

Project 2009-03 Emergency Operations (EOP-001-2.1b, -002-3.1, and -003-2) Consideration of Issues and Directives | July 2014

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Issue or Directive	Source	Consideration of Issue or Directive
<p>P 571 (S- Ref 10066 – EOP-002)</p> <p>“As we stated in the NOPR, neither EOP-002-2 nor any other Reliability Standard addresses the impact of inadequate transmission during generation emergencies. The Commission agrees with MRO that “insufficient transmission capability” could be due to various causes. The ERO should examine whether to clarify this term in the Reliability Standards development process.”</p>	<p>FERC Order No. 693</p>	<p>The EOP SDT has included transmission related items to be included in the Transmission Operator’s Emergency Operating Plan. These items impact transmission capability and include Requirement R1, Parts 1.2.3-1.2.5:</p> <ul style="list-style-type: none"> 1.2.3. Cancellation or recall of Transmission and generation outages; 1.2.4. System reconfiguration; 1.2.5. Redispatch of generation request;
<p>573 (S- Ref 10067 – EOP-003)</p> <p>“The Commission agrees with FirstEnergy that for demand-side resources to qualify as another tool for balancing authorities to use in meeting control performance and disturbance control Reliability Standards, they must meet comparable technical performance requirements as generation resource options. In response to comments from Comverge and APPA, the Commission believes that curtailable loads are adequately addressed in Requirement R6 of</p>	<p>FERC Order No. 693</p>	<p>The EOP SDT removed EOP-001-2.1b, Attachment 1 and incorporated it into this standard under the applicable requirements. The EOP SDT developed individual requirements for the Transmission Operator and the Balancing Authority to develop, maintain and implement Emergency Operating Plan. The requirements incorporate the applicable elements of Attachment 1 for each entity.</p> <p>R1. Each Transmission Operator shall develop, maintain, and implement a Reliability Coordinator-approved Emergency Operating Plan to mitigate operating Emergencies on its Transmission System. At a minimum, the Emergency Operating Plan shall include the following elements: <i>[Violation Risk Factor: High] [Time Horizon: Real-Time Operations, Operations Planning]</i></p> <ul style="list-style-type: none"> 1.1. Roles and responsibilities to activate the Emergency Operating Plan;

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<p>the Reliability Standard but that demand response is not covered. Demand response covers considerably more resources than interruptible load. Accordingly, the Commission directs the ERO to modify the Reliability Standard to include all technically feasible resource options in the management of emergencies. These options should include generation resources, demand response resources and other technologies that meet comparable technical performance requirements.”</p>		<p>1.2. Strategies to prepare for and mitigate Emergencies including, at a minimum:</p> <ul style="list-style-type: none"> 1.2.1. Notification to the Reliability Coordinator, to include current and projected System conditions, when experiencing an operating Emergency; 1.2.2. Voltage control; 1.2.3. Cancellation or recall of Transmission and generation outages; 1.2.4. System reconfiguration; 1.2.5. Redispatch of generation request; 1.2.6. Operator-controlled manual Load shedding plan coordinated to minimize the use of automatic Load shedding; 1.2.7. Mitigation of reliability impacts of extreme weather conditions; and <p>1.3. Strategies for coordinating Emergency Operating Plans with impacted Transmission Operators and impacted Balancing Authorities.</p> <p>R2. Each Balancing Authority shall develop, maintain and implement a Reliability Coordinator-approved Emergency Operating Plan to mitigate Capacity and Energy Emergencies. At a minimum, the Emergency Operating Plan shall include the following elements: <i>[Violation Risk Factor: High] [Time Horizon: Real-Time Operations, Operations Planning]</i></p> <ul style="list-style-type: none"> 2.1. Roles and responsibilities to activate the Emergency Operating Plan; 2.2. Notification to the Reliability Coordinator, to include current and projected System conditions, when experiencing a Capacity Emergency or Energy Emergency;

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		<p>2.3. Criteria to declare an Energy Emergency Alert, per Attachment 1;</p> <p>2.4. Strategies to prepare for and mitigate Emergencies including, at a minimum:</p> <p>2.4.1. Generating resources in its Balancing Authority Area:</p> <ul style="list-style-type: none"> 2.4.1.1. capability and availability; 2.4.1.2. fuel supply and inventory concerns; 2.4.1.3. fuel switching capabilities; and 2.4.1.4. environmental constraints. <p>2.4.2. Voluntary Load reductions;</p> <p>2.4.3. Public appeals;</p> <p>2.4.4. Requests to government agencies to implement their programs to achieve necessary energy reductions;</p> <p>2.4.5. Reduction of internal utility energy use;</p> <p>2.4.6. Customer fuel switching;</p> <p>2.4.7. Use of Interruptible Load, curtailable Load and demand response;</p> <p>2.4.8. Operator-controlled manual Load shedding plan coordinated to minimize the use of automatic Load shedding; and</p> <p>2.4.9. Mitigation of reliability impacts of extreme weather conditions.</p> <p>2.5. Strategies for coordinating Emergency Operating Plans with impacted Balancing Authorities and impacted Transmission Operators.</p>

