

Standard Development Timeline

This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.

Development Steps Completed

1. Five Year Review Tam Recommendations posted for informal comment period (August 6-September 19, 2013).
2. Developed SAR, proposed revisions to the standard and response to comments posted (December 1, 2008).
3. SC authorized moving the SAR forward to standard development (December 16–17, 2008).

Description of Current Draft

This is the first draft of the proposed standard presented to the NERC Standards Committee for authorization [moving to move](#) the SAR forward to standard development. This draft includes the modifications based on comments submitted by stakeholders, as well as items identified in the SAR and applicable FERC directives from FERC Order 693.

Anticipated Actions	Anticipated Date
30-day Formal Comment Period	
45-day Formal Comment Period with Parallel Initial Ballot	
30-day Formal Comment Period with Parallel Successive Ballot	
Recirculation ballot	
BOT adoption	

Effective Dates

First day of the second calendar quarter beyond the date this standard is approved by applicable regulatory authorities, or in those jurisdictions where regulatory approval is not required, the standard becomes effective on the first day of the second calendar quarter beyond the date this standard is approved by the NERC Board of Trustees, or as otherwise made effective pursuant to the laws applicable to such ERO governmental authorities.

Version History

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed “Proposed” from Effective Date	Errata
1	November 1, 2006	Adopted by Board of Trustees	Revised
2	November 4, 2010	Adopted by Board of Trustees; Modified R4, R5, R6 and associated VSLs for R2, R4, and R7 to clarify that the requirements don’t apply to automatic underfrequency load shedding.	Revised to eliminate redundancies with PRC-006-1
2	May 7, 2012	FERC Order issued approving EOP-003-2 (approval becomes effective July 10, 2012)	
3	TBD	TBD	Five Year Review

Definitions of Terms Used in Standard

This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.

Term: definition.

When this standard has received ballot approval, the text boxes will be moved to the Application Guidelines Section of the Standard.

A. Introduction

1. **Title:** Load Shedding Plans
2. **Number:** EOP-003-~~23~~
3. **Purpose:** A Balancing Authority and Transmission Operator operating with insufficient generation or transmission capacity must have the capability and authority to shed load rather than risk an uncontrolled failure of the Interconnection
4. **Applicability:**
 - 4.1. **Functional Entities:**
 - 4.1.1 Balancing Authority
 - 4.1.2 Transmission Operator
5. **Background:**

Text

B. Requirements and Measures

- R1.** After taking all other remedial steps, a Transmission Operator or Balancing Authority operating with insufficient generation or transmission capacity shall shed customer load rather than risk an uncontrolled failure of components or cascading outages of the Interconnection. *[Violation Risk Factor: High]*
[Time Horizon:]

Rationale for R1:

- M1.** Text

- ~~**R2.** Each Transmission Operator shall establish plans for automatic load shedding for undervoltage conditions if the Transmission Operator or its associated Transmission Planner(s) or Planning Coordinator(s) determine that an under-voltage load shedding scheme is required. *[Violation Risk Factor: High]*
[Time Horizon:]~~

Rationale for R2:

~~M2.~~ Each Transmission Operator that has or directs the deployment of undervoltage load shedding facilities, shall have and provide upon request, its automatic load shedding plans. (Requirement 2)

~~R3.~~R2. Each Transmission Operator and Balancing Authority shall coordinate load shedding plans, excluding automatic under-frequency load shedding plans, among other interconnected Transmission Operators and Balancing Authorities. [*Violation Risk Factor: High*] [*Time Horizon:*]

Rationale for R3:

~~M3.~~M2. Text

~~R4.~~ A Transmission Operator shall consider one or more of these factors in designing an automatic under voltage load shedding scheme: voltage level, rate of voltage decay, or power flow levels. [*Violation Risk Factor: High*] [*Time Horizon:*]

Rationale for R4:

~~M4.~~ Text

~~R5.~~ A Transmission Operator or Balancing Authority shall implement load shedding, excluding automatic under frequency load shedding, in steps established to minimize the risk of further uncontrolled separation, loss of generation, or system shutdown. [*Violation Risk Factor: High*] [*Time Horizon:*]

Rationale for R5:

~~M5.~~ Text

~~R6.~~ After a Transmission Operator or Balancing Authority Area separates from the Interconnection, if there is insufficient generating capacity to restore system frequency following automatic underfrequency load shedding, the Transmission Operator or Balancing Authority shall shed additional load. *[Violation Risk Factor: High] [Time Horizon:]*

Rationale for R6:

~~M6.~~ Text

~~R7.~~ The Transmission Operator shall coordinate automatic undervoltage load shedding throughout their areas with tripping of shunt capacitors, and other automatic actions that will occur under abnormal voltage, or power flow conditions. *[Violation Risk Factor: High] [Time Horizon:]*

Rationale for R7:

~~M7.~~ Text

~~R8.~~R3. Each Transmission Operator or Balancing Authority shall have plans for operator controlled manual load shedding to respond to real-time emergencies. The Transmission Operator or Balancing Authority shall be capable of implementing the load shedding in a timeframe adequate for responding to the emergency. *[Violation Risk Factor: High] [Time Horizon:]*

Rationale for R8:

~~M8.~~M3. Each Transmission Operator and Balancing Authority shall have and provide upon request its manual load shedding plans that will be used to confirm that it meets Requirement 8. (Part 1)

C. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority

Regional Entity

1.2. Evidence Retention

Each Balancing Authority and Transmission Operator shall have its current, in-force load shedding plans.

- If an entity is found non-compliant the entity shall keep information related to the noncompliance until found compliant or for two years plus the current year, whichever is longer.
- Evidence used as part of a triggered investigation shall be retained by the entity being investigated for one year from the date that the investigation is closed, as determined by the Compliance Monitor.
- The Compliance Monitor shall keep the last periodic audit report and all requested and submitted subsequent compliance records.

1.3. Compliance Monitoring and Assessment Processes:

Compliance Audits

Self-Certifications

Spot Checking

Compliance Violation Investigations

Self-Reporting

Complaints Text

1.4. Additional Compliance Information

None

Table of Compliance Elements

R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
R1		High	N/A	N/A	N/A	The Transmission Operator or Balancing Authority failed to shed customer load.
R2		High	N/A	N/A	N/A	The Transmission Operator did not establish plans for automatic load shedding for undervoltage conditions as directed by the requirement.
R3		High	The responsible entity did not coordinate load shedding plans, as directed by the requirement, affecting 5% or less of its required entities.	The responsible entity did not coordinate load shedding plans, as directed by the requirement, affecting more than 5% up to (and including) 10% of its required entities.	The responsible entity did not coordinate load shedding plans, as directed by the requirement, affecting more than 10%, up to (and including) 15% or less, of its required entities.	The responsible entity did not coordinate load shedding plans, as directed by the requirement, affecting more than 15% of its required entities.
R4		High	N/A	N/A	N/A	The Transmission Operator failed to consider at least one of the three elements voltage level, rate of voltage decay, or

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						power flow levels) listed in the requirement.
R5		High	N/A	N/A	N/A	The Transmission Operator or Balancing Authority failed to implement load shedding in steps established to minimize the risk of further uncontrolled separation, loss of generation, or system shutdown.
R6		High	N/A	N/A	N/A	The Transmission Operator or Balancing Authority failed to shed additional load after it had separated from the Interconnection when there was insufficient generating capacity to restore system frequency following automatic underfrequency load shedding.
R7		High	The Transmission Operator did not coordinate automatic undervoltage load	The Transmission Operator did not coordinate automatic undervoltage load	The Transmission Operator did not coordinate automatic undervoltage load	The Transmission Operator did not coordinate automatic undervoltage load

			shedding with 5% or less of the types of automatic actions described in the Requirement.	shedding with more than 5% up to (and including) 10% of the types of automatic actions described in the Requirement.	shedding with more than 10% up to (and including) 15% of the types of automatic actions described in the Requirement.	shedding with more than 15% of the types of automatic actions described in the Requirement.
R8		High	N/A	The responsible entity did not have plans for operator controlled manual load shedding, as directed by the requirement.	The responsible entity has plans for manual load shedding but did not have the capability to implement the load shedding, as directed by the requirement.	The responsible entity did not have plans for operator controlled manual load shedding, as directed by the requirement nor had the capability to implement the load shedding, as directed by the requirement.

D. Regional Variances

None.

E. Interpretations

None.

F. Associated Documents

None.

Application Guidelines

Guidelines and Technical Basis

Requirement R1:

Requirement R2:

Requirement R3: