

# **Appendix I: Core Features Of Testing Criteria**

## **Black Start and Restoration Services Testing Requirements**

### **Consolidated Edison Transmission District**

#### **General**

1. Testing shall be performed annually, consistent with Consolidated Edison Company of New York, Inc. ("Con Edison") system operation requirements to qualify for Black Start and Restoration Services payments during the annual compensation period, which shall be May 1<sup>st</sup> through April 30<sup>th</sup>.
2. A test will be considered successful if it is completed in accordance with the written black start test procedures that have been adopted by the plant.

#### **Scheduling a Test**

1. The annual test period shall be November 1<sup>st</sup> to April 30<sup>th</sup>, and may be reasonably extended by mutual agreement among the plant owner, Con Edison and the NYISO, without financial penalty.
2. The test date must be agreed upon by Con Edison, the plant owner and the NYISO.
3. An annual black start test may be performed prior to a maintenance outage only if there is no other scheduling option within the test period.
4. If the annual test is unable to be completed during the test period due to a forced outage or force majeure event, Con Edison and the plant owner will conduct the test outside the test period without a pro-rata reduction in annual payments.
5. If a black start test is not successful, the plant owner will have a reasonable opportunity to reschedule and conduct a subsequent test.

#### **Gas Turbine Facility Testing Requirements**

1. A qualifying test of a gas turbine must be conducted when the unit is in a cold condition, i.e., the unit will be off line and will be brought on line specifically to conduct the black start tests.
2. The gas turbine-generator units to be tested will be off line at the start of the test and will be isolated from all external Con Edison light and power sources.
3. The black start test must demonstrate that (i) the designated black start unit can be started and can energize the isolated light and power bus; and (ii) that the light and power source is adequate for the purpose of bringing the other units on line. Part (ii) must be demonstrated by starting up an additional gas turbine from the light and power bus that has been energized through Part (i) of the test. Site specific appendices will be developed to reflect this general criteria.
4. Once isolated from Con Edison's light and power, the gas turbine facility will have 90 minutes to ready the equipment and to request permission to synchronize the additional generating unit to a live bus on the Con Edison transmission system. When authorized by the Con Edison System Operator, the gas turbine-generator will be asked to close its breaker. Once the gas turbine-generator unit has synchronized and closed its breaker onto the transmission bus, the test will be considered successful.

5. A maximum of two (2) Con Edison System Operations or Engineering personnel are allowed to be onsite to witness the test. At its discretion, the NYISO may have its representatives onsite to witness the test. If a NYISO representative is not onsite, a representative from Con Edison and the plant owner will initiate calls to NYISO operations personnel to signal the start time, completion time and outcome of the test.
6. Upon successful completion of the test, the generator owner shall submit a certification form, the template of which shall be included in the NYISO tariff, to the NYISO and Con Edison.
7. Consistent with past practice, plant owners will continue to test on a monthly basis their standby diesel generators, black start gas turbines and UPS/battery back up systems. If any of these critical systems are found to be non-operational or otherwise unavailable, the plant owner will notify Con Edison and the NYISO within 36 hours and provide a schedule for their repair and return to service.

### **Steam Turbine Facility Testing Requirements**

1. A qualifying test of a steam turbine must be conducted while the unit is in a hot condition, i.e., the unit must be on line and firm to the system prior to the test. The plant owner, the NYISO and Con Edison shall agree on a schedule for this test. The agreed upon test date shall be deemed firm as of 48 hours prior to the scheduled beginning of the test. A firm test may not be called off or deferred except (1) by NYISO, for system or local reliability reasons; or (2) if the unit is unable to be in hot condition because it was not selected by NYISO to run on the day prior to the test. As is the case for any ISO-approved outage, the plant owner shall not offer the unit into the Day Ahead Market for operation during the test day, and such non-offering into the market shall be deemed not to diminish the unit's availability.
2. The steam unit will be required to start up using energy and voltage control from a gas turbine-generator to energize its internal light & power bus, and be ready to synchronize to an energized transmission system when directed by the Con Edison System Operator.
3. A test shall be considered successful if, after isolation from the Con Edison transmission system, the hot steam unit is synchronized to the transmission system in no more than 6 hours after the completion of the isolation and is firm to the system operating at minimum load in no more than 2 hours after closing its breaker.
4. A maximum of two (2) Con Edison System Operations or Engineering personnel will be allowed onsite to witness the test. NYISO representatives may be onsite to witness the test. If a NYISO representative is not onsite, a representative from Con Edison and the plant owner will initiate calls to NYISO operations personnel to signal the start time, completion time and outcome of the test.
5. Upon successful completion of the test, Con Edison shall SRE the unit until midnight of the test day or until the unit's reference minimum run time has elapsed, whichever is earlier.
6. Upon successful completion of the test, the generator owner shall submit a certification form, the template of which shall be included in the NYISO tariff, to the NYISO and Con Edison.
7. Consistent with past practice, plant owners will continue monthly tests of standby diesel generators; black start gas turbines and UPS/battery back up systems. If any of these critical systems are found to be non-operational or otherwise unavailable, the plant owner will notify Con Edison and the NYISO within 36 hours and provide a schedule for their repair and return to service.