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<p>595 (S- Ref 10072 – EOP-003)</p> <p>“The Commission concludes that the Reliability Standard needs to be modified to ensure that adequate load shedding capabilities are provided so that system operators have an effective operating measure of last resort to contain system emergencies and prevent cascading. The Commission recognizes that the amount of load shedding capability required is dependent on system characteristics and therefore it may not be feasible to have a uniform nationwide load shedding capability. This, however, does not preclude a uniform nationwide criterion on the methodology for establishing load shedding capability that would specify the minimum amount of load shedding capability that should be provided based on system characteristics and conditions and the maximum amount of delay before load shedding can be implemented. The Commission directs the ERO to address the minimum load and maximum time concerns of the Commission through the Reliability Standards development process. We suggest that a review of industry best practices</p>	<p>FERC Order No. 693</p>	<p>The EOP SDT removed EOP-001-2.1b, Attachment 1 and incorporated it into this standard under the applicable requirements. The EOP SDT developed individual requirements for the Transmission Operator and the Balancing Authority to develop, maintain and implement Emergency Operating Plan. The requirements incorporate the applicable elements of Attachment 1 for each entity.</p> <p>R1. Each Transmission Operator shall develop, maintain, and implement a Reliability Coordinator-approved Emergency Operating Plan to mitigate operating Emergencies on its Transmission System. At a minimum, the Emergency Operating Plan shall include the following elements: <i>[Violation Risk Factor: High] [Time Horizon: Real-Time Operations, Operations Planning]</i></p> <ul style="list-style-type: none"> 1.1. Roles and responsibilities to activate the Emergency Operating Plan; 1.2. Strategies to prepare for and mitigate Emergencies including, at a minimum: <ul style="list-style-type: none"> 1.2.1. Notification to the Reliability Coordinator, to include current and projected System conditions, when experiencing an operating Emergency; 1.2.2. Voltage control; 1.2.3. Cancellation or recall of Transmission and generation outages; 1.2.4. System reconfiguration; 1.2.5. Redispatch of generation request; 1.2.6. Operator-controlled manual Load shedding plan coordinated to minimize the use of automatic Load shedding; 1.2.7. Mitigation of reliability impacts of extreme weather conditions; and

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would be useful in developing nationwide criteria.		<p>1.3. Strategies for coordinating Emergency Operating Plans with impacted Transmission Operators and impacted Balancing Authorities.</p> <p>R2. Each Balancing Authority shall develop, maintain and implement a Reliability Coordinator-approved Emergency Operating Plan to mitigate Capacity and Energy Emergencies. At a minimum, the Emergency Operating Plan shall include the following elements: <i>[Violation Risk Factor: High] [Time Horizon: Real-Time Operations, Operations Planning]</i></p> <p>2.1. Roles and responsibilities to activate the Emergency Operating Plan;</p> <p>2.2. Notification to the Reliability Coordinator, to include current and projected System conditions, when experiencing a Capacity Emergency or Energy Emergency;</p> <p>2.3. Criteria to declare an Energy Emergency Alert, per Attachment 1;</p> <p>2.4. Strategies to prepare for and mitigate Emergencies including, at a minimum:</p> <p>2.4.1. Generating resources in its Balancing Authority Area:</p> <p style="padding-left: 40px;">2.4.1.1. capability and availability;</p> <p style="padding-left: 40px;">2.4.1.2. fuel supply and inventory concerns;</p> <p style="padding-left: 40px;">2.4.1.3. fuel switching capabilities; and</p> <p style="padding-left: 40px;">2.4.1.4. environmental constraints.</p> <p>2.4.2. Voluntary Load reductions;</p> <p>2.4.3. Public appeals;</p> <p>2.4.4. Requests to government agencies to implement their programs to achieve necessary energy reductions;</p>

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		<p>2.4.5. Reduction of internal utility energy use;</p> <p>2.4.6. Customer fuel switching;</p> <p>2.4.7. Use of Interruptible Load, curtailable Load and demand response;</p> <p>2.4.8. Operator-controlled manual Load shedding plan coordinated to minimize the use of automatic Load shedding; and</p> <p>2.4.9. Mitigation of reliability impacts of extreme weather conditions.</p> <p>2.5. Strategies for coordinating Emergency Operating Plans with impacted Balancing Authorities and impacted Transmission Operators.</p>
<p>P 597 (S- Ref 10073 – EOP-003)</p> <p>“As suggested by California PUC, periodic drills of simulated load shedding should involve all participants required to ensure successful implementation of load shedding plans. As such, the drills should extend beyond system operators to distribution operators and LSEs. The Reliability Standard should require periodic drills by entities subject to section 215, and require those entities to seek participation by other entities. The drills should test the readiness and functionality of the load shedding plans, including, at times, the actual deployment of personnel. Therefore the Commission disagrees with FirstEnergy that the</p>	<p>FERC Order No. 693</p>	<p>The Transmission Operator participates in Reliability Coordinator restoration drills and they will be able to shed Load with or without the Load-Serving Entity or Distribution Provider. Transmission Operators also participate in annual training required under Reliability Standard PER-005-2. NERC has launched the Risk-Based Registration (RBR) Initiative to ensure that the right entities are subject to the right set of applicable Reliability Standards, using a consistent approach to risk assessment and registration across the ERO. The goal is to develop enhanced registry criteria, including the use of thresholds and specific Reliability Standards applicability, where appropriate, to better align compliance obligations with material risk to Bulk Electric System reliability. The proposed enhancements reduce unnecessary burdens by all involved while preserving Bulk Electric System reliability and avoiding causing or exacerbating instability, uncontrolled separation, or cascading failures.</p>

