BPA Outage Planning and Coordination Policy
For Tier 1 and Tier 2 Equipment

Bonneville Power Administration
Transmission Operations

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# Table of Contents

Section 1: Purpose ........................................................................................................................... 3  
Section 2: Scope .............................................................................................................................. 3  
Section 3: Definitions ..................................................................................................................... 3  
Section 4: Policy............................................................................................................................ 5  
   4.1 Outage Notification .................................................................................................................. 5  
   4.2 Coordination and Communication ........................................................................................ 5  
Section 5: Responsibilities ............................................................................................................ 5  
   5.1 BPA Outage Offices (Dittmer or Munro) .............................................................................. 5  
   5.2 Outage Requestor .................................................................................................................. 5  
   5.3 Transmission Operations Study Engineers ....................................................................... 6  
Section 6: Procedures.................................................................................................................... 6  
   6.1 Scheduling an outage: ......................................................................................................... 6  
   6.2 Review of planned outages: ............................................................................................... 6  
   6.3 Assess Scheduling Conflicts: ............................................................................................ 6  
   6.4 Coordinate final outage plan: ............................................................................................ 7  
   6.5 Publish Final Outage Plan: .............................................................................................. 7  
   6.6 Revisions to the tier 1 or tier 2 equipment list: ................................................................. 7  
Section 7: References ................................................................................................................... 7  
Section 8: Policy Review and Revision Timelines ........................................................................ 7  
Appendix 1 - Outage Submission and Approval Timelines ....................................................... 9  
Appendix 2 – Tier 1 or tier 2 Equipment .................................................................................... 10
Section 1: Purpose

Proposed transmission outages that impact the Bulk Electrical System (BES) and paths that BPA is responsible for must be planned and coordinated among Balancing Authorities, Transmission Operators, and Reliability Coordinators. This includes any equipment that may affect the reliability of interconnected operations for the region.

This document provides technical requirements and criteria for transmission operations, maintenance, and construction staffs related to the submission of transmission outages for tier 1 or tier 2 equipment.

The goal of the coordination process is to minimize cases where schedule curtailments, generation redispatch, and load management actions are likely to occur on paths BPA operates.

Section 2: Scope

This policy addresses the roles, methods and procedures that inform BPA Outage Dispatchers of the equipment outages needed to support planned maintenance and construction as well as urgent and emergency work on the power system.

This policy only addresses needs for information relating to equipment that impacts the BES and when taken out of service, by itself or in conjunction with other equipment will require inclusion in a study. This information is conveyed to study personnel for modeling of the transmission system.

This policy does not address standards, methods and procedures used for next day studies or for the execution of the outages by real time dispatchers. This policy also does not supersede BPA’s Accident Prevention Manual or BPA’s Contractor: Clearance, Hold Order, and Work Permit Procedure.

Section 3: Definitions

COS – Peak Reliability Coordinated Outage System

DART - Daily Activity Record Tracking System, BPA’s system used to request, and process outages.

Day – 00:01 – 24:00 Pacific Prevailing Time (PPT)
**Facility Operator** - Entity with jurisdiction and physical control over Tier 1 or Tier 2 equipment that is capable of taking the tier 1 or tier 2 equipment out of service.

**Outage request** – An application for a period of time when tier 1 or tier 2 equipment (normally in service) is to be taken out of service.

**Outage process participants** – All facility operators responsible for operating the BES within their jurisdiction.

**Outage week** – Monday through Sunday

**Study** - Mathematical modeling of the transmission system that simulates generation and load levels, topology, equipment ratings, protection schemes, planned maintenance/construction outages, and potential contingencies.

**System Operating Limit (SOL)** – The value (such as MW, MVar, Amperes, Frequency or Volts) that satisfies the most limiting of the prescribed operating criteria for a specified system configuration to ensure operation within acceptable reliability criteria. System Operating Limits are based upon certain operating criteria. These include, but are not limited to:

- Facility Ratings (Applicable pre- and post-Contingency equipment or facility ratings)
- Transient Stability Ratings (Applicable pre- and post-Contingency Stability Limits)
- Voltage Stability Ratings (Applicable pre- and post-Contingency Voltage Stability)
- System Voltage Limits (Applicable pre- and post-Contingency Voltage Limits)

**Tier 1 or Tier 2 equipment** - Equipment that (when taken out of service) may impact the Bulk Electrical System or require a capacity reduction to assure reliable operation on a constrained path. This includes equipment outages that alone might not affect the electrical system or capacity, but under credible conditions, in combination with other outages, could have a significant impact or capacity reduction. For example, a 500kV Breaker outage may not force out a transmission line or transformer but the outage of that breaker can change the equipment forced out of service due to a breaker failure operation of another 500kV breaker in that station. Those impacts need to be included when determining transmission impacts and/or system capacity.

