MISO Market Capacity Emergency

SO-P-EOP-11-002 Rev: 25

ROLE			ROLE	
BAO	☑		SM	☑
IRAC	☑		RC	☑
UDS	☑		G&I	☑
SOE	☑		LBA	☑
TOP	☑		MP	☑
GOP	☑		ORM	☑

Rev History	Reason for Issue	Revised By	Issue Date	Effective Date
25	Replaced RTOpsCompliance@misoenergy.org email reference with DOENERCEventReporting@misoenergy.org	Alessandro Stammes	08/24/2026	08/24/2026
24	Out-of-Cycle Review. Removed Max Gen Alert. Consolidated content into Max Gen Warning step. Condensed Event Steps 1a-5 into distinct Event Steps aligned with NERC EEA levels. Grammar, formatting, sentence construction. Updated Attachment 1, 6, 7, and 8 tables and figures. Added Attachment 9 and 10 for MCE Checklists. Compliance Review Completed. Operating procedure owner approval on file. Removed mentions of SO-I-EOP-00-001 Utilizing Emergency Ranges and Emergency and VOLL Pricing (retired).	Don Hunter/ Alessandro Stammes/Josh Womack/Austin Francis	6/1/2026	6/1/2026

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1.0 Purpose

Provide a set of Emergency operating instructions to address Capacity Emergencies and Energy Emergencies within the MISO Balancing Authority Area (MBAA), including preparation, management, and recovery from an Emergency.

2.0 Precautions and Limitations

1. As conditions require, MISO may provide instructions to move directly to any section or step within this procedure. Actions described in earlier levels or steps should still be completed as time permits.
2. If sufficient relief is obtained during the implementation of an action during a declaration step, subsequent actions within that declaration step do NOT need to be taken.
3. The Operating Reserve Requirement for the MBAA consists of Regulation and Contingency Reserve Requirements.
4. The Operating Reserve Requirement for a Region or Sub-Area consists of a Contingency Reserve Requirement based on the Most Severe Single Contingency (MSSC) within its boundaries.
5. Available economic Resources are calculated from the Available Economic Maximum Limits, including Behind the Meter Generation (BTMG), minus capacity that cannot be committed due to congestion or excessive Time-to-Start, and adjusted for Constraint Stranded MW and Net Scheduled Interchange (NSI) obligations.
6. South Region available economic Resources are the South Available Economic Maximum Limits (including BTMG, but reduced by Resources that cannot be committed due to congestion or excessive Time-to-Start), adjusted for South Constraint Stranded MW, Regional Dispatch Transfer (RDT) NSI, and Resources from the North/Central Region that are deliverable to the South via the RDT up to the Regional Dispatch Transfer Limit (RDTL) — typically 3,000 MW.
7. The Reserve Margin Entry Condition for an MBAA Capacity Advisory includes allowance for loss of the MSSC and subsequent recovery within 90 minutes for the second MSSC (if applicable), plus uncertainties.

8. Reserve Margin Entry Conditions will be based on the forecasted uncertainty level for the given operating day(s).
9. MISO will use the Mid-Term Load Forecast (MTLF) or Short-Term Load Forecast (STLF), as applicable, to determine available Operating Reserves. MISO may adjust Load Forecast values based on sustained error over time and will document the reasons for any adjustment.
10. Transmission System Emergencies requiring immediate action will be declared and resolved per SO-P-EOP-00-004 Transmission System Emergency. Transmission constraints that limit energy transfers to the MBAA or a sizable Sub-Area of the MBAA and result in a Capacity or Energy Emergency for such area will be managed through this procedure.
11. Energy deficient BA obligations include taking immediate actions to mitigate any undue risk to the Interconnection, including Load shedding, if required.
12. MISO posts the Max Gen Declaration notification to the MISO Market and Operations — Real-Time Operations Website.
13. Depending on the urgency of the Max Gen Emergency, manual Load Shedding may be used to control the Emergency at any time. This includes the immediate shedding of Load to return the Area Control Error (ACE) to zero.
14. MISO's posting of the Max Gen Declaration notification to the RT Ops Website via Operator Interface (OI) serves as notice of the existence and duration of the conditions requiring the implementation of the procedures set forth in Section 40.2.20 of the Tariff. Historical Max Gen Declarations can be found on MISO’s Open Access Same Time Information System (OASIS) page.
15. MISO will render all available Emergency assistance to others, as requested, in accordance with SO-I-NOP-00-479 Purchasing and Selling Emergency Energy, provided that the requesting entity has implemented their comparable Emergency procedures, unless such actions violate safety, equipment, regulatory, or statutory requirements.
16. If MISO is unable to issue Load Modifying Resource (LMR) implementation instructions through the MCS-LMR Tool, operators will reference LMR availability in CSAT or other resources, assuming the LMR database remains available, and issue implementation instructions via Operator Interface (OI) or verbal communication, as appropriate.
17. MISO Shift Manager (SM) should evaluate additional staffing requirements per SO-I-NOP-00-441 Real-Time Event Resolution.

18. The Reserve Procurement Enhancement (RPE) objective for the RDT North-to-South is to elevate Market Clearing Prices (MCP) and energy prices in the South Region to clear additional Contingency Reserves, allowing recovery of the RDT Flow to 116% post-contingent of the South MSSC. Operators must then determine how to further reduce the RDT Flow to 100%. When RPE on RDT is violated, additional generation should be started.
19. An infographic of MISO's Market Capacity Emergency Procedure steps is included in Attachment 8 — Summary of Market Capacity Emergency Procedure Steps.
20. An Emergency Operations Resource (EOR) is an online Generation Resource that is not an online Fast Start Resource and is started, synchronized, and injecting Energy, or a Demand Response Resource that reduces its Energy consumption, within two hundred forty (240) minutes of being notified, and that has a minimum run time of less than four (4) hours, and that will participate in setting price as described in Schedule 29A of the MISO Transmission, Energy, and Operating Reserve Market Tariff. EORs participate in setting prices automatically when either the Emergency Tier I or Tier II Offer Floors are established.
21. Refer to applicable Work Level Instructions (WLIs) for detailed step and tools. WLIs are internal and maintained by the role's business area and may change independently of this procedure. In the event of any conflict between a WLI and this procedure, the requirements in this procedure take precedence. WLIs maybe accessed by MISO Operators in the Work Level Instruction Index.

2.0 Roles and Responsibilities

1. In addition to the roles and responsibilities in SO-P-EOP-11 MISO Emergency Operation Plan, the following also apply:
   - MISO Operations Risk Management (ORM) Team
     - Issues forward-looking Market Capacity Declarations up to and including the FRAC Next Day (ND) Case.
     - Coordinates with the Shift Manager (SM) prior to issuance.
     - Capacity Advisories may be issued up to 5 days in advance but must be declared no later than 23:59 EPT the day prior to the operating day.
     - Capacity Advisories are not issued on a same-day basis, as the real-time process begins after the FRAC Handoff.
   - MISO Shift Manager (SM)
     - Issues real-time Market Capacity Declarations after the FRAC ND Handoff per SO-I-NOP-00-491 FRAC Handoff procedure, based on current system conditions.
     - Coordinates with the ORM Team prior to issuance.

3.0 Entry Conditions

3.1 Capacity Advisory

1. Entry conditions are based on the Reserve Margin, which is the Total Operating Reserves compared to the Operating Reserve Requirement, either in MW or as a % of the Load, plus Operating Reserve Requirements. See Attachment 1 — Reserve Margin Example Calculations for examples.
   - Reserve Margin:
     Total Operating Reserves - Operating Reserve Requirement
   - Reserve Margin (%):
     100 * (Total Operating Reserves - Operating Reserve Requirement) / (Load + Operating Reserve Requirement)
   - Total Operating Reserves MBAA:
     (Avail Eco Max - Constraint Stranded MW - NSI) - Load
   - Total Operating Reserves South Region:
     (Avail Eco Max - Constraint Stranded MW - RDT NSI + RDTL) - Load

ORM/ SM

Note

- IF Reserve Margin thresholds are forecasted below the associated uncertainty level, THEN:
- A Capacity Advisory may be declared up to 5 days in advance but must be declared no later than 23:59 EPT the day prior to the operating day.
- Capacity Advisories are not issued on a same-day basis.
- The decision to declare a Capacity Advisory may also consider other information such as time frame, weather, and other uncertainty factors.
- Increasing the Reserve Margin Entry Conditions may be required.

2. IF the following conditions are identified, THEN **PERFORM** Section 4.1 Capacity Advisory: [□]
   - MBAA, Region, or Sub-Area forecasted Reserve Margin is less than the Reserve Margin threshold based upon the associated forecasted uncertainty level.

3.2 Max Gen Warning

SM

Note

A negative Reserve Margin means that Load and Operating Reserve Requirements cannot be met with normal economic Resources. In this scenario, a Max Gen Warning or Event should be declared.

1. IF the following condition is identified, THEN **PERFORM** Section 4.2.3 Max Gen Warning - MISO Actions: [□]
   - MBAA, Region, or Sub-Area actual or forecasted Reserve Margin is less than zero.

3.3 Max Gen Event

SM

1. IF the following condition is identified, THEN **PERFORM** Section 4.2.3 Max Gen Event Step 1: [□]
   - MBAA, Region, or Sub-Area actual or forecasted Reserve Margin is less than zero, **and**
   - Warning level actions are NOT sufficient.

