



Southern Company Transmission Generating Facility Test Energy Guidelines

PURPOSE:

The following guidelines provide direction on how “Test Energy” should be coordinated and scheduled from a generating facility in the Southern Balancing Authority.

DISCUSSION:

Southern Companies’ Power Coordination Center (PCC) is responsible for ensuring the reliable operations of Southern Companies’ transmission system for the Southern Balancing Authority. As such, testing of generating facilities connected to Southern Companies’ transmission system must be coordinated with the PCC to ensure there is no adverse reliability impact to the transmission system. The transmission configuration, generation dispatch pattern, and system load at the time of testing dictate when the test energy output from a generating facility can be safely accommodated while maintaining transmission system reliability.

In order to meet the generating facility’s output testing requirements and timeframes while maintaining the reliability of the transmission system, prescheduled testing information is necessary. 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. In order to provide ample opportunity for testing while at the same time maintaining transmission system reliability, the PCC performs studies based on the testing information supplied by the generator customer.

After the testing information is received, the PCC conducts studies based on the system conditions forecast for the requested test period. The PCC then provides a response to the generator customer as to whether or not the request for generating facility testing can be accommodated.

Since a generating facility’s test energy output can be unreliable, communication of test energy output during the test period is also critical for the PCC to maintain transmission system reliability. A proper NERC e-tag and corresponding TTSS schedule designated for the test energy is needed to notify the PCC of the pending test energy output from the generating facilities. Also, communication of deviations from the schedule during the testing period is needed to ensure proper Balancing Authority operations.



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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.
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.
 - The code “TEST ENERGY” should be added to the Comment field in the NERC e-Tag.
 - To avoid Generator Imbalance Service charges for test energy delivered to SOCO 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 across the top of the hour.
4. Southern Companies’ Open Access Transmission Tariff (OATT) Schedule10 (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-SOCO load.
 - To avoid Generator Imbalance Service charges for test energy delivered to SOCO load, the sink point on the load line in the NERC e-tag’s physical path must be “SOCOLOAD-TEST”.



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Prior to the testing period

1. Prior to the 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 testing, and at least two business days prior to the test period for 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.

The 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).
 - 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. Prior to the testing 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. 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 must notify the Balancing Authority Operator, via GENCOMM or phone, of the start of the scheduled generator testing.



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During the testing 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 (based on NERC INT-004-2) 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 250 MW and in that hour the actual hourly integrated energy deviates from the hourly average energy profile indicated on the tag by more than $\pm 10\%$.
 - The average energy profile in an hour is less than or equal to 250 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 megawatt-hours.
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. 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 to reflect the return of generation will be allowed at the Top of the Hour (TOH).
 3. 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.