

## 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 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** Report events that would prompt PJM to adopt conservative operations

**9.2 Enabling Objective** Respond to PJM adopting conservative operations

**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

	<b>Total</b>
<b>Total Reliability-Related Terminal Tasks:</b>	<b>14</b>
<b>Total PJM Enabling Objectives</b>	<b>42</b>
<b>Total Company-Specific Tasks</b>	<b>8</b>

**Revision History**

**Revision 00 (12-18-2012)**

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



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**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*