4.0 Instructions

4.1 Capacity Advisory

ORM/ SM

4.1.1 Capacity Advisory - MISO Actions

1. **COMMUNICATE** Capacity Advisory as follows: [□]
   - A. **DEFINE** the boundaries of the Capacity Advisory area. [□]
   - B. **DEFINE** the start and end time of the Capacity Advisory and **COMMUNICATE** those times to the UDS Operator to allow STR Default and RPE MSSC Overrides to be entered. [□]
   - C. **SEND** the Capacity Advisory declaration to affected members via OI per SO-I-NOP-00-448 Event Communications Matrix. [□]
   - D. **SEND** the Capacity Advisory declaration via Reliability Coordinator Information System (RCIS). [□]
   - E. **DECLARE** Conservative System Operations per SO-P-NOP-00-449 Conservative System Operations, if conditions warrant and not already declared. [□]

SM

2. IF OI is unavailable, or the SM determines a conference call is necessary, THEN **PERFORM** a conference call with affected reliability entities per SO-P-NOP-00-483 Reliability Coordination Conference Call. [□]

SM

3. IF a significant shortage of Operating Reserves is anticipated in any Reliability Assessment Commitment (RAC) process, THEN **DETERMINE** whether to issue LMR Scheduling Instructions in anticipation of a Max Gen Emergency Event Step 2 or higher. [□]
   - A. **SEND** an informational message via OI to the impacted area(s) indicating that LMRs have been called in

anticipation of a Max Gen Emergency. [□]

B. **SEND** LMR Scheduling Instructions (from longest to shortest lead time) via MISO Communication System (MCS) for the forecasted Max Gen Emergency. [□]

UDS

Note

For Steps 4 to 8, **REFER** to Attachment 7 — UDS Operator Actions During a MISO Market Capacity Emergency. **[See WLI: BA/UDS]**

4. IF a Capacity Advisory or higher is declared for the North/Central Region only, THEN **OVERRIDE** the STR RPE MSSC Default value(s) for Non-Zone only in the Energy Market Displays (EMD) Global Reserve Requirements menu, for the duration of the Capacity Advisory or higher declaration. [□]

UDS

5. IF a Capacity Advisory or higher declaration is made for the North/Central Region and a Capacity Advisory or higher declaration is added for the South Region, THEN **OVERRIDE** the System-Wide STR Default value(s) and **OVERRIDE** the South Region STR RPE MSSC in Zone 8 in the EMD Global Reserve Requirements menu for the duration of the Capacity Advisory or higher declaration. [□]

UDS

6. IF a Capacity Advisory is declared for the South Region only, THEN **OVERRIDE** the STR RPE MSSC Default value(s) for Zone 8 only in the EMD Global Reserve Requirements menu for the duration of the Capacity Advisory or higher declaration. [□]

UDS

7. IF a Capacity Advisory or higher declaration is made for the South Region and a Capacity Advisory or higher declaration is added for the North/Central Region, THEN **OVERRIDE** the System-Wide STR Default value(s) and **OVERRIDE** the North/ Central STR RPE MSSC for Non-Zone in the EMD Global Reserve Requirements menu for the duration of Capacity Advisory or higher declaration. [□]

ORM/UDS/SM

8. IF a System-Wide Capacity Advisory is declared, THEN **OVERRIDE** the STR Default value(s), the North/Central STR RPE MSSC for Non-Zone, and the South Region STR RPE MSSC for Zone 8 in the EMD Global Reserve Requirements menu, for the duration of the Capacity Advisory or higher declaration. [□]

ORM/ UDS/SM 9. **NOTIFY** Day Ahead (DA) and Forward Reliability Assessment and Commitment (FRAC) Operators when STR updates are complete. [□]

4.1.2 Capacity Advisory - MISO Stakeholder Actions

1. WHEN notified by MISO, THEN **ENSURE** all market data is updated with the best available information for the operating day(s), including the following: [□]
   - Facility and generation availability, outages, and de-rates
   - Generation Offers, including any changes to reflect fuel availability
   - Fuel supply and inventory concerns
   - Fuel switching capabilities
   - Environmental constraints
   - Load forecast Values
   - LMR Availability in the DSRI Tool
   - Voluntary Load Management information
   - Load Management Measures (LMM) and any Voluntary Load Management in the MCS
   - Emergency Demand Response (EDR) offers

MP

Note

LMRs should be implemented at NO less than the MW amount scheduled and following the guidelines provided by MISO.

2. IF notified by MISO, THEN **IMPLEMENT** LMRs. [□]

MP 3. **UPDATE** the DSRI Tool as follows: [□]

   A. **NAVIGATE** to the Active Event by selecting one of the following: [□]
      - The Scheduling Instruction event banner
      - The Active Event from the dashboard
      - The Events tab

   B. **REVIEW** the Event Timeline and LMR Instructions broken down by each LBA. [□]

   C. **ACKNOWLEDGE** the LMR Scheduling Instructions. [□]

   D. **NAVIGATE** to the Resource Deployment tab of the Active Event. [□]

   E. **ENTER** and **SUBMIT** the MW Amounts of Resources that will be deployed to meet the LMR Scheduling Instruction obligation per LBA. [□]

   F. Upon receiving the LMR Scheduling Instruction, **UPDATE** the LMR Availability for all Resources designated to respond, ensuring their availability accurately reflects what is now accessible to MISO. [□]

4.2 MISO Actions during a Max Gen Emergency

4.2.1 Max Gen Declaration - MISO Actions

SM 1. **DECLARE** applicable Max Gen Warning/Event as follows: [□]

A. **DEFINE** the boundaries of the declaration area. [□]

B. **DEFINE** the start and end time of the declaration. [□]

C. **SEND** the Max Gen Declaration via OI per SO-I-NOP-00-448 Event Communications Matrix. [□]

D. **SEND** the Max Gen declaration summary information via RCIS within 30 minutes. [□]

SM 2. **ENSURE** Conservative System Operations has been declared per SO-P-NOP-00-449 Conservative System Operations. [□]

SM 3. IF OI is unavailable or the SM determines whether a conference call is necessary, THEN **PERFORM** a conference call with affected reliability entities per SO-P-NOP-00-483 Reliability Coordination Conference Call. [□]

Note

- Actions are taken to preserve Resources dedicated to firm Load and to maintain Operating Reserves.
- Actions available at this level should be fully utilized, time permitting, by all entities within the defined declaration area prior to declaring an Emergency.

4.2.2 Max Gen Warning - MISO Actions

SM 1. IF starting the declaration at a Max Gen Warning or escalating from a Capacity Advisory, THEN **DECLARE** Max Gen Warning per Section 4.2.1 Max Gen Declaration - MISO Actions. [□]

UDS 2. **IMPLEMENT** Emergency Pricing – Tier I in EMD **[See WLI: BA/UDS]**. [□]

SM

Note

This survey is to gain an idea of the amount of LMM Load reduction expected to be available, if needed.

SM 3. **SEND** a survey via the MCS LMM Tool in the Load Management Tab to LBAs to ensure LMM information is updated. [□]

A. IF the Drill Mode is currently on, THEN **ENSURE** to “Switch to Live Mode.” [□]

BAO 4. IF changes in Operating Reserve availability are identified, THEN **NOTIFY** the SM. [□]

IRAC 5. **ENSURE** available economic Resources are committed to meeting Load, firm transactions, and reserve requirements. [□]

RC

Note
The following analysis should be completed in time for implementation during the Warning declaration.

6. **COORDINATE** with neighboring Reliability Coordinators (RCs) and MISO TOPs to raise transfer capability into the declaration area or make available Constraint Stranded MW from generation (on- or off-line) in the declaration area, including review of Transmission Loading Relief (TLR) activity, binding constraints, available reconfiguration options, and use of short-term Emergency ratings. [□]

SM 7. **REVIEW** EDR offers to determine EDR availability and MW amounts for the Warning period. [□]

SM 8. **OBTAIN** updated MW relief amount available during the effective Warning period by LBA from MCS.

- LMMs – Stage 1
- LMMs – Stage 2

SM 9. **REVIEW** LMR availability in the MCS-LMR Tool for the declaration period. [□]

SM/BAO 10. **DIRECT** the following actions to raise forecasted capacity:

A. **TERMINATE** Inadvertent Payback process pe SO-I-NOP-00-462 Inadvertent Interchange Management, if required to assist system conditions. [□]

B. **DETERMINE** if a request for Time Error Correction termination should be made per SO-P-NOP-00-455 Balancing Authority Operations. [□]

SM 11. **SEND** OI message to MPs to schedule remaining available External and Internal Resources (Module E Registered Capacity Resources) that are deliverable to the Warning area, considering transmission constraints. [□]

G&I 12. **NOTIFY** the SM of forecasted changes in MBAA NSI due to loss of imports. [□]

G&I 13. **MODIFY** webTrans E-tag validation mode to reflect the Max Gen in affected area (North, South, or All) per SO-I-EOP-00-006 Interchange Scheduling Operations during Emergency Conditions. [□]

G&I 14. **SUSPEND** Coordinated Transaction Scheduling (CTS) for the duration of the Capacity Emergency per SO-I-AOP-00-224 CTS Failure Modes. [□]

A. **COMMUNICATE** CTS suspension to PJM. [□]

G&I 15. **COORDINATE** to determine amount of non-firm and firm Export Schedules to curtail, as identified below. [□]

G&I 16. IF Export Schedule Limits are exceeded, THEN **CURTAIL** Export Schedules from the declaration area in amounts required to relieve shortage conditions in the following order per SO-I-EOP-00-006 Interchange Scheduling Operations during Emergency Conditions: [□]

A. Non-Firm Transmission Schedules.
B. Firm Schedules from Capacity (Module E) Resources that are NOT meeting their Schedule and Capacity requirements.
C. Firm Schedules from non-Capacity (Module E) Resources that are NOT meeting their Schedule requirements.
D. Firm Transmission schedules from Power Purchase Agreements (PPAs) that represent a Fleet of Resources, when those Resources are NOT meeting their collective Resource obligation.

G&I 17. **COORDINATE** with MPs to schedule in any non-scheduled MWs from external Resources up to their cleared Module E Capacity obligation. [□]

SM 18. IF forecasting an escalation to Max Gen Event Step 2 or higher, THEN **NOTIFY** GOPs via OI in the declaration area with Generators de-rated due to environmental restrictions, and request that they obtain waivers from the appropriate government agencies. [□]

RC 19. **NOTIFY** TOPs to implement reconfiguration options agreed upon to raise transfer capability into the declaration area or to make available Constraint Stranded MW from generation in the declaration [□]

Note

AME are Resources with a commit status of Emergency. If all available generation Resources are in use, proceed to Max Gen Event Step 1 and Declare EEA1.

