

Regulation Testing Process Overview

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Regulation Test Request

- Member notifies PJM Performance Compliance and PJM Dispatch at least 24 hours before PJM-administered or self-scheduled test through <u>RegulationTesting@pjm.com</u>
 - PJM Dispatch will make a determination as to whether the test can be run
 - PJM Performance Compliance will make a determination as to whether the test can be scored
- Member includes following information for a test request:
 - Resource name and ID
 - Date and time of the test (EPT)
 - Amount of MW being tested (+/- TReg, regulation capability)
 - Basepoint (The resource will be regulating around that basepoint)
 - Signal type (RegA or RegD)
 - Reason for testing (new resource, disqualified resource, change in capability, change in communication path – New Owner, change in communication path – Existing Owner)

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Successful Test Requirements

- Regulation testing requirements have been met by verifying the resource:
 - 1. Was providing Regulation for the duration (40 minutes) of the test
 - 2. Can achieve its full Regulation testing range (+/- TREG)
 - 3. Has held its Regulation base loading for the full duration of the test
 - 4. That no other resources within the testing fleet were in the Regulation market during the testing period
 - 5. Has scored 75% or more in performance score



Self-scheduled and PJM-administered Test Rules

Self-scheduled test

- Member must use the PJM test shape posted on PJM's website and fed into the resource owner's EMS
 - Markets and Operations > Ancillary Services > Market Based Regulation page
- Member must set testing unit to unavailable during the test, other units may continue to regulate
- Up to 3 self-administered tests may be performed on a resource each day
- PJM-administered test
 - The tests should be administered by PJM Dispatch
 - All resources within the Fleet will be taken out of the Regulation market for the specific signal
 - Only 1 PJM-administered test may be performed on a resource each day

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Regulation Testing Status Quo

Regulation Testing (Must hit full regulation range @ >75%)

3 tests (either 3 PJM-administered tests or 1 self-scheduled test and 2 PJM-administered tests)

1 PJM-administered test

New Resources

Disqualified Resources

Uprate

Change in
Communication
Path – Existing
Owner

Change in Communication Path – New Owner

New Performance Score of an average of 3 tests

New Performance Score of an average of 3 tests New Performance Score of 1 test

Historical Performance Score

New Performance Score of 1 test



Disqualified Resources

Change in Capability (MW)

Change in
Communication Path
or EMS – Existing or
New Owner/MOC

New Resources

1 PJM-administered test

2 tests = 1 selfscheduled test + 1 PJM-administered test or 2 PJMadministered tests

New Performance Score of (an average of)
PJM-administered test(s)



Regulation Testing Proposal

- Self-scheduled test is recommended for new resources to determine capability and basepoint MW
 values, and resolve any technical issues that can be worked out on Member's side.
 - PJM will provide a testing template for resources to score their self-scheduled test results. A
 new resource must satisfy all test requirements and provide self-scheduled test results to PJM
 for the final confirmation.
 - In order to be considered for a valid self-scheduled test, results must be submitted to PJM within 10 business days of the test.
 - A resource must pass self-scheduled test before scheduling PJM-administered test if the resource chooses 1 Self-scheduled test + 1 PJM-administered test option
- PJM-administered test is required for resources to ensure communication is working between a resource and PJM. PJM will score the test. If it's a successful test, then PJM will enter MW capability and performance score in PSCE.

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Regulation Testing Proposal

- Remove below language from Manual 12 under a new proposal
 - Certifying Multiple Combustion Turbines or Hydro Units operating under a single plant control system:
 - Must have a minimum of 3 tests of the control system
 - Performance of each of the units being certified must be demonstrated in at least one of these tests.

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