

# EMS Tripping Functionality



- In cases of emergency tripping, it was determined necessary to generate a transmission outage ticket as quickly as possible.
- In cases of emergency trips it may take some time for a transmission company (TO) to create a ticket since they are assessing the scope of the issue.
- The PJM EMS automatically receives a signal from the TO EMS notifying PJM of the outage.
- However, this data is not immediately sent to NERC SDX.

- Also notifications not sent to other interested TO's within the PJM footprint or PJM neighbors having access to the eDart Transmission Outage Ticket (TOT).
- To handle these issues the EMS Tripping Functionality was created.

- The EMS Tripping Functionality takes advantage of the fact that the PJM EMS has been given a signal that the facility is out of service.
- Once every ten minutes it checks the TOT to see if a ticket had been created for the outage.
- If no ticket was created the functionality will automatically create one, assigning the ticket to the TO whose zone the facility is in.
  - For tie-lines one of the companies the line traverses arbitrarily will be assigned.
- If a ticket is found for the facility, which is scheduled to start within the next six hours, that is not in the status of “Active,” it will be changed to “Active.”

- Tripped equipment (from PJM EMS) automatically creates an eDART outage ticket
- All equipment 115kV and above
- Outage type = Tripping
- Ticket has Active status
- Start date/time = time of tripping
- End date = Start date + 2 hours
- Tier 1 equipment list is auto selected

- EMS Tripping Tickets created automatically by eDART are given a default cause of “Unknown”.
- EMS Tripped Tickets have the functionality to allow the Transmission Operator to associate cause for the purpose of performance compliance data gathering and to give PJM a better understanding of the reason for the outage.
- “Contingency Planning” checkbox is for the outage being caused by pre-contingency switching.

- Once the EMS Tripping Ticket is created, notifications are automatically sent to interested TOs.
  - As a result of the PJM-MISO JOA, MISO is also notified if the outage is to a LINE or XFMR for which MISO has requested notification within the guidelines of the JOA Outage Requirement Specification.
- If the facility is mapped to the MMWG case (NERC PSSE model) the outage is included in the Transmission Outages sent to NERC SDX with a status of Forced.
  - If the facility is 230 KV or above, NERC SDX automatically posts the outage on RCIS.
  - Since NERC SDX is updated every fifteen minutes it also receives updates as End Dates are extended.
    - Updates to the End Dates are posted to RCIS automatically via NERC SDX functionality.

- The EMS Tripping Ticket is only meant for quick postings and notifications.
  - EMS Tripping Tickets are available to the owning TO via the Review/Revise Report in TOT.
- The TO who owns the facility still must create a ticket giving full details – as per usual – on the outage.
  - For tie-lines, the company who owns the part of the line in issue would create the ticket.
    - Note: This may not be the company the EMS Tripping ticket was created under as the company selected to own the EMS Tripping Ticket is selected arbitrarily. In that case the company owning the part of the line in issue would have received notification of the EMS Tripping Ticket when it was initially created.

- Once logged in to eDart, select EMS Trip Update from the Transmission Outage Main Menu at the top of the screen.

### Transmission Outage Main Menu

Create New Outage Ticket	View/Revise Outage Ticket	EMS Trip Update	Gen Outage Lookup
Future Facilities	Current One Line Diagrams	RTEP Queue # Update	Cause Lookup
View / Revise Projects	New Project	Network Model Link	

### Transmission Reports

Status Report	Trans. Outage Tickets Report	Tickets Active Tomorrow
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Submitted: 175 / 3   Revised: 61 / 87   Received: 127 / 91  
 Approved: 34 / 8   Active: 30 / 29   **Incomplete: 83**

### Conflicts

Conflicting Outages	Confl. Identifier Facility List	Confl. Identifier Group List	Gen Off Scenario List
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**Review Needed: 2**

Submitted: 5   Revised: 0   Received: 1   Approved: 1   Active: 0

### System Impacts

Per Impact	Per Facility	Impacts Report
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### NERC-TADS

NERC-TADS Report	Ticket Update	Ticket Date Exception	Transformer Selection
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### Generation Reports

Generation Ack. Required	Owners Report	Tickets Active Tomorrow
D-Curve Report	Reactive Test Result	

- Form in Transmission Outage Ticket to allow TO to assign Cause Type to all EMS Trip Tickets marked “Unknown”
- User either selects a Cause Type from drop down or checks “Pre-Contingency Switching”
- Button on Transmission Outage Ticket menu only visible if user’s company has EMS Trip Tickets marked “Unknown”.
- Transmission Owner/Operator is expected to update ticket if “EMS Trip Update” Button is shown.
- When you are finished, scroll to the bottom and click Submit Form.
- Select Main Menu to return to the initial Trans. Tickets Menu.

**EMS Trip Update**

Result Set is limited to 100 rows.

**Ticket Status:** Submitted  Received  Approved  Revised  Active  Cancelled  Completed

[Apply Filter](#)

Ticket ID	Company Ticket ID	Ticket Status	Station	Voltage	Equipment	Start Date	End Date	Cause	Pre-Contingency Switching
<a href="#">75674</a>		Completed	GRANITE	230 KV	230-1	03/24/2004	12/11/2011	Unknown <input type="checkbox"/>	<input checked="" type="checkbox"/>
<a href="#">75675</a>		Completed	COLU BC	230 KV	COL-HOW	03/24/2004	12/11/2011	Unknown <input type="checkbox"/>	<input type="checkbox"/>
<a href="#">75676</a>		Completed	COLU BC	230 KV	COL-HIG	03/24/2004	12/11/2011	Unknown <input type="checkbox"/>	<input type="checkbox"/>
<a href="#">75843</a>		Completed	NOTCHCLI	115 KV	NOT-WIN8	03/25/2004	11/11/2011	Unknown <input type="checkbox"/>	<input type="checkbox"/>

- If you have any questions, please feel free to call either Customer Support (610-666-8980) or the Helpdesk (610-666-8886).