IRAC/SM 20. **COMMIT** the following Available Max Emergency (AME) designated Resources and declare Max Gen Event Step 1 and EEA 1: [□]

- Generation Resources
- Demand Response Resources – Type 1
- Demand Response Resources – Type 2

ALL 21. **LOG** all actions taken and relevant information in response to the declaration. [□]

4.2.3 Max Gen Event Step 1 - MISO Actions

SM

Note

Actions in this section are taken to attempt to preserve Resources dedicated to firm Load and maintaining Regulating Reserves.

1. IF starting the declaration at a Max Gen Event Step 1 or escalating from a lower Max Gen level, THEN **DECLARE** Max Gen Event 1 and EEA1 per Section 4.2.1 Max Gen Declaration - MISO Actions.
   Actions. [□]

SM 2. **NOTIFY** On-Call Director to implement SO-P-AOP-00-217 MISO and State Officials 24X7 Communication Protocols During Emergencies. [□]

IRAC/ UDS

Note

The IRAC Operator ensures Emergency Ranges are available for use by UDS, and the UDS Operator verifies these ranges as preliminary actions to implementing them in Event Step 1.

UDS 3. IF Warning step skipped, THEN **IMPLEMENT** Emergency Pricing – Tier I in EMD **[See WLI: BA/UDS]**.

4. **ENSURE** unit Emergency Ranges are pushed in EMD . [□]

IRAC/ UDS

Note

Resources selected to provide Regulating Reserve for each Generation Resource, Demand Response Resource – Type II, and External Asynchronous Resource for use in MISO's RAC, Automatic Generation Control (AGC), and UDS for the MBAA (or Sub-Area due to a transmission constraint) are to be excluded when implementing Emergency Maximum Limits.

5. **ACTIVATE** Emergency Maximum Limits in EMD **[See WLI: BA/UDS]**. [□]

ALL 6. **LOG** actions taken and relevant information in response to the declaration. [□]

4.2.4 Max Gen Event Step 2 - MISO Actions

SM

Note

- LMM – Stage 1 and LMRs are utilized on a pro-rata basis within the declaration area based on availability of those actions, except for EDRs, which are committed in merit order.
- LMRs can be called in anticipation up to one hour prior to their required notification time. If MISO does NOT declare a Max Gen Emergency Event Step 2 or higher at least two hours prior to the start of the Scheduling Instructions issued in anticipation, then, the LMRs are NOT obligated to perform.

1. IF starting the declaration at a Max Gen Event Step 2 or escalating from a lower Max Gen level, THEN **DECLARE** Max Gen Event Step 2 and EEA2 per Section 4.2.1 Max Gen Declaration MISO Actions. [□]

UDS

2. **IMPLEMENT** Emergency Pricing - Tier II in EMD **[See WLI: BA/UDS]**. [□]

SM

3. **DETERMINE** Manitoba Hydro's EEA status. [□]

SM

4. IF Manitoba Hydro is in an EEA concurrently with MISO's EEA2 or higher, THEN **PERFORM** SO-I-NOP-00-481 MISO-Manitoba Hydro Concurrent EEA. [□]

SM

Note

- One MW value will be provided per LBA for Load reduction.
- Determination of individual LMMs to be utilized will be managed at the LBA level.
- Reduction MW amounts for each LBA will be determined by proration of the total amount available in the declaration area.
- If OI is unavailable, notifications will be made via phone.
- LMR Load reduction amounts communicated to LBAs are for information only; LBAs do not implement LMRs

5. **NOTIFY** LBAs of required Load reduction via LMM – Stage 1 and LMRs in MW amounts via MCS. [□]

SM

6. **COORDINATE** with MPs on implementing LMRs as follows: [□]

Note

LMR implementation amounts are determined by taking prorated amount of LMR availability in each LBA area as compared to total available in the declaration area, and based upon registration profile of each LMR, within the tolerances as set in the MCS-LMR Tool.

A. **DETERMINE** LMR implementation amounts by MPs. [□]

B. **PROVIDE** a MW minimum implementation amount to each MP based upon this pro-ration and profile of registered LMRs via MCS-LMR Tool. [□]

SM 7. **DETERMINE** OE-417 reporting responsibilities per SO-P-NOP-04 MISO Event Reporting Operations Plan. [□]

SM 8. **ENSURE** required notifications are performed per SO-I-NOP-00-448 Event Communications Matrix. [□]

SM 9. **COMMIT** EDR Resources, in merit order, to alleviate capacity shortages within the declaration area per SO-I-NOP-00-404 Emergency Demand Response Implementation. [□]

SM 10. **COORDINATE** with neighboring RCs and BAs to determine Emergency Energy available from external sources, either through interruptible firm Load or through Emergency Energy purchases. [□]

SM 11. **IMPLEMENT** Emergency Energy purchases from neighboring BAs to conserve Operating Reserves per SO-I-NOP-00-479 Purchasing and Selling Emergency Energy. [□]

SM 12. **EVALUATE** opportunities to reduce internal energy usage, such as sending non-essential personnel home, reducing lighting that is non-essential for personnel safety, and reducing large electric Loads. [□]

Note

DOE Form OE-417 filing requirements for issuing Public Appeals is the responsibility of the LBA.

SM 13. **INSTRUCT** LBAs in the declaration area to issue public appeals to reduce demand per their internal procedures. [□]

14. **NOTIFY** GOPs via OI in the declaration area with Generators de-rated due to environmental restrictions, instructing them to implement waivers from the appropriate government agencies [□]

SM

Note

Reduction of MW amounts for each LBA will be determined on a pro-rate basis of the total amount available in the declaration area.

SM 15. **NOTIFY** LBAs, via MCS, of the required Load reduction (in MW of interruptible demands) via LMM – Stage 2. [□]

RC 16. **COORDINATE** with neighboring RCs and BAs to identify additional available Emergency Energy, including Operating Reserves. [□]

G&I 17. **IMPLEMENT** Emergency Energy purchases from neighboring BAs per SO-I-NOP-00-479 Purchasing and Selling Emergency Energy. [□]

BAO 18. **IMPLEMENT** use of MISO's spinning and supplemental reserves, as needed and as time permits. [□]

SM 19. IF Contingency Reserves fall below minimum required (MSSC) for greater than 30 minutes and NO reasonable actions exist to restore them within 90 minutes, THEN **DECLARE** Max Gen Event Step 3 and EEA3 per Section 4.2.1 Max Gen Declaration - MISO Actions. [□]

BAO 20. **IMPLEMENT** a Reserve Call from Contingency Reserve Sharing Group (CRSG), utilizing MHEB's available contingency reserves. [□]

IRAC 21. **EVALUATE** the exclusion of Regulating Units that have room between Reg Max and Emergency Max from clearing Reg in EMD. [□]

Note
The SM and IRAC should coordinate to maintain an appropriate amount of Regulating Reserves to avoid shedding firm Load for normal ACE deviations.

ALL 22. **LOG** actions taken and relevant information in response to the declaration. [□]

4.2.5 Max Gen Event Step 3 - MISO Actions

SM 1. IF starting the declaration at a Max Gen Event Step 3 or escalating from a lower Max Gen level, THEN **DECLARE** Max Gen Event Step 3 and EEA3 per Section 4.2.1 Max Gen Declaration - MISO Actions. [□]

SM
Note
Attachment 4 — Slice-of-System PPAs Load/Schedule Curtailment provides additional information regarding sharing of Load shedding with Slice-of-System PPAs.

2. **DETERMINE** manual Load Shedding requirements. [□]

SM
Note
Issuing Emergency Operating Instructions for firm Load shed is based on the ratio of LBA forecasted or actual Load to the total forecasted or actual Load of the declaration area, considering applicable transmission security requirements.

SM

Note

The Shift Manager will ensure that firm Load Shed points are known and members are prepared to execute Load Shed when reserves are depleted and additional action is required such as increasing Load conditions or ACE recovery from generation loss.

3. **ISSUE** Emergency Operating Instructions to LBAs in the declaration area for MW amounts of Load to shed via the MCS Firm Load Shed Tool or verbally per SO-P-NOP-10-431 Communications Protocol for Operating Instructions [□]

UDS

4. WHEN notified by MISO SM, THEN **PERFORM** the following:
   A. In the EMD UDS tab, **CHECK** the appropriate box(es) in the column titled "Is Voll Price Enforced" for the applicable LBAs,. This action sets LMPs and MCPs to the Value of Lost Load (VOLL) **[See WLI: BA/UDS]**. [□]
   B. **SAVE** updates. [□]

SM

5. IF firm Load Shed is greater than 100 MW, THEN **DETERMINE** OE-417 reporting responsibilities per SO-P-NOP-04 MISO Event Reporting Operations Plan. [□]

SM

6. **ENSURE** required notifications are performed per SO-I-NOP-00-448 Event Communications Matrix. [□]

ALL

7. **LOG** actions taken and relevant information in response to the declaration. [□]

4.2.6 Max Gen Event Downgrade/Termination - MISO Actions

SM

Note

- Steps and levels during Termination may be skipped, as appropriate, based on system conditions and projections.
- Emergency steps shall be exited in a controlled and deliberate manner to avoid adversely affecting system reliability, while also minimizing the impact of these Emergency actions on the Load Serving Entities (LSEs).

1. WHEN actual obligations return below total MISO capability, THEN **DOWNGRADE/TERMINATE** Max Gen Event as follows: [□]

SM

   A. **SEND** Max Gen Downgrade/Termination to affected members via OI per Section 4.2.1 Max Gen Declaration - MISO Actions. [□]

UDS

   B. IF Max Gen Event Step 3 is being terminated, THEN **UNCHECK** the box(es) in EMD that previously set all LMPs and MCPs to the Value of Lost Load (VOLL). [□]

G&I C. **ENSURE** CTS is enabled per SO-I-AOP-00-224 CTS Failure Modes [□]

G&I D. **RETURN** webTrans E-tag validation to normal mode per SO-I-EOP-00-006 Interchange Scheduling Operations during Emergency Conditions. [□]

G&I E. **TERMINATE** any Emergency Energy purchases made during the event, as necessary. [□]

G&I F. **RELOAD** any Export curtailments made during the event, as necessary. [□]

IRAC G. **EVALUATE** and **DECOMMIT** any online Emergency generation (AME) that has met its Min Runtime. [□]

SM H. **PERFORM** necessary actions to back out of steps taken, in reverse order. [□]

UDS I. IF an STR requirement override is NOT needed for the remainder of the declared Emergency, THEN **REMOVE** STR requirement override in EMD from STR Default and STR MSSC Non-Zone and South Zone 8. [□]

SM 2. **ENSURE** all notifications are performed per SO-I-NOP-00-448 Event Communications Matrix. [□]

ALL 3. **LOG** actions taken and relevant information in response to the declaration. [□]

4.3 MISO Stakeholder Actions during a Max Gen Emergency

4.3.1 Max Gen Warning - MISO Stakeholder Actions

Note

Deferring generation/transmission maintenance until the Max Gen declaration has been terminated ensures trips are minimized.

