M-13 Emergency Procedures Rev. 96

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SOS

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M13 Revision 96 Summary

- Revision 96 effective 8/20/2025
- All changes are associated with our periodic review
- Impacted Sections
  - Introduction – About This Manual
  - 2.2 Reserve Requirements
  - 2.3.1 Advanced Notice Emergency Procedures: Alerts
  - 2.3.2 Real-Time Emergency Procedures (Warnings and Actions)
  - 3.3.2 Cold Weather Alert
  - 3.4 Hot Weather Alert
  - 3.8.2 GMD Action
  - 5.2 Transmission Security Emergency Procedures
  - 5.5 Interconnection Reliability Operating Limit (IROL) Manual Load Dump Warning/Action
  - Revision History

Introduction – About This Manual

- Updated the three bullets in the “About This Manual “section to align with “Section 1: Overview” defining what constitutes an “Emergency condition”
- Updated reference to correct number of sections and attachments in M-13

About This Manual

The ***PJM Manual for Emergency Operations*** focuses on how PJM and the PJM Members are expected to respond to emergency conditions and is the designated PJM RC, BA and TOP Operating Plan to mitigate operating Emergencies per EOP-011. Emergency conditions include:

- An~~y~~ abnormal condition requiring manual or automatic action to maintain system frequency or to prevent loss of firm load, equipment damage, or tripping of system elements that could adversely affect the reliability of an electric system or the safety of persons or property.
- A fuel shortage requiring departure from normal operating procedures in order to minimize the use of such scarce fuel.
- A condition that requires implementation of emergency procedures as defined in the manuals.
- Capacity deficiency or capacity excess conditions.
- Abnormal natural events or man-made threats that would require conservative operations to posture the system in a more reliable state.
- An abnormal event external to the PJM service territory that may require PJM action.

The ***PJM Manual for Emergency Operations*** consists of seven~~six~~ sections and fourteen~~twelve~~ attachments. These sections are listed in the table of contents beginning on page 2.

Section 2.2 Reserve Requirements

- Removed reference to 33% interruptible load ceiling for contingency reserves and reference to outdated standard

Note:
PJM must schedule sufficient Regulating Reserves to satisfy control standards. Regulating Reserves shall be made up of not less than 75% Spinning Reserves, and resources allocated to regulating reserves shall not be included as part of Contingency Reserves.

PJM schedules sufficient Contingency Reserves to satisfy the Reliability *First* (RF) Regional Criteria. Contingency Reserves shall not be less than the largest contingency. Contingency Reserves must be made up of at least 50% Spinning Reserves. ~~No more than 33% of Contingency Reserves should be interruptible load. (NERC Standard BAL-002-3)~~

2.3.1 Advanced Notice Emergency Procedures: Alerts

- Max Gen/Load Management Alert -separated bullets under PJM and Member actions
- Voltage Reduction Alert
  - Updated Duquesne's Time to implement from 60 minutes to 10
  - Added Note to include average load reduction % from recent voltage reduction action test

Section 2.3.2 Real-Time Emergency Procedures (Warnings and Actions)

- Actions taken prior to entering into capacity related Emergency Procedures
  - Updated point #3 indicating that PJM will curtail non-firm exports as needed in accordance with EOP-011

Actions taken prior to entering into capacity related Emergency Procedures:

1. Review weather projections, load forecasts, reserve projections and generation performance.
2. Ensure LMPs are reflective of system conditions
3. Curtail all non-Firm exports, as needed, and issue an EEA1, as required by EOP-011 Attachment 1, via the RCIS and Emergency Procedures webpage.
4. Dispatch may elect to implement an interchange cap to stabilize the amount of interchange during peak hours to protect against volatility.

- Pre-Emergency Load Management Reduction Action:
  - added note to clarify pre-emergency load management is not a trigger for an EEA2
  - Separated bullet under “PJM Actions”

Note:
The minimum dispatch duration is 1 hour.

A Pre-Emergency Load Management Reduction Action is not a trigger for a NERC Energy Emergency Alert Level 2 (EEA2 = Alert Level 2

Section 2.3.2 Real-Time Emergency Procedures (Warnings and Actions)

- Emergency Load Management Reduction Action
  - Separated bullets under “PJM Actions”
  - Removed reference to “Long Lead Time”

- Primary Reserve Warning
  - Updated “equipment” to “generation”

- Maximum Generation Emergency Action
  - Clarified that PJM may suspend regulation
  - PJM Dispatch will curtail all non-pseudo tied export transactions as needed

- PJM Dispatch may instructs members to suspend Regulation on all resources, except hydro generation.
- PJM Dispatch will curtail all non-psuedo tied export transactions as needed
- ~~PJM Dispatch determines the feasibility recalling off-system capacity sales that are recallable (network resources).~~
  - PJM Dispatch will determine any limiting transmission constraints internal to PJM that would impact the ability to cut transactions to a specific interface.
  - PJM Dispatch will identify off-system capacity sales associated with the identified interfaces.
  - PJM Dispatch will contact the sink Balancing Authority to determine the impact of transaction curtailment.
  - If the net result of cutting off-system capacity sales would put the sink Balancing Authority into load shed then PJM will not curtail the transactions unless it would prevent load shedding within PJM.
  - If the net result of cutting off-system capacity sales would put PJM in a more severe capacity emergency than it is in currently in due to reciprocal transaction curtailments from the sink Balancing Authority, PJM will not initiate curtailing the transactions.

