 of Attachment Y to the OATT.

[3] *See* R4 of the Northeast Power Coordinating Council, Inc. (NPCC) Regional Reliability Reference Directory #1; Section A-R1 of the New York State Reliability Council, L.L.C. (NYSRC) Rules.

Appendix

Table 1: Updates to Capacity Resource Deactivations

Plant	Zone	Expected Deactivation Date	Name Plate (MW)	Summer (MW)
Niagara Bio-Gen (1)	A	January 1, 2016	50.5	43.2
Astoria GTs 5, 7, 8, 10, 11, 12, 13 (1)	J	January 1, 2016	142.0	104.7
Dunkirk 2	A	January 1, 2016	100.0	75.0
Huntley 67 & 68	A	March 1, 2016	436.0	376.9
Ravenswood GTs 4, 5, 6	J	May 1, 2016	64.2	39.9
FitzPatrick	C	November 12, 2016	882.0	836.8
Ginna	B	April 1, 2017	614.0	581.4
Cayuga 1 & 2	C	July 1, 2017	322.5	304.3

(1) This Generator Deactivation Assessment considered the deactivation of Niagara Bio-Gen and the Astoria GTs only in the resource adequacy analysis. Transmission security analyses considering the deactivation of Niagara Bio-Gen and the Astoria GTs will be reported in the respective Generator Deactivation Assessments for each plant on March 31, 2016.

Table 2: Updates to Capacity Resource Additions

Plant	Zone	Planned In-Service Date	Name Plate (MW)	Summer (MW)
CPV Valley Energy Center	G	March 2018	820.0	677.6

Table 3: Updates to Planned Transmission Facilities

Project	Transmission Owner	Planned In-service Date
Huntley 230kV capacitor banks	National Grid	June 2016
Sawyer load serving transformer reconfiguration and relay additions	National Grid	June 2016
Packard-Huntley 230 kV series reactors	National Grid	June 2016
Ginna Retirement Transmission Alternative (GRTA)	RG&E	June 2017
Station 255	RG&E	June 2020