1. **FOLLOW** MISO's SO-P-NOP-00-449 Conservative System Operations procedure. [□]

2. **DETERMINE** potential exclusions of constrained pockets within the declaration area where there is expected to be adequate generation that may NOT be transferred to other parts of the declaration area due to local constraints. [□]

TOP 3. **INFORM** MISO RC of identified constrained areas. [□]

GOP 4. IF generators are de-rated, THEN **PERFORM** the following:

GOP A. INFORM the following stakeholders of capacity-limited facilities: [□]

- LBAs
- TOPs
- MISO G&I Operator

GOP 5. **UPDATE** Limits and Offers. [□]

MP

Note

- Schedules that source from a Resource that is identified as a Capacity Resource in Module E for a MISO LSE must be identified in the tagging process per MISO BPM-007 Physical Scheduling Business Practice Manual Section 16 - Capacity Resource Scheduling.
  This also includes a Generation Resource internal to the MBAA that is identified as a Capacity Resource for an external BA.

MP 6. **ENSURE** accuracy of LMR availability and Self-Scheduled/ Voluntary Load Management LMRs in the DSRI Tool. [□]

LBA 7. **ENSURE** accuracy of Non-LMR Voluntary Load Management/ Self-Scheduled LMM information in the MCS-LMR Tool. [□]

TOP 8. **COORDINATE** with the MISO RC to determine reconfiguration options to raise transfer capability into the declaration area or to make available Constraint Stranded MW[□] from generation in the declaration area.

LBA 9. Based on Load Shed methodology, **PREPARE** for potential Load Shed during an Event stage. [□]

MP 10. **UPDATE** EDR offers for availability and MW amounts for the declaration period. [□]

LBA 11. **SUBMIT** LMM availability via MCS per Attachment 3 — Load Management Update Form Example. [□]

MP 12. **ENSURE** accuracy of registered LMR availability in the DSRI Tool. [□]

MP 13. **SCHEDULE** remaining available External and Internal Resources (Module E Registered Capacity Resources) that are deliverable to the declaration area. [□]

LBA 14. **NOTIFY** Interruptible Loads of potential interruption. [□]

LBA

.

15. **DETERMINE** whether Generators are de-rated due to environmental restrictions, and request waivers from the appropriate government agencies as directed by MISO. [□]
16. **IMPLEMENT** agreed upon reconfiguration options to raise transfer capability into the declaration area or to make Available Constraint Stranded MW from generation in the declaration area. [□]
17. WHEN notified by MISO, THEN **START** applicable off-line AME Generation Resources. [□]

4.3.2 Max Gen Event Step 1 - MISO Stakeholder Actions

GOP

Note

- MPs should ensure Emergency Range limits reflect actual Resource capabilities.
- Specific information, limitations, and concerns regarding Emergency Range usage should be communicated to the MISO G&I Operators, as applicable.

1. WHEN Resources are dispatched, THEN **ENSURE** Resources move into Emergency Ranges. [□]

2. **ENSURE** all co-generation and independent power producers are at maximum output and availability. [□]

3. IF additional reliability capacity is available (such as adding additional mills, duct burners, etc.), THEN **COORDINATE** adjustments with the MISO G&I Operator. [□]

4.3.3 Max Gen Event Step 2 - MISO Stakeholder Actions

LBA 1. IF in the declaration area and notified by MISO to reduce Load via LMM – Stage 1, THEN **PERFORM** the following: [□]

LBA A. **REDUCE** Load via LMM – Stage 1. [□]

LBA

Note

- Reductions through Load Management are NOT precise to the MW.
- Determination of individual LMMs to be utilized will be managed at the LBA level.

B. WHEN Load reduction actions have been implemented, THEN **NOTIFY** MISO. [□]

MP

Note

LMRs should be implemented at NO less than the MW amount scheduled and following the guidelines provided by MISO.

2. WHEN notified by MISO, THEN **IMPLEMENT** LMRs. [□]

MP 3. **UPDATE** the DSRI Tool as follows: [□]

A. **NAVIGATE** to the Active Event by selecting one of the following: [□]

- The Scheduling Instruction event banner
- The Active Event from the dashboard
- The Events tab

B. **REVIEW** Event Timeline and LMR Instructions broken down by each LBA. [□]

C. **ACKNOWLEDGE** LMR Scheduling Instructions. [□]

D. **NAVIGATE** to the Resource Deployment tab of the Active Event. [□]

E. **ENTER** and **SUBMIT** MW Amounts of Resources that will be deployed to meet the LMR Scheduling Instruction obligation per LBA. [□]

F. Upon receiving the LMR Scheduling Instruction, **UPDATE** the LMR Availability for all Resources designated to respond, ensuring their availability accurately reflects what is now accessible to MISO. [□]

MP 4. WHEN notified by MISO, THEN **COMMIT** EDR Resources. [□]

Note

- Public appeals to reduce demand is based on internal LBA procedures, system conditions, and Event projections provided by MISO.
- The public appeals should include an educational message on how the public may reduce demand and conserve power.
- DOE Form OE-417 filing requirements for issuing Public Appeals is the responsibility of the LBA.

LBA

5. WHEN instructed by MISO, THEN **ISSUE** public appeals to reduce demand per internal procedures. [□]

LBA

6. **EVALUATE** opportunities to reduce internal energy usage, such as sending non-essential personnel home, reducing lighting that is non-essential for personnel safety, and reducing large electric Loads.

LBA

7. IF in the declaration area, THEN **PREPARE** to shed Load. [□]

GOP

8. IF requested by MISO to dispatch available capacity THEN **DISPATCH** as follows: [□]
   A. **VERIFY** Generators in the declaration area with de-rates from environmental restrictions. [□]
   B. IF approved waiver from government regulations, THEN **DISPATCH** available generation. [□]

LBA

9. IF in the declaration area and notified by MISO to reduce Load via LMM – Stage 2, THEN **PERFORM** the following:
   A. REDUCE Load via LMM – Stage 2. [□]

Note

- Reductions through LMMs are NOT precise to the MW.
- Determination of individual LMMs to be utilized will be managed at the LBA level.

   B. WHEN Load reduction actions have been implemented, THEN **NOTIFY** MISO via MCS. [□]

GOP/ MP

10. **REVIEW** Offers. [□]

GOP/ MP

11. **ENSURE** all available Emergency Ranges and Resources are offered. [□]

GOP/ MP

Note

All Resources should be committed, producing energy or committed for reserves, except Emergency Ranges on Resources providing Regulating Reserves.

GOP/ MP

12. IF there are available Resources or capacity NOT being utilized, THEN **NOTIFY** the MISO G&I Operator. [□]

LBA

4.3.4 Max Gen Event Step 3 - MISO Stakeholder Actions

Note

In addition to ensuring Load shed schemes are capable of implementation in a time frame adequate for mitigating the Emergency for Load shed directed by MISO, LBAs are responsible for coordinating with TOPs for any Load shed requirements, critical load evaluation in Load shed schemes, and coordinating rotation of selected Loads with any other automatic Load shed schemes such as Underfrequency and Undervoltage. The minimum MISO directed Load shed per LBA should always be maintained until Load restore directions are provided by MISO.

1. **SHED** firm Loads per MISO issued Emergency Operating Instruction. [□]

LBA

2. **CONFIRM** actions taken with the MISO RC via MCS Firm Load Shed Tool or verbally per SO-P-NOP-10-431 Communications Protocol for Operating Instructions. [□]

LBA

3. IF requested by MISO during Event Step 3, THEN **COMPLETE** Department of Energy (DOE) Form OE-417 as follows: [□]
   A. **COMPLETE** DOE Form OE-417 for actions taken to reduce Load via Load Management Procedures per NERC EOP-004-4 and SO-P-NOP-04 MISO Event Reporting Operations Plan. [□]
   B. **SUBMIT** completed DOE Form OE-417 to the following: [□]
      - DOE
      - NERC
   C. **FORWARD** a copy of the submitted DOE Form OE-417 to the following: [□]
      - Regional Entities
      - DOENERCEventReporting@misoenergy.org

4.3.5 Max Gen Event Downgrade/Termination - MISO Stakeholder Actions

LBA/ MP/ TOP/ GOP

1. **PERFORM** requests of the MISO SM or designee to back out of each level. [□]

5.0. Definitions

1. **Reserve Margin** - The difference between Total Operating Reserves and the Operating Reserve Requirement.
2. **Constraint Stranded MW** - Resource MW that are NOT available to meet Load due to congestion on the electric grid.
3. **Emergency Demand Response (EDR)** - Load reductions, Behind the Meter Generation (BTMG), and other demand resources that are available to reduce demand or increase generation in exchange for guaranteed recovery of costs associated with the response in accordance with Schedule 30 (EDR Provisions) of the Tariff.
4. **Load Management Measures (LMM) Stage 1** – Load management actions that can be taken to reduce demand to preserve or maintain Operating Reserves that are NOT included in EDRs or LMRs.
5. **Load Management Measures (LMM) Stage 2** – Load management actions that can be taken to reduce demand including voltage reductions and reducing Loads that, by contract, CANNOT be interrupted until reserves are being or expected to be depleted and energy from Emergency Offers by Market Participants are being or expected to be depleted. These do NOT include EDRs or LMRs.
6. **Load Modifying Resource (LMR)** - These are either Demand resources or Behind the Meter Generation that have an obligation to reduce demand or increase generation during declared system emergencies.
7. **Maximum Generation (Max Gen) Capacity Advisory** - Provides advanced notice of forecasted capacity shortage and will request stakeholder update data.
8. **Max Gen Warning** - MISO foresees or is experiencing conditions where all available economic Resources are committed to meeting Load, firm transactions, and reserve requirements, and is concerned about sustaining required Operating Reserves.