**Transmission Outage Request Timelines for Tier 1 or Tier 2 Equipment** (see Appendix 1)
Section 4: Policy

4.1 Outage Notification

BPA requires notification of Urgent, Emergency, and Planned outages of all transmission elements which can impact the BES and/or reduce system capacity for paths within its jurisdiction, in order to:

1. Meet reliability;
2. Meet safety standards;
3. Meet compliance requirements;
4. Meet availability requirements.

4.2 Coordination and Communication

BPA will coordinate and communicate outage plans so that:

1. Operating with a known and studied SOL, specific to the outage condition, is achieved;
2. Opportunities for maintenance and construction work for related equipment are known;
3. Operation of the system in a constrained condition is minimized.
4. Applications for planned outages of Tier 1 or Tier 2 equipment shall be made as far in advance as possible.

Section 5: Responsibilities

5.1 BPA Outage Offices (Dittmer or Munro)

BPA Outage Offices (Dittmer or Munro) receive and review outage requests, assure that equipment nomenclature is accurate, assess conflicting outages, communicate with facility operators, and finalize the outage plan.

5.2 Outage Requestor

An Outage Requestor is the facility owner or operator of the BES who requests an outage to perform planned maintenance, construction, urgent or emergency work.
5.3 Transmission Operations Study Engineers

Transmission Operations Study Engineers provide preliminary studies that model the potential contingencies and execute formal studies supporting SOL determination.

Section 6: Procedures

6.1 Scheduling an outage:

1. Outage requests originating within BPA are submitted by Substation Operators and [Construction Coordinators] thru DART and the outage is submitted to COS.

2. Outage requests by facility operators other than BPA are submitted via COS and communicated (verbally and by email) to the impacted participant.

6.2 Review of planned outages:

1. BPA Outage offices (Dittmer or Munro) review submitted outage requests to assess which equipment is involved, that all foreign clearances and hold orders are identified, and that the request meets the minimum advance notice requirement.

2. Requests that do not meet minimum timing requirements or are incomplete will be returned by the outage office to the requestor/submitter.

3. Note: BPA’s determination of compliance with minimum time requirements, (See Appendix 1) based on request type, will be made by applying the time at which the request status becomes “submitted” in COS.

6.3 Assess Scheduling Conflicts:

1. BPA Outage offices (Dittmer or Munro) develop a preliminary outage plan that includes all submitted outages for Tier 1 or Tier 2 equipment.

2. This preliminary plan will be used to assess impacts to the BES and identify potential outage scheduling conflicts.
6.4 Coordinate final outage plan:

1. BPA will facilitate a coordination meeting with outage process participants to identify and resolve conflicts.

6.5 Publish Final Outage Plan:

1. BPA will determine the final outage plan and assure that participants are informed of all required changes to individual outage requests (if any).

2. This plan is then used to perform SOL studies.

6.6 Revisions to the Tier 1 or Tier 2 equipment list:

1. BPA may modify (add or delete equipment) the Tier 1 or Tier 2 equipment list as needs arise.

2. If the modification involves equipment not owned by BPA, the modification will be coordinated with the facility owner/operator.

3. For BPA equipment, the modification will be coordinated with the affected owner.

4. Additions to the Tier 1 or Tier 2 equipment will be effective according to the timeline in Appendix 1.

Section 7: References

DART User Guide
WECC COS User Guides
NERC Standards
WECC Standards
BPA Operating Bulletin (OB-19)

Section 8: Policy Review and Revision Timelines

At a minimum, this policy will be reviewed annually.
### Version History

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<th>Description of Changes</th>
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Appendix 1 - Outage Submission and Approval Timelines

45 day requirement: Tier 1 Equipment outage requests are required to be in a submitted status in COS (or BPA’s DART system) 45 days prior to the month the outage is scheduled to start.

21 day requirement: Tier 2 Equipment outage requests are required to be in a submitted status in COS (or BPA’s DART system) no later than 21 days prior to the outage week in which the outage is scheduled to start.

If BPA determines that the coincidence of planned outages represents an unreasonable risk to reliability, BPA will take steps to negotiate changes to the planned outages thereby reducing operational risk. To the extent possible, the submittal time that the outage request was received will be taken into consideration, earliest to latest.

Additions/changes to Equipment in appendix 2:
If BPA determines that equipment must be added to the Tier 1 or Tier 2 Equipment listed in Appendix 2, BPA will allow 21 days until the change will be implemented.

Tier 1 or Tier 2 Equipment removed will take effect immediately.

Outage requests for Tier 1 or Tier 2 Equipment that do not meet the submission timeline:
BPA has the sole discretion to accommodate late outage requests. However, if BPA is unable to accommodate a change to an existing request or a new request, BPA will mitigate using established procedures.

A change to an existing request includes modification of: start time; stop time; equipment; isolating points and/or constraints.
Appendix 2 – Tier 1 or Tier 2 Equipment

Link will be provided to Appendix 2