

Transmission Owner Reliability Related Task List

- 1 **Terminal Task** Given the daily load and weather forecast, evaluate your operating strategy in accordance with the appropriate PJM manuals
 - 1.1 **Enabling Objective** Identify impacts to the load forecast based on actual and forecasted weather
 - 1.2 **Enabling Objective** Identify impacts to transmission equipment operation based on actual and forecasted weather

- 2 **Terminal Task*** Given a notification (verbal or electronically) of a problem with BES equipment, determine the appropriate actions and notifications required in accordance with the appropriate PJM manuals
 - 2.1 **Enabling Objective** Identify when adjustment of transmission facility operating limits are required and notify PJM
 - 2.2 **Enabling Objective** Describe general causes for some alarms coming from BES equipment
 - 2.3 **Company Specific Task*** – Given a notification of a problem with BES equipment, explain how to respond in accordance with company guidelines

- 3 **Terminal Task** Given a reactive resource within PJM, support its operation, reporting and testing in accordance with the appropriate PJM manuals
 - 3.1 **Enabling Objective** Evaluate changes in Generator Reactive Output/Capability in eDART
 - 3.2 **Enabling Objective** Validate and report changes in the status of Capacitors/Reactors /SVCs/ LTCs
 - 3.3 **Enabling Objective** Complete switching of capacitors and reactors for voltage control
 - 3.4 **Enabling Objective** Complete adjustment of PARS & LTCs and other system equipment as needed
 - 3.5 **Enabling Objective** Support the required reactive testing of units to verify unit capability

- 4 **Terminal Task** *This Task was retired on 8/1/16*

- 5 **Terminal Task** Given a monitored facility, ensure actual and post contingency parameters are within established limits and initiate corrective action as directed by PJM in accordance with the appropriate PJM manuals
 - 5.1 **Enabling Objective** Determine if actual operational parameters (MW/MVAR flows, voltages, etc) are within established limits and initiate corrective actions if necessary



5.2 Enabling Objective Determine if simulated post contingency operational parameters (MW/MVAR flows, voltages, etc) are within established operating criteria and initiate corrective actions if necessary

5.3 Company Specific Task Given a monitored facility, explain how to utilize your company's security analysis, evaluate the results, and coordinate the results with PJM in accordance with company guidelines

5.4 Company Specific Task Given a PJM directive to shed load, explain how your company implements load shedding and load restoration in accordance with company guidelines

6 Terminal Task Given a request for PJM operational information, respond in accordance with the appropriate PJM manuals

6.1 Enabling Objective Validate and submit Reactive Reserve Check (RRC) data

6.2 Enabling Objective *This Enabling Objective was retired on 8/16/16*

7 Terminal Task* Given a capacity emergency, respond to the Emergency Procedures in accordance with the appropriate PJM manuals

7.1 Enabling Objective Respond to a PJM issued Alert and take the appropriate action

7.2 Enabling Objective Respond to a PJM issued Warning and take the appropriate action

7.3 Enabling Objective Respond to a PJM issued Action and take the appropriate action

8 Terminal Task* Given a Voltage Emergency, respond to Emergency Procedures and take the appropriate actions in accordance with PJM manuals

8.1 Enabling Objective Respond to a PJM issued Low Voltage Alert and take the appropriate action

8.2 Enabling Objective Respond to a PJM issued Heavy Load Voltage Schedule Warning and take the appropriate action

8.3 Enabling Objective Respond to a PJM issued Heavy Load Voltage Schedule Action and take the appropriate action

8.4 Enabling Objective Respond to a PJM issued High System Voltage Message and take the appropriate action

9 Terminal Task Given the need for conservative operations, respond to PJM instructions and take appropriate action in accordance with PJM manuals

9.1 Enabling Objective Respond to weather emergencies requiring conservative operations and take the appropriate action

9.2 **Enabling Objective** Respond to physical threats requiring conservative operations and take the appropriate action

9.3 **Enabling Objective** Respond to cyber threats requiring conservative operations and take the appropriate action

9.4 **Enabling Objective** Respond to geomagnetic disturbances requiring conservative operations and take the appropriate action

9.5 **Enabling Objective** Respond to high-altitude electromagnetic pulse events requiring conservative operations and take the appropriate action

10 **Terminal Task*** Given the requirements as outlined in NERC Standards & the appropriate PJM manuals, maintain continued system operations during a loss of functionality of the primary control center

10.1 **Enabling Objective** Identify the requirements for annual testing of the plan to maintain continued system operations for loss of functionality of the primary control center

10.2 **Company Specific Task*** Given the requirement to continue system operations, explain your company's procedures for the loss of functionality at the primary control center.