9. **Max Gen Event** – IF MISO's forecasted or real-time energy demand and Operating Reserve Requirements within the MBAA (or Sub-Area due to a transmission constraint) CANNOT be satisfied with Economic Maximum Limits of all available Resources, then, MISO issues a Max Gen Event due to a shortage of economic Resources.

6.0 References

6.1 NERC References

1. EOP-011-4 Emergency Operations
   - R2.2.1[Section 4.1.1 Step 1.]
   - R2.2.2 [Section 4.2.3 Step 1.][Section 4.2.4 Step 1.] [Section 4.2.5 Step 1.]
   - R2.2.3 [Section 4.1.2]
   - R2.2.4 [Section 4.2.4 Step 13.]
   - R2.2.5 [Section 4.2.4 Step 14.]
   - R2.2.6 [Section 4.2.4]
   - R2.2.7
   - [Section 4.2.2 Step 11.][Section 4.2.2 Step 21.][Section 4.2.4 Step 6.][Section 4.2.4 Step 9.]R2.2.9 [Section 4.2.5 Step 3.]
   - R2.2.10 [Section 3.1 Note after Step 1]
   - R5 [Section 4.2.1 Step 1.D.]
   - R6 [Section 4.2.3 Step 1.][Section 4.2.4 Step 1.] [Section 4.2.1][Section 4.2.5 Step 1.]
2. IRO-014-4 Coordination Among Reliability Coordinators
3. R1 [Section 4.1][Section 4.2]
4. TOP-001-6 Transmission Operations
   - R2 [Section 4.1][Section 4.2]

6.2 FERC References

1. MISO Open Access Transmission, Energy, and Operating Reserve Markets Tariff, Section 40.2.20

6.3 MISO References

1. BPM-007 Physical Scheduling Business Practice Manual Section 16 – Capacity Resource Scheduling
2. SO-I-EOP-00-006 Interchange Scheduling Operations during Emergency Conditions
3. SO-I-AOP-00-224 CTS Failure Modes
4. SO-I-NOP-00-404 Emergency Demand Response Implementation
5. SO-I-NOP-00-441 Operations Real-Time Event Resolution
6. SO-I-NOP-00-448 Event Communications Matrix
7. SO-I-NOP-00-462 Inadvertent Interchange Management
8. SO-I-NOP-00-479 Purchasing and Selling Emergency Energy
9. SO-I-NOP-00-481 MISO-Manitoba Hydro Concurrent EEA
10. SO-I-NOP-00-483 Reliability Coordination Conference Call
11. SO-I-NOP-00-491 FRAC Handoff
12. SO-P-AOP-00-217 MISO and State Officials 24X7 Communication Protocols During Emergencies
13. SO-P-EOP-00-004 Transmission System Emergency
14. SO-P-EOP-11 MISO Emergency Operating Plan
15. SO-P-NOP-10-431 Communications Protocol For Operating Instructions
16. SO-P-NOP-00-449 Conservative System Operations
17. SO-P-NOP-00-455 Balancing Authority Operations
18. SO-P-NOP-04 MISO Event Reporting Operating Plan

Attachment 1 — Reserve Margin Example Calculations

1.0 Example 1: Projection for MBAA

Table 1: Calculation

Description	Value
MBAA Peak Load Forecast:	100,000
Operating Reserve Requirement:	2,410
Load plus Operating Reserve Requirement:	102,410
Available Economic Maximum in Area:	97,000
Constraint Stranded MW:	2,000
Available Economic Resources in Area:	95,000
Net Scheduled Interchange (NSI) into Area:	7,000
Reserve Margin = 95,000+7,000-102,410	- 410
Reserve Margin (%) = (590/102,410)*100:	- 0.4%

Assessment: Reserve Margin is forecasted to be -410 MW. Load plus Operating Reserve Requirement is not met and the Reserve Margin is less than 0 MW. A Max Gen Warning declaration may be necessary.

2.0 Example 2: Projection for South Region

Table 2: Calculation

Description	Value
MBAA Peak Load Forecast:	30,000
Operating Reserve Requirement:	1,500
Load plus Operating Reserve Requirement:	31,500
Available Economic Maximum in Area:	29,000
Constraint Stranded MW:	1,000
Available Economic Resources in Area:	28,000
Net Scheduled Interchange (NSI) into Area (RDT NSI):	400
RDT Import Capability up to RDTL of 3,000	3,000
Reserve Margin = 28,000+3,400-31,500	-100
Reserve Margin (%) = (-100/31,500)*100:	- 0.3%

Assessment: Reserve Margin is -100 MW, meaning the South Region Load plus Operating Reserve Requirement is 100 MW short of being met. This means Load will be covered but the 1,500 MW Operating Reserve Requirement will not be. A Max Gen Warning or Event declaration may be necessary.

Attachment 2 — Maximum Generation Declaration Template

Maximum Generation Declaration Type: [Warning/Event]

The MISO RC is Declaring/Updating a Maximum Generation Warning/Event effective from [MM/DD/YYYY] [HH:MM] EST and [MM/DD/YYYY] [HH:MM] EST for the following entities:

[List the affected entities within the boundaries of the declaration by LBA. Include any constrained pockets within the declaration area with adequate generation that should be excluded from the Maximum Generation Emergency.]

The reason for the declaration is:
State the reason(s): Forced Transmission Outage, Forced Generation Outage, Higher than Forecasted Load, Above/Below Normal Temperatures, Loss of Import Interchange Schedules, Reduction in RDT limit, etc.

Members are to prepare for a Maximum Generation Emergency by performing the applicable MISO Member Maximum Generation [Warning/Event] Level Actions of SO-P-EOP-002 MISO Market Capacity Emergency procedure.

CTS Suspension: Attention Market Participants: CTS (Coordinated Transaction Scheduling) is Suspended as of [MM/DD/YYYY] [HH:MM] EST. Alternative scheduling methods should be utilized.

Projections (to LBAs and TOPs only):

- Peak hour for Area is Hour Ending [MM/DD/YYYY] [HH:MM] EST.
- Load plus Operating Reserve Requirement for Area: _____
- Amount of available economic Resources in Area: _____
- Imports into Area: _____
- Reserve Margin shortfall(-)/surplus(+) for Area: _____

1. Summary information (only) at the top of the OI Message/template will be communicated to MPs via the following:
   A. OI
   B. MISO public web site – Real Time Notifications Tab via OI View Real-Time Operations Updates at https://www.misoenergy.org/markets-and-operations/notifications-overview/

2. Completed OI message/template (summary & projections) will be communicated to TOPs, LBAs, BAs and neighboring BAs, and RCs as follows:
   A. OI
   B. RCIS
3. MISO will provide summary information to the following email exploder lists via OI message:
   - *MISO Alerts BA and TO
   - *MISO Alerts FERC, State Comm., RRO, Neighboring RCs and BAs

Attachment 3 — Load Management Update Form Example

Local Balancing Authorities (LBAs) report via MCS or phone to the RC Load reductions that would be available, time permitting, via Load Management should a Maximum Generation Emergency Event be implemented during the same time frame the Warning is effective. MISO will provide the expected notification time* for LBAs to assume when completing form.

Load Management may include but are NOT limited to public appeals, voltage reduction, and interruption of end use Loads in accordance with applicable contracts, demand-side management, utility Load conservation measures, and starting behind the meter generation*.

Load Management is separated into LMM – Stage 1 and LMM – Stage 2.

*Excludes Registered DRR Type 1 and DRR Type 2 Resources

Table 3: LBAs report the following estimated values:

LBA:	
Notification time for Load Management Measures (i.e. less than 4 hours)	
LMM Stage 1 available:	10
LMM Stage 2 available:	5
Total:	15
LBAs should list LMM Stage 1 and LMM Stage 2 that are already or projected to be implemented at the Event time:	
LMM Stage 1:	100
LMM Stage 2:	0
Total:	100

Attachment 4 — Slice-of-System PPAs Load/Schedule Curtailment

1.0 Slice-of-System Power Purchase Agreements (PPAs) Curtailed Pro-Rata with Load in the Source Balancing Authority when Source Balancing Authority is in Emergency Procedures

1. PPAs in this category will continue to qualify as Planning Resources so long as the PPA only will be curtailed pro-rata along with Load in the source Balancing Authority and only when the source Balancing Authority is operating under Emergency Procedures.
2. Under this situation, a PPA with a 1,000 MW Export schedule from an external Balancing Authority with a 3,000 MW Load will be curtailed pro-rata along with the Load when the external Balancing Authority is operating under Emergency Procedures. That is, curtailment would take place three-quarters to firm Load and one quarter to the firm schedule. This pro-rata treatment is triggered when MISO experiences Emergency Conditions at the same time as the external Balancing Authority.

2.0 Slice-of-System PPA in a Balancing Authority that Coordinates Planning Reserve Qualifications and Shares Emergency Responsibilities with MISO's Balancing Authority

1. In addition to the slice-of-system PPA treatment noted in category (1.0) above, slice-of-system PPAs can continue to qualify as External Resources under this category, and MISO and the external BA will share Load Shedding on a pro-rata basis in proportion to the Load in the area under the Capacity Emergency, so long as the requirements of this category are met.
2. This qualification category has several requirements for the host BA:
   A. It must be in MISO's RC area.
   B. It must share Operating Reserves with the MISO BA.
   C. It must have a Seams Operating Agreement with MISO containing several features.
3. Seams Operating Agreement must specify the following:
   A. The host BA has established planning reserve processes and criteria similar to MISO's.
   B. Actions that will be taken by both entities – MISO and the host BA – during Emergency Procedures prior to implementing Load Shedding.
   C. BA responsibilities include:
      (1.) Submitting Load estimates to MISO in a similar manner as submitted by other Load entities under Module E-1.

