PURPOSE

The following requirements provide direction on how test energy should be coordinated and scheduled from a generating facility in the Southern Balancing Authority Area ("SBAA").

APPLICABILITY

This guideline is applicable to the following:

- Any inverter-based or synchronous generating facility in the SBAA that is connected to the Bulk Electric System (100 kV or above) or that is connected to the sub-transmission system (<100 kV) with direct impact to the Bulk Electric System, including:
  - Generating facilities that have not reached Commercial Operation, and
  - Generating facilities that have achieved Commercial Operation and been modified in a way that would warrant generator testing.
- Any generating facility that the Southern Company Balancing Authority Area Manager or Southeastern Reliability Coordinator Manager deem necessary for the reliable operation of the BES.

DISCUSSION

Southern Companies' Power Coordination Center ("PCC") is responsible for ensuring the reliable operations of Southern Companies' transmission system for the SBAA. Since a generating facility's test energy output can be unreliable, communication of test energy output during a defined test period is critical for the PCC to maintain transmission system reliability. As such, testing of generating facilities connected to the transmission system within the SBAA must be coordinated with the PCC to ensure there is no adverse reliability impact to the transmission system.

The primary means of operational visibility and congestion management of test energy is a NERC e-tag. A proper NERC e-tag and corresponding NERC Schedule designated for the test energy is used to provide visibility to the PCC of the pending test energy output from the generating facilities. In addition, communication of deviations from the schedule during the generator testing period is required to ensure proper operational awareness.

To accommodate the generating facility's test energy output while maintaining the reliability of the transmission system, prescheduled generator testing information is necessary. The PCC performs studies based on the preschedule generator testing information supplied by the generator operator. The generator testing parameters, transmission configuration, generation dispatch patterns, and system load for the requested generator testing period are evaluated to determine if the test energy output from a generating facility can be reliably accommodated. After evaluating the generator testing parameters and forecasted system conditions, the PCC provides a response to the generator operator as to whether generator testing can be accommodated.

Note: There may be limited times in which certain generator tests can be conducted. For example, it may be difficult to accommodate a two-hour maximum VAR output test from a generating facility during light load conditions.

GUIDELINES

General

1. Test energy is to sink within the Southern Balancing Authority Area.

2. Appropriate transmission service must be obtained and utilized for the test energy.

    - Non-firm Point-to-Point and Secondary Network Transmission Service are appropriate for test energy.
    - Firm Transmission Service may only be utilized for test energy at the discretion and approval of the Southern Balancing Authority.

3. A separate NERC e-tag meeting the following requirements must be used for test energy:
    - Test energy should not be tagged or scheduled on the same NERC e-tag used for non-test energy.
    - The transaction type should be "NORMAL".
    - The transaction must have an adequate Transmission Allocation.
    - In the NERC e-tag's Physical Path section, the Contract field should include the code "TEST ENERGY" on either the Source or Sink line.
    - To avoid Generator Imbalance Service charges for test energy delivered to Southern Companies' load, the sink point on the load line in the NERC e-tag's physical path must be "SOCOLOAD-TEST".
    - The transaction must have an approximate or average energy profile (not zero).
    - The NERC e-Tag must conform with the Eastern Interconnection default ramping requirement of 10 minutes.

4. Southern Companies' Open Access Transmission Tariff ("OATT") Schedule 10 (Generator Imbalance Service) will apply to any schedule for test energy originating from a generating facility connected to Southern Companies' transmission system and being delivered to non- Southern Companies' load.

Communications Prior to the Generator Test Period

1. Prior to the generator test period, the Southern Balancing Authority is to be notified of prescheduled test dates and energy profile amounts via GENCOMM (or alternately via E-Mail to G2PCCBULKPWROP@southernco.com). This notice should be submitted at least three weeks prior to the test period for reactive power and real power testing. Any subsequent revisions to the scheduled test dates or energy profiles should also be communicated as soon as possible to the Southern Balancing Authority in a similar manner. This information will be provided to the Southern Company TOP/RC for inclusion in system studies.

   The generator test period notification should include the following information:
   - Type of generator tests to be conducted, e.g., real power and/or reactive power (production and/or absorption).
   - Expected generator MW and/or MVAR output amount (maximum and/or minimum).
   - Transmission service obtained for testing period.
   - Specific dates, times and durations of testing.
   - Alternate dates and times the testing could be conducted, if the preferred dates/times cannot be granted.

2. To support operational visibility and congestion management, prior to the generator test period, all test energy is to be appropriately tagged using a NERC e-Tag meeting the requirements for a test energy e-Tag as noted in the General Guidelines above.

3. In support of RC operational planning, at least one day prior to the beginning of the test period for each generator, a day- ahead, hourly energy schedule (energy profile) shall be submitted by 10:00 AM CPT to the Southern Balancing Authority Operator and the appropriate Transmission Operator via GENCOMM.

4. At least one hour prior to the start of testing the generator operator must notify the Southern Balancing Authority Operator, via GENCOMM or phone, of the start of the scheduled generator testing.

During the Generator Test Period

1. Hourly variations of the projected energy profile will require adjustments to the NERC e-tag by the Purchasing-Selling Entity ("PSE"). The following criteria is to be applied for determining when a e-tag adjustment should be made:

   The PSE responsible for tagging a test energy schedule shall ensure the e-tag is updated for the next available scheduling hour and future hours when any one of the following occurs:
   - The average energy profile in an hour is greater than 75 MW and, in that hour, the actual hourly integrated energy deviates from the hourly average energy profile indicated on the tag by more than ± 10%.
   - The average energy profile in an hour is less than or equal to 75 MW and in that hour the actual hourly integrated energy deviates from the hourly average energy profile indicated on the tag by more than ± 25% .

2. In the event of loss of generation:
   - Immediate submission of an e-tag adjustment by the PSE to reflect the loss of generation is required within the hour for the next available quarter hour scheduling window. The E-tag adjustment must allow for the standard 20-minute notification period prior to implementation of the schedule change.
   - Upon the return of generation, e-tag adjustment by the PSE should be made to reflect the return of generation for the next available scheduling window.

3. Communications during test period:
   - During the test period if a generator has to abort or significantly modify the testing plan, the generator operator shall notify the Southern Balancing Authority Operator, via GENCOMM or phone, of the adjusted plan, unit status and if required the projected schedule for retest.

4. Since a generating facility's test energy output can be unreliable, test energy schedules may be the first schedules curtailed through use of local procedures. Curtailments of test energy schedules are implemented according to transmission reservation priority on generating facilities that are determined to have a significant impact on a transmission system constraint, and curtailments can include the entire amount of the test energy schedule.