Section 2.3.2 Real-Time Emergency Procedures (Warnings and Actions)

- Voltage Reduction Action
  - Updated Note clarifying that Voltage reduction actions can be implemented to increase transfer capability
  - Added note stating PJM may schedule up to 2 voltage reduction tests annually

- Manual Load Dump Action
  - Added note under PJM Member Actions to consider reducing the total number of customers impacted

Note:
Voltage reductions can also be implemented to increase transmission system voltages or to increase transfer capability across the system.

PJM Dispatch may perform bi-annual Voltage Reduction Action tests to ensure member companies and PJM Dispatch personnel are prepared to implement this procedure during real-time operations.

Note:
Member Load shed plans must recognize priority and critical load including: Essential health and public safety facilities such as hospitals, police, fire facilities, 911 facilities, wastewater treatment facilities; Facilities providing electric service to facilities associated with the Bulk Electric System including off-site power to generating stations, substation light and power; Critical gas infrastructure used to supply gas pipeline pumping plants, processing and production facilities; and Telecommunication facilities. Member load shed plans must recognize:

- Provisions to minimize the overlap of circuits that are designated for manual load shed and circuits that serve designated critical loads;
- Provisions to minimize the overlap of circuits that are designated for manual load shed and circuits that are utilized for underfrequency load shed (UFLS) or undervoltage load shed (UVLS); and;
- Provisions for limiting the utilization of UFLS or UVLS circuits for manual load shed to situations where warranted by system conditions.[1]

Plans should be reviewed and updated at least annually including Attachment F of M-13.

Consider using automated programs in member's EMS to facilitate shedding the specified amount of load with the required timeline.

Considerations should be given to limit the total number of customers impacted.

Rotate load that is shed when feasible to reduce impact to end use customers.

Section 3.3.2 Cold Weather Alert

- Added bullet under PJM actions stating we will issue a Change Freeze

Section 3.4 Hot Weather Alert

- Added bullet under PJM actions stating we will issue a Change Freeze

- PJM may issue a Production System Change Freeze where PJM will refrain from updating business application systems, programs, data, systems software, hardware and other aspect of the information-processing environment at PJM.

Section 3.8.2 GMD Action

- Corrected spelling on “system” under 4th bullet of PJM Actions

Section 5.2 Transmission Security Emergency Procedures

- Pre-Emergency Load Management Reduction Action:
  - Added note to clarify pre-emergency load management does not trigger and EEA2
  - Separated bullet under “PJM Actions”

Note:
The minimum dispatch duration is 1 hour.

A Pre-Emergency Load Management Reduction Action is not a trigger for a NERC Energy Emergency Alert Level 2 (EEA2 = Alert Level 2

- Emergency Load Management Reduction Action
  - Separated bullets under “PJM Actions”

- Primary Reserve Warning
  - Updated “equipment” to “generation”

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Section 5.2 Transmission Security Emergency Procedures

- Maximum Generation Emergency Action
  - Clarified that PJM may suspend regulation
  - PJM Dispatch will curtail all non-pseudo tied export transactions as needed
  - Updated “equipment” to “generation” in PJM Actions Section

- Voltage Reduction Action
  - Updated Note clarifying that Voltage reduction actions can be implemented to increase transfer capability
  - Added note stating PJM may schedule up to 2 voltage reduction tests annually

- PJM Dispatch may instructs members to suspend Regulation on all resources, except hydro generation.
- PJM Dispatch will curtail all non-psuedo tied export transactions as needed
- ~~PJM Dispatch determines the feasibility recalling off-system capacity sales that are recallable (network resources).~~
  - PJM Dispatch will determine any limiting transmission constraints internal to PJM that would impact the ability to cut transactions to a specific interface.
  - PJM Dispatch will identify off-system capacity sales associated with the identified interfaces.
  - PJM Dispatch will contact the sink Balancing Authority to determine the impact of transaction curtailment.
  - If the net result of cutting off-system capacity sales would put the sink Balancing Authority into load shed then PJM will not curtail the transactions unless it would prevent load shedding within PJM.
  - If the net result of cutting off-system capacity sales would put PJM in a more severe capacity emergency than it is in currently in due to reciprocal transaction curtailments from the sink Balancing Authority, PJM will not initiate curtailing the transactions.

Note:
Voltage reductions can also be implemented to increase transmission system voltages or to increase transfer capability across the system.

PJM Dispatch may perform bi-annual Voltage Reduction Action tests to ensure member companies and PJM Dispatch personnel are prepared to implement this procedure during real-time operations.

- **Section 5.5 Interconnection Reliability Operating Limit (IROL) Manual Load Dump Warning/Action**
  - Added note under PJM Member Actions to consider reducing the total number of customers impacted

Note:
Member Load shed plans must recognize priority and critical load including: Essential health and public safety facilities such as hospitals, police, fire facilities, 911 facilities, wastewater treatment facilities; Facilities providing electric service to facilities associated with Bulk Electric System including off-site power to generating stations, substation light and power; Critical gas infrastructure used to supply gas pipeline pumping plants, processing and production facilities; and Telecommunication facilities.

Plans should be reviewed and updated at least annually including Attachment N of M-13.

Consider using automated programs in member's EMS to facilitate shedding the specified amount of load with the required timeline.

Considerations should be given to limit the total number of customers impacted

Rotate load that is shed when feasible to reduce impact to end use customers.

- **Revision History**
  - Corrected Revision 93 bullet #5 to correct standard EOP-011-4

Timeline

First Reads

- July 1st SOS
- July 10th OC
- July 23rd MRC

Second Reads

- August 1st SOS
- August 7th OC
- August 20th MRC (Endorsement)

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M-13 Version 96 Revisions

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