(2.) Providing generator testing data for all resources used to serve firm requirements of the host Balancing Authority.

(3.) Providing transparency to such resource plans in the form of a Fixed Resource Adequacy Plan, pursuant to Module E-1.

4. With these requirements in place, when both BAs have exhausted other Emergency operating actions and are in a firm Load shedding event, Load shedding is shared on a pro-rata basis in proportion to the Load in the area under the Capacity Emergency.

Example 1

If the load of an external BA in Capacity Emergency is 3,000 MW and the Load of the area in MISO in Capacity Emergency is 17,000 MW, then pro-rata Load shed is 3/20 of the total for the external Balancing Authority and 17/20 for the area in MISO in the Capacity Emergency.

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5. This treatment is appropriate for BAs that meet the requirements indicated above because MISO can count on the fact that the external BA is planning and testing its resources in an equivalent manner to MISO, is part of MISO's RC area, and is subject to Emergency Procedures it has developed with MISO. It has also agreed to operate its system in a similar manner, including the agreement to share its Operating Reserves with MISO during Emergency Conditions.

3.0 When MISO is in an EEA and the external BA with PPA is not, then MISO will determine if the PPA should flow or determine the curtailable MWs of the PPA.

1. LBA NET (Excess Capability) =
   Σ(LBA_online RTmw - LBA_online MaxObligation)
   - Where RTmw = Current RT MWs of Resource
   - Where MaxObligation = The lesser of a resource's Effective ICAP (capacity obligation) and their Real-Time Must Offer availability
2. Prior to any curtailments, MISO will contact the external BA by phone.
3. If the BA indicates that the curtailment will cause the BA to enter an EEA, then MISO will initiate SO-I-NOP-00-481.
4. If the BA indicates that the curtailment will NOT cause the BA to enter an EEA, then MISO will curtail any relevant schedule(s).

Attachment 5 — Additional Information

1.0 Max Gen Emergency

1. MISO may call for a Max Gen Warning, Event, or EEA level prior to the actual forecasted start time of such Warning, Event, or EEA level.
   A. The purpose of this is to communicate forecasted conditions that meet the criteria of these levels, as well as to provide notice of certain implementation steps that require longer notifications times.
   B. An example would be an LMR which has a 4-hour notification time, requiring implementation instructions to be sent prior to the actual start time of the Event or EEA.
   C. Due to the dynamic nature of the Bulk Electric System (BES), these preliminary declarations and instructions may be canceled prior to the actual start time of the forecasted Warning, Event, or EEA as conditions warrant.
   D. At the Max Gen Warning level, Emergency Pricing - Tier I is in effect until termination of the Warning or increasing Max Gen level to Step 2 or higher.
2. Max Gen Warning
   A. EDRs may also be registered as LMRs in Module E. If a Market Participant (MP) has decided to offer all or part of their resource as an EDR for an operating day, the MP should reduce the availability of that resource as an LMR in the DSRI Tool for all 24 hours of the same operating day by the maximum MW amount offered for that resource as an EDR. In addition, if an MP has voluntarily implemented any resources registered as an LMR, the MP should adjust the availability of that resource in the DSRI Tool.
   B. Tier I prices are in effect from Max Gen Warning until an Emergency Event Step 2, when Tier II prices are implemented. This is an ex-post ELMP pricing change and does NOT affect system commitment or dispatch. Emergency Pricing will be utilized as necessary on an LBA basis.
3. Max Gen Event
   A. MISO will implement Emergency Pricing - Tier II during Step 2 of an Emergency Event. This is an ex-post ELMP pricing change and does NOT affect system commitment or dispatch. Emergency Pricing will be utilized as necessary on an LBA basis.

Attachment 6 — Maximum Generation Emergency Overview

The following is an overview of Max Gen Emergency actions and should be used for reference only during an actual event.

Table 4: Maximum Generation Emergency Overview

Level	MISO Major Actions	Stakeholder Major Actions
Capacity Advisory	Send OI Declaration message and RCIS notification	Prepare to implement this procedure and follow internal procedures for Emergency Conditions Update market data (availability, offers, constraints, load forecast values, etc.)
	Declare Conservative System Operations (if conditions warrant)	Follow instructions per Conservative System Operations procedure and declaration
	Determine if LMR Scheduling Instructions should be issued (in anticipation of Event Step 2 or higher) – send informational message and LMR Scheduling Instructions via MCS if needed	LBAs/MPs ensure accuracy of LMM/LMR availability and Self-Scheduled values in MCS/DSRI Tools
	Increase STR Default if System-Wide or STR MSSC if North/Central or South Region	Implement LMRs if notified by MISO
Warning	Implement Emergency Pricing - Tier I	LBAs/TOPs provide potential exclusion of constrained pockets within the declaration area
	Send LBAs LMM survey	Affected GOPs communicate capacity-limited facilities to MISO and update Limits/Offers
	Raise transfer capability or make Constraint Stranded MW from generation available	TOPs coordinate with MISO RC to identify potential reconfiguration options
	Request MPs/LBAs ensure accuracy of LMM/ LMR availability and Self-Scheduled values	LBAs/MPs ensure accuracy of LMM/LMR availability and Self-Scheduled values in MCS/ DSRI Tools

Table 4: Maximum Generation Emergency Overview

Level	MISO Major Actions	Stakeholder Major Actions
Warning	Determine EDR availability and MW amounts	MPs update EDR availability and MW amounts
	Obtain updated MW amounts of relief available via Load Management Form in MCS	LBAs update LMM availability via Load Management Form in MCS
	Review LMR availability using MCS-LMR Tool	MPs ensure LMR availability data is correct in the DSRI Tool
	Schedule available Module E Resources into the declaration area	MPs schedule available Module E Resources into the declaration area
	Suspend CTS	
	Curtail Export Schedules as required	
	Notify affected GOPs with Generators de-rated due to environmental restrictions to request waivers from appropriate government agencies	Affected GOPs request waivers from the appropriate government agencies for Generators de-rated due to environmental restrictions
	Evaluate options for returning Transmission and Generation services	
	Instruct TOPs to implement reconfiguration options	As directed by MISO RC, implement reconfiguration options
	Commit AME Resources and Declare Event Step 1/EEA 1	As directed by MISO, LBAs/GOPs/MPs start AME Resources
Event Step 1/EEA1	Implement Emergency Pricing – Tier I, if not already completed in the Warning step	
	Declare EEA1	
	Activate Emergency Maximum Limits	MPs review Offers and ensure all available Emergency Ranges and Resources are offered

Event Step 2/EEA2	Declare EEA2	
	Implement Emergency Pricing - Tier II	
	Instruct Load to be reduced via LMMs - Stage 1 and LMRs	As directed by MISO, LBAs reduce Load via LMM - Stage 1
	Implement LMRs	MPs implement LMRs via DSRI Tool
	Commit EDR Resources	As directed by MISO, MPs commit EDRs
	Implement Emergency Energy purchases	
	Instruct LBAs to issue Public Appeals	LBAs issue public appeals to reduce demand per internal procedures and OE-417 filings
		LBAs in defined Event area shall prepare to shed Load
	Notify affected GOPs with de-rated Generators to implement waivers for dispatch	Affected GOPs implement waivers to dispatch de-rated Generators
	Implement Emergency Energy purchases from neighboring BAs (Operating Reserves)	
	Instruct Load to be reduced via LMMs – Stage 2	Affected LBAs reduce Load via LMM – Stage 2
	Implement spinning and supplemental reserves	
	Implement Reserve Call from CRSG	

Table 4: Maximum Generation Emergency Overview

Level	MISO Major Actions	Stakeholder Major Actions
Event Step 3/EEA3	Declare EEA3	
	Issue Emergency Operating Instruction to shed Load if Contingency Reserves are depleted or to recover ACE from loss of Generation	LBAs shed Load per MISO instructions and confirm action via MCS Firm Load Shed Tool
	Set LMPs and MCPs to the VOLL	LBAs review OE-417 filing requirements

Attachment 7 — UDS Operator Actions During a MISO Market Capacity Emergency

- If a North/Central declaration is in place and a South declaration is subsequently implemented, Increase STR Default Values.

SO-P-EOP-00-002 MISO Market Capacity Emergency - UDS Operator Actions								
		Increase STR RPE MSSC Default Values for **Zone 8** (South) if not done in previous declaration*	Increase STR RPE Default Values for **Non-Zone** (N/C) if not done in previous declaration*	Increase STR Default Values for System Current (**System-Wide**) if not done in previous declaration*	Implement Emergency Pricing **Tier I**	Activate **Emergency Limits**	Implement Emergency Pricing **Tier II**	Check **Is VOLL Price Enforced** in EMD
System-Wide Declaration Level	Capacity **Advisory**	■	■	■				
	Max Gen **Warning**	■	■	■	■			
	Max Gen **Event Step 1**	■	■	■	■	■		
	Max Gen **Event Step 2**	■	■	■		■	■	
	Max Gen **Event Step 3**	■	■	■		■	■	■
North/Central Declaration Level	Capacity **Advisory**		■					
	Max Gen **Warning**		■		■			
	Max Gen **Event Step 1**		■		■	■		
	Max Gen **Event Step 2**		■			■	■	
	Max Gen **Event Step 3**		■			■	■	■
South Declaration Level	Capacity **Advisory**	■						
	Max Gen **Warning**	■			■			
	Max Gen **Event Step 1**	■			■	■		
	Max Gen **Event Step 2**	■				■	■	
	Max Gen **Event Step 3**	■				■	■	■
Single Region (North or Central) Declaration Level	Capacity **Advisory**							
	Max Gen **Warning**				■			
	Max Gen **Event Step 1**				■	■		
	Max Gen **Event Step 2**					■	■	
	Max Gen **Event Step 3**					■	■	■