11 **Terminal Task*** Given a restoration condition, operate in accordance with the established restoration procedures and the appropriate PJM manuals

11.1 **Enabling Objective** Direct the operation of a blackstart generating unit

11.2 **Enabling Objective** Determine method of restoration based on conditions

11.3 **Enabling Objective** List some considerations for restoring power to critical facilities

11.4 **Enabling Objective** Explain how to coordinate load pick up to maintain frequency and voltage during system restoration

11.5 **Enabling Objective** Explain how to maintain adequate synchronous and dynamic reserves

11.6 **Enabling Objective** Identify minimum source guidelines to safely energize the EHV transmission system

11.7 **Enabling Objective** Demonstrate how to coordinate the synchronization of islands to neighboring systems

11.8 **Enabling Objective** Demonstrate how to coordinate frequency and tie line control with interconnected systems

11.9 **Enabling Objective** Identify when to transfer control back to PJM at a certain stage of the restoration

11.10 **Enabling Objective** Interpret and monitor frequency signal across your system during the restoration



11.11 Company Specific Task* Given a restoration condition, explain the steps involved in your company's restoration guide

12 Terminal Task Given an equipment outage, ensure that all appropriate information is conveyed in accordance with the appropriate PJM manuals

12.1 Enabling Objective Explain how to communicate a transmission equipment outage request to PJM

12.2 Enabling Objective Explain how to modify outage requests with PJM

12.3 Enabling Objective Coordinate operations with neighboring systems and PJM

12.4 Enabling Objective Given a real-time outage explain the notification and coordination requirements

12.5 Company Specific Task Given an equipment outage request, model the outage in a network study program and analyze the results in accordance with company guidelines

12.6 Company Specific Task Given an equipment outage, demonstrate how to access and operate SCADA devices in your company's EMS in accordance with company guidelines

13 Terminal Task Given operating control systems & data exchange requirements, evaluate the integrity of the data in accordance with the appropriate PJM manuals

13.1 Enabling Objective Recognize and correct any inconsistencies in data reported via EMS

13.2 Company Specific Task Given operating control systems & data exchange requirements, explain how to verify the accuracy and resolve inconsistencies in your company's EMS data in accordance with company guidelines

14 Terminal Task Given telecommunication requirements, ensure appropriate equipment is available and functional in accordance with the appropriate PJM manuals

14.1 Enabling Objective Explain the back-up satellite phone testing requirements

14.2 Enabling Objective Explain the function and use of the PJM All-Call System

14.3 Enabling Objective Explain how to coordinate outages of telemetry and communication equipment with PJM (RTUs, datalinks, etc.)

15 Terminal Task Given the need for communication, ensure that the exchange is made in accordance with the appropriate PJM manuals

15.1 Enabling Objective Respond to a PJM All-Call message for Operational, Informational and/or Emergency situations

15.2 Enabling Objective Describe the requirements outlined in PJM's Communication Protocols when issuing or receiving Operating Instructions



	Total
Total Reliability-Related Terminal Tasks:	14
Total PJM Enabling Objectives	45
Total Company-Specific Tasks	8

*Denotes Tasks requiring Annual Training

Revision History

Revision 00 (12-18-2012)

This is the first DTS-approved version of the Transmission Owner Reliability-Related Task List

Revision 01 (08-16-2016)

This Task List was reviewed and revised based on updates to PJM Manual 1. The following Tasks/Enabling Objectives were revised:

Task 4 was retired due to the removal of “Directive” language from PJM Manual 1.

Company Specific Task 4.3 was moved under Task 5 (*new 5.4*)

Language change to EO 15.2 to reflect Manual 1 language (PJM Communication Protocols)

Note: Language change did not affect how the task is completed.

This Task List was revised based on an internal review of TO responsibilities. The following Enabling Objective was removed:

6.2 Compile and submit a Supplementary Status Report (SSR) – *no longer applies*

Revision 01 (12-19-2017)

This Task List was reviewed and no revisions identified.

Revision 01 (12-19-2018)

This Task List was reviewed and no revisions identified.

Revision 02 (12-17-2019)

Format of the Task List was updated to include an indication of which tasks require annual training as part of the PJM Transmission Owner Operator continuing training program. No other revisions identified.

Revision 02 (11-17-2020)

This Task List was reviewed and no revisions identified.

Revision 03 (08-20-2021)

This Task List was reviewed and revised based on feedback from a member company. The following Enabling Objectives were revised or added:

EO 9.1, 9.2, 9.3, 9.4, 9.5 to provide more clarity into Conservative Operations categories

The following Company Specific Task was updated:

Company Specific Task 5.4 was revised to clarify that load restoration is also part of load shedding process.

Note: Language changes did not affect how the tasks were completed.