National Grid Transmission Planning Guide Update Mark F Domino, PE May 16, 2023

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Transmission Planning Guide Update

National Grid has updated the Section regarding Acceptable Interconnection of Generation (5.5.2)

• Minimum Interconnection is a three-breaker ring bus, unless an exception is granted for any of the conditions in 5.5.2.3. Additional circuit breakers and alternate substation configurations may be required when interconnecting multiple generating units.

This will facilitate the NYISO Interconnection Reform and be consistent with the other TO's in NY.

5.5.2.3 New York Interconnections

Generation may be granted an exception, and allowed to connect with a single circuit breaker or circuit switcher, subject to acceptable evaluations noted below, for any of the following conditions:

1. Generation connected to a radial transmission line or a tap of a radial transmission line⁴; or

2. Generation connected to an existing Transmission station through a dedicated transmission line.

These exceptions shall be evaluated on a case-by-case basis and shall be granted only when the conditions in section 5.5.2.4 are met.

⁴ A radial transmission line is defined as a transmission line that emanates from a single station with one or more breakers that are capable of switching the transmission line in and out of service. Note that a radial tap from a network transmission line is part of that network transmission line. In cases where a generator interconnects to a radial tap from a network transmission line, a three-breaker ring bus is required, where the network line must loop in and out of the three-breaker ring bus.

5.5.2.4 Conditions for exceptions to ring bus requirements

In both New England and New York:

 Protection Engineering verifies that the transmission line and interconnection facilities can be protected adequately, while ensuring that transmission system protective relay coordination and relay sensitivity can be maintained

 Transmission Planning verifies that transmission reliability and operability are not adversely impacted by assessing the Design Criteria listed in Section 5.2 pertaining to safety, planning and operating criteria, reliability, and maintainability

• As deemed necessary by Transmission Planning, provisions acceptable to National Grid are made to accommodate the future expansion of the interconnection to (at least) a three-breaker ring bus

National Grid TGP-28

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