Figure 1: UDS Operator Actions During a MISO Market Capacity Emergency

Attachment 8 — Summary of Market Capacity Emergency Procedure Steps

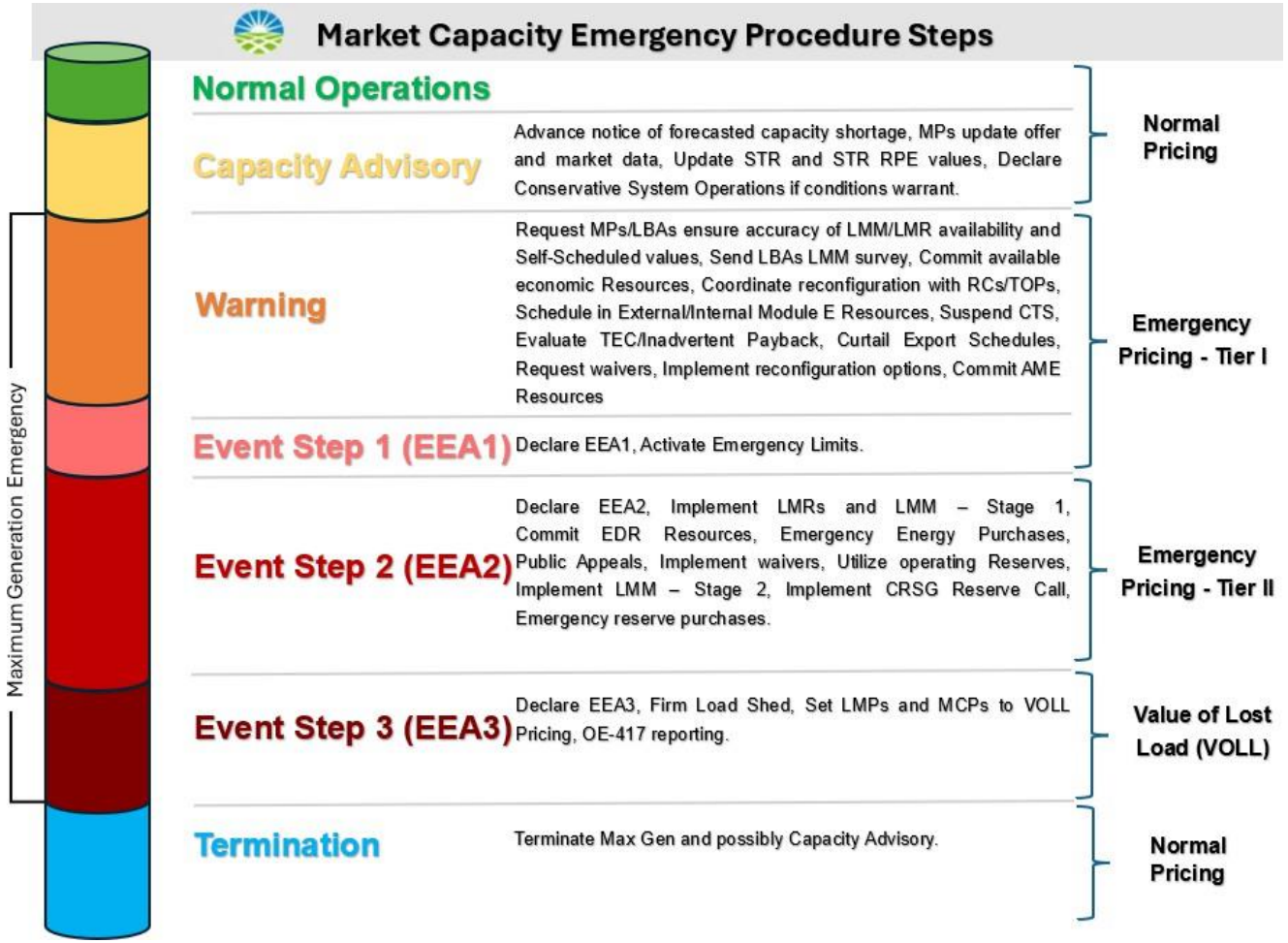


Figure 2: Market Capacity Emergency Procedure Steps

Attachment 9 — Market Capacity Emergency Checklist – MISO Actions

MCE CHECKLIST - MISO ACTIONS

4.1.1 Capacity Advisory

☐ Start_____End_____SM – **COMMUNICATE** Capacity Advisory declaration area boundaries, start time, and end time to MISO members via OI and RCIS. I**NFORM** UDS Operator for STR Default and RPE MSSC Overrides.

☐ Start_____ End_____ SM – **DECLARE** Conservative Operations if conditions warrant and not already declared.

☐ Start_____ End_____ SM – If a significant shortage of Operating Reserves is anticipated in any RAC process, THEN **DETERMINE** whether to issue LMR Scheduling Instructions in anticipation of a Max Gen Event Step 2.

☐ Start_____ End_____ UDS – **UPDATE** STR Default and/or RPE MSSC Overrides based on Capacity Advisory Region(s).

☐ Start_____ End_____ SM/ORA – **NOTIFY** DA and FRAC Operators when STR Default or RPE MSSC Overrides are updated.

4.2.2 Max Gen Warning

☐ Start_____End_____SM – **COMMUNICATE** Max Gen Warning declaration area boundaries, start time, and end time to MISO members via OI and RCIS.

☐ Start_____ End_____ UDS – **IMPLEMENT** Emergency Pricing - Tier I.

☐ Start_____ End_____ SM – **SEND** survey via MCS LMM Tool in the Load Management Tab to LBAs.

☐ Start_____ End_____ G&I – **COORDINATE** with MPs that have Module E Resources.

☐ Start_____ End_____ RC – **COORDINATE** with neighboring RCs and MISO TOPs to **RAISE** transfer capability into declaration area, make available Constraint Stranded MW from generation, review TLR activity, binding constraints, reconfiguration options, and use of short-term ratings.

☐ Start_____ End_____ SM – **REVIEW** EDR offers to determine EDR availability and MW amounts during the Warning period.

☐ Start_____ End_____ SM – **OBTAIN** updated LMM Stage 1 & 2 MW amounts of relief available during the effective Warning period by LBA from MCS.

☐ Start_____ End_____ SM – **REVIEW** LMR availability in MCS-LMR Tool for the declaration period.

☐ Start_____ End_____ SM/BAO – SM **DIRECT** BAO to **TERMINATE** Inadvertent Payback and Time Error Correction if required to assist system conditions.

☐ Start_____End_____SM – **SEND** OI message to MPs to **SCHEDULE** remaining available External and Internal Module E Registered Capacity Resources that would be deliverable to the Warning area.

☐ Start_____ End_____ SM/GI – **COORDINATE** to notify MPs to **SCHEDULE** Module E Resources into the MBAA declaration area.

☐ Start_____ End_____ G&I – **NOTIFY** SM of forecasted changes in MBAA NSI due to loss of imports.

☐ Start_____ End_____ G&I – **MODIFY** webTrans E-tag validation mode to reflect Max Gen in the affected area per SO-I-EOP-00-006 Interchange Scheduling Operations during Emergency Conditions.

☐ Start_____ End_____ G&I – **COORDINATE** to determine the amount of non-firm and firm Export Schedules to curtail per SO-I-EOP-00-006 Interchange Scheduling Operations during Emergency Conditions.

☐ Start_____ End_____ G&I – **CURTAIL** Export Schedules from the declaration area in amounts required to relieve shortage conditions.

☐ Start_____ End_____ SM – **NOTIFY** GOPs via OI in the declaration area with Generators de-rated due to environmental restrictions to **REQUEST** waivers from appropriate government agencies if forecasts show probable escalation to Max Gen Event Step 2.

☐ Start_____ End_____ RC – **NOTIFY** TOPs to **IMPLEMENT** reconfiguration options agreed upon to raise transfer capability into the declaration area or make available constraint stranded MW from generation.

☐ Start_____ End_____ G&I – **SUSPEND** Coordinated Transaction Scheduling (CTS) for the duration of the Capacity Emergency per SO-I-AOP-00-224 CTS Failure Modes.

☐ Start_____ End_____ SM/IRAC – **COMMIT** AME designated resources AND **DECLARE** Max Gen Event Step 1 and EEA1.

4.2.3 Max Gen Event Step 1/EEA1

☐ Start_____ End_____ SM – **COMMUNICATE** Max Gen Event Step 1/EEA1 declaration area boundaries, start time, and end time to MISO members via OI and RCIS.

☐ Start_____ End_____ SM – **NOTIFY** Director On-Call to implement SO-P-AOP-00-217 MISO and State Officials 24x7 Communication Protocols During Emergencies.

☐ Start_____ End_____ UDS – **IMPLEMENT** Emergency Pricing - Tier I in EMD, if not already implemented.

☐ Start_____ End_____ IRAC – **ENSURE** Emergency Ranges are pushed in EMD.

☐ Start_____ End_____ UDS – **ACTIVATE** Emergency Maximum Limits in EMD , excluding units providing Regulation.

☐ Start_____ End_____ SM – If increasing load forecasts continue to result in negative Reserve Margin after all resources are committed and dispatched into Emergency Ranges, THEN **PREPARE** to move to Max Gen Event Step 2 and EEA2.

4.2.4 Max Gen Event Step 2/EEA2

☐ Start_____ End_____ SM – **COMMUNICATE** Max Gen Event Step 2/EEA2 declaration area boundaries, start time, and end time to MISO members via OI and RCIS.

☐ Start_____ End_____ UDS – **IMPLEMENT** Emergency Pricing - Tier II in EMD.

☐ Start_____ End_____ SM – If Manitoba Hydro (MHEB) is in an EEA concurrently with MISO's EEA2 or higher, THEN **PERFORM** SO-I-NOP-00-481 MISO-Manitoba Hydro Concurrent EEA.

☐ Start_____ End_____ SM – **NOTIFY** LBAs of required Load reduction via LMM – Stage 1 and LMRs in MW amounts via MCS.

☐ Start_____ End_____ SM – **COORDINATE** with MPs on implementing LMRs.

☐ Start_____ End_____ SM – **DETERMINE** OE-417 reporting responsibilities per SO-P-NOP-04 MISO Event Reporting Operations Plan.

☐ Start_____ End_____ SM – **ENSURE** required notifications are performed per SO-I-NOP-00-448 Event Communications Matrix.