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<p>requirement for periodic drills of simulated load shedding should be incorporated into the new PER-005-0 Reliability Standard that is currently being drafted to address operator training.”</p>		
<p>P 601 (S- Ref 10074 – EOP-003)</p> <p>“APPA Comments are in Paragraph 598: ‘In addition, APPA states that NERC should consider requiring balancing authorities and transmission operators to expand coordination and planning of their automatic and manual load shedding plans to include their respective Regional Entities, reliability coordinators and generation owners’.”</p>	<p>FERC Order No. 693</p>	<p>The EOP SDT removed EOP-001-2.1b, Attachment 1 and incorporated it into this standard under the applicable requirements. The EOP SDT developed individual requirements for the Transmission Operator and the Balancing Authority to develop, maintain and implement Emergency Operating Plan. The requirements incorporate the applicable elements of Attachment 1 for each entity.</p> <p>Coordination and planning of automatic and manual Load shedding has been adequately addressed by requiring Transmission Operators and Balancing Authorities to have a Reliability Coordinator-approved Emergency Operating Plan.</p> <p>R1. Each Transmission Operator shall develop, maintain, and implement a Reliability Coordinator-approved Emergency Operating Plan to mitigate operating Emergencies on its Transmission System. At a minimum, the Emergency Operating Plan shall include the following elements: <i>[Violation Risk Factor: High] [Time Horizon: Real-Time Operations, Operations Planning]</i></p> <ul style="list-style-type: none"> 1.1. Roles and responsibilities to activate the Emergency Operating Plan; 1.2. Strategies to prepare for and mitigate Emergencies including, at a minimum: <ul style="list-style-type: none"> 1.2.1. Notification to the Reliability Coordinator, to include current and projected System conditions, when experiencing an operating Emergency; 1.2.2. Voltage control;

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		<p>1.2.3. Cancellation or recall of Transmission and generation outages;</p> <p>1.2.4. System reconfiguration;</p> <p>1.2.5. Redispatch of generation request;</p> <p>1.2.6. Operator-controlled manual Load shedding plan coordinated to minimize the use of automatic Load shedding;</p> <p>1.2.7. Mitigation of reliability impacts of extreme weather conditions; and</p> <p>1.3. Strategies for coordinating Emergency Operating Plans with impacted Transmission Operators and impacted Balancing Authorities.</p> <p>R2. Each Balancing Authority shall develop, maintain and implement a Reliability Coordinator-approved Emergency Operating Plan to mitigate Capacity and Energy Emergencies. At a minimum, the Emergency Operating Plan shall include the following elements: <i>[Violation Risk Factor: High] [Time Horizon: Real-Time Operations, Operations Planning]</i></p> <p>2.1. Roles and responsibilities to activate the Emergency Operating Plan;</p> <p>2.2. Notification to the Reliability Coordinator, to include current and projected System conditions, when experiencing a Capacity Emergency or Energy Emergency;</p> <p>2.3. Criteria to declare an Energy Emergency Alert, per Attachment 1;</p> <p>2.4. Strategies to prepare for and mitigate Emergencies including, at a minimum:</p> <p>2.4.1. Generating resources in its Balancing Authority Area:</p> <p>2.4.1.1. capability and availability;</p> <p>2.4.1.2. fuel supply and inventory concerns;</p>

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		<p>2.4.1.3. fuel switching capabilities; and</p> <p>2.4.1.4. environmental constraints.</p> <p>2.4.2. Voluntary Load reductions;</p> <p>2.4.3. Public appeals;</p> <p>2.4.4. Requests to government agencies to implement their programs to achieve necessary energy reductions;</p> <p>2.4.5. Reduction of internal utility energy use;</p> <p>2.4.6. Customer fuel switching;</p> <p>2.4.7. Use of Interruptible Load, curtailable Load and demand response;</p> <p>2.4.8. Operator-controlled manual Load shedding plan coordinated to minimize the use of automatic Load shedding; and</p> <p>2.4.9. Mitigation of reliability impacts of extreme weather conditions.</p> <p>2.5. Strategies for coordinating Emergency Operating Plans with impacted Balancing Authorities and impacted Transmission Operators.</p>