☐ Start_____ End_____ SM – **COMMIT** EDR resources, in merit order, to alleviate capacity shortages within the declaration area per SO-I-NOP-00-404 Emergency Demand Response Implementation.

☐ Start_____ End_____ SM – **COORDINATE** with neighboring RCs and BAs to determine Emergency Energy available from external sources, either through interruptible firm Load or through Emergency Energy purchases.

☐ Start_____ End_____ SM/G&I – **IMPLEMENT** Emergency Energy purchases from neighboring BAs to conserve Operating Reserves per SO-I-NOP-00-479 Purchasing and Selling Emergency Energy.

☐ Start_____ End_____ SM – **EVALUATE** opportunities to reduce internal energy usage, such as sending non-essential personnel home, reducing lighting that is non-essential for personnel safety, and reducing large electrical Loads.

☐ Start_____ End_____ SM – **INSTRUCT** LBAs in the declaration area to **ISSUE** public appeals to reduce demand per their internal procedures.

☐ Start_____ End_____ SM – **NOTIFY** GOPs via OI in the declaration area with Generators de-rated due to environmental restrictions to implement waivers from the appropriate government agencies.

☐ Start_____ End_____ SM – **NOTIFY** LBAs, via MCS, of required Load reduction via LMM - Stage 2 in MW of interruptible demands.

☐ Start_____ End_____ RC – **COORDINATE** with neighboring RCs and BAs to identify additional available Emergency Energy, including their Operating Reserves.

☐ Start_____ End_____ G&I – SM/G&I – **IMPLEMENT** Emergency Energy purchases of neighboring BAs Operating Reserves if available.

☐ Start_____ End_____ BAO – **IMPLEMENT** the use of MISO's Spinning and Supplemental Reserves, as needed and as time permits.

☐ Start_____ End_____ SM – If Contingency Reserves fall below MSSC for greater than 30 minutes and NO reasonable actions exist to restore them in 90 minutes, THEN **DECLARE** EEA3.

☐ Start_____ End_____ BAO – **IMPLEMENT** a Reserve Call from Contingency Reserve Sharing Group (CRSG), utilizing MHEB's available Contingency Reserves.

☐ Start_____ End_____ SM/IRAC – **EVALUATE** excluding Regulating Units that have room between Reg Max and Emergency Max from clearing Regulation, while **ENSURING** enough Regulating Reserve is available to avoid firm Load shed for normal ACE deviations.

4.2.5 Max Gen Event Step 3/EEA3

☐ Start_____ End_____ SM - **COMMUNICATE** Max Gen Event Step 3/EEA3 declaration area boundaries, start time and end time to MISO members via OI and RCIS.

☐ Start_____ End_____ SM – **DETERMINE** manual Load Shedding requirements based on increasing Load or potential loss of MSSC and ability to recover ACE. **ENSURE** Load Shed points are known and members are prepared to execute Load Shed when Contingency Reserves are depleted and Load continues to increase or ACE recovery from generation loss is only possible through Load Shed.

☐ Start_____ End_____ SM – **ISSUE** Emergency Operating Instructions to LBAs in the declaration area for MW amounts of Load to shed via the MCS Firm Load Shed Tool or verbally per SO-P-NOP-10-431 Communications Protocol for Operating Instructions.

☐ Start_____ End_____ UDS – When notified by SM, in the EMD UDS tab, **CHECK** the appropriate box(es) in the column titled “Is Voll Price Enforce” for the applicable LBAs. **SAVE** updates.

☐ Start_____ End _____ SM – If firm Load Shed is greater than 100MW, THEN **DETERMINE** OE-417 reporting responsibilities per SO-P-NOP-04 MISO Event Reporting Operations Plan.

☐ Start_____ End_____ SM – **ENSURE** required notifications are performed per SO-I-NOP-00-448 Event Communications Matrix.

4.2.6 Max Gen Event Downgrade/Termination

☐ Start_____ End_____ SM – When actual obligations return below total MISO capability, then Downgrade/Terminate Max Gen Event by reversing the order of entry into each step.

Attachment 10 — Market Capacity Emergency Checklist – Member Actions

MCE CHECKLIST - MEMBER ACTIONS

4.1.2 Capacity Advisory

☐ Start_____ End_____ LBA/TOP/GOP/MP - WHEN notified by MISO, THEN **ENSURE** all market data is updated with the best available information for the operating day(s).

- Facility and generation availability, outages, and de-rates
- Generation Offers, including any changes to reflect fuel availability
- Fuel supply and inventory concerns
- Fuel switching capabilities
- Environmental constraints
- Load forecast Values
- LMR Availability in the DSRI Tool
- Voluntary Load Management information
- Load Management Measures (LMM) and any Voluntary Load Management in the MCS
- Emergency Demand Response (EDR) offers

☐ Start_____ End_____ MP - IF notified by MISO, THEN **IMPLEMENT** LMRs.

☐ Start_____ End_____ LBA/TOP/GOP – **FOLLOW** MISO's SO-P-NOP-00-449 Conservative System Operations procedure, if declared.

4.3.1 Max Gen Warning

☐ Start_____ End_____ LBA/TOP – **DETERMINE** potential exclusions of constrained pockets within the declaration area where there is expected to be adequate generation that may NOT be transferred to other parts of the declaration area due to local constraints.

☐ Start_____ End_____ TOP – **INFORM** MISO RC of identified constrained areas from previous step.

☐ Start_____ End_____ GOP – If generators are de-rated, then **INFORM** LBAs, TOPs, and the MISO G&I Operator of capacity-limited facilities.

☐ Start_____ End_____ MP – **ENSURE** accuracy of LMR availability and Self-Scheduled/Voluntary Load Management LMRs in the DSRI Tool.

☐ Start_____ End_____ LBA – **ENSURE** accuracy of Non-LMR Voluntary Load Management/ Self-Scheduled LMM information in the MCS-LMR Tool.

☐ Start_____ End_____ TOP – **COORDINATE** with the MISO RC to determine reconfiguration options to raise transfer capability to declaration area or make available Constraint Stranded MW from generation in the declaration area.

☐ Start_____ End_____ LBA – Based on Load Shed methodology, **PREPARE** for potential Load Shed during an Event stage.

☐ Start_____ End_____ MP – **UPDATE** EDR offers for availability and MW amounts for the declaration period.

☐ Start_____ End_____ LBA – **SUBMIT** LMM availability via MCS per Attachment 3 — Load Management Update Form Example.

☐ Start_____End_____MP – **ENSURE** accuracy of registered LMR availability in the DSRI Tool.

☐ Start_____ End_____ MP – **SCHEDULE** remaining available External and Internal Resources (Module E Registered Capacity Resources) that are deliverable to the declaration area.

☐ Start_____ End_____ LBA – **NOTIFY** Interruptible Loads of potential interruption.

☐ Start_____ End_____ GOP – **REQUEST** waivers for de-rated Generators from government agencies as directed by MISO.

☐ Start_____ End_____ TOP – **IMPLEMENT** agreed upon reconfiguration options to raise transfer capability into the declaration area or make available Constraint Stranded MW from generation in the declaration area.

☐ Start_____ End_____ GOP – WHEN notified by MISO, THEN **START** applicable off-line AME Generation Resources.

4.3.2 Max Gen Event Step 1/EEA1

☐ Start_____ End_____ GOP – WHEN Resources are dispatched, THEN **ENSURE** Resources move into Emergency Ranges.

☐ Start_____ End_____ GOP – **ENSURE** all co-generation and independent power producers are at maximum output and availability.

☐ Start_____ End_____ GOP – IF additional reliable capacity is available (such as adding additional mills, duct burners, etc.), THEN **COORDINATE** adjustments with the MISO G&I Operator

.

4.3.3 Max Gen Event Step 2/EEA2

☐ Start_____ End_____ LBA – IF in the declaration area and notified by MISO to reduce Load via LMM – Stage 1, THEN **REDUCE** load via LMM – Stage 1. WHEN Load reduction actions have been implemented, THEN **NOTIFY** MISO.

☐ Start_____ End_____ MP – WHEN notified by MISO, THEN **IMPLEMENT** LMRs.

☐ Start_____ End_____ MP – WHEN notified by MISO, THEN **COMMIT** EDR Resources.

☐ Start_____ End_____ LBA – WHEN instructed by MISO, THEN **ISSUE** public appeals to reduce demand per internal procedures.

☐ Start_____ End_____ LBA – **EVALUATE** opportunities to reduce internal energy usage, such as sending non-essential personnel home, reducing lighting that is non-essential for personnel safety, and reducing large electrical Loads.

☐ Start_____ End_____ LBA – IF in the declaration area, THEN **PREPARE** to shed load.

☐ Start_____ End_____ GOP – IF requested by MISO to dispatch available capacity, THEN **VERIFY** Generators in the declaration area with de-rates from environmental restrictions AND IF approved waiver from government regulations, THEN **DISPATCH** available generation.

☐ Start_____ End_____ LBA – IF in the declaration area and notified by MISO to reduce Load via LMM – Stage 2, THEN **REDUCE** Load via LMM – Stage 2. WHEN Load reduction actions have been implemented, THEN **NOTIFY** MISO via MCS.

☐ Start_____ End_____ GOP/MP – **REVIEW** Offers, **ENSURE** all available Emergency Ranges and Resources are offered. IF there are available Resources or capacity NOT being utilized, THEN **NOTIFY** the MISO G&I Operator.

4.3.4 Max Gen Event Step 3/EEA3

☐ Start_____ End_____ LBA – **SHED** firm Loads per MISO issued Emergency Operating Instruction.

☐ Start_____ End_____ LBA – **CONFIRM** actions taken with the MISO RC via the MCS Firm Load Shed Tool or verbally per SO-P-NOP-10-431 Communications Protocol for Operating Instructions.

☐ Start_____ End_____ LBA – IF requested by MISO during Event Step 3, THEN **COMPLETE** Department of Energy (DOE) Form OE-417.

4.3.5 Max Gen Event Downgrade/Termination

☐ Start_____ End_____ LBA/MP/TOP/GOP – **PERFORM** requests of MISO SM or designee to back out of each level.