

Attachment 1

Power System Emergency Action Plan

December 31, 2013

When a change in generation is needed to maintain system stability and reliability, the following is a list of pre-emptive actions that the power system will pursue to avoid or delay a situation that would result in the interruption or adjustment of protection measures contained in the respective Biological Opinions (BiOps). Should the items on the pre-emptive actions list be unavailable or fail to resolve a situation, or if the situation arises suddenly without warning, BPA shall initiate the process to declare an appropriate type of transmission or power system emergency. BPA's declaration of a transmission system emergency or BPA's request for the declaration of a power system emergency will initiate implementation of the actions from the Emergency Actions List.

Notification to the region will be made as soon as practical, and will follow the protocols for notification, reporting, and documentation as specified in the *Technical Management Team Emergency Protocols, Appendix 1 – Emergency Protocols of the TMT Water Management Plan*.

Pre-emptive Actions (not in priority order)

- Purchase Energy and/or reserves at prices up to the applicable FERC WECC price cap.
- Request that Corps and Reclamation return all possible units to service by canceling or postponing scheduled generator or equipment outages (e.g., makes all units available).
- Request the transmission dispatcher consider adjusting transmission system maintenance or other possible actions that would allow increases or decreases in FCRPS generation as appropriate.
- Put into service (on line) all possible generators (e.g., Grand Coulee pump-generators) while preserving sufficient energy storage to maintain reserve capability in subsequent hours
- Reshape flows within objectives at specific projects to meet immediate generation needs e.g., spill upstream projects to position water downstream.
- Cut any interruptible power commitments (e.g., PNCA storage return).
- Adjust pumping schedule at Banks Lake.
- Request variance from non-power operational objectives or limits at FCRPS hydro projects (e.g., forebay draft limits, tailwater rate of change, recreation, irrigation, Treaty fishing, etc...)
- Reduce the amount of balancing reserves provided by the FCRPS to the minimum amount necessary for power system stability and reliability.
- Acquire any resources made available through the issuance of a "Merchant Alert".
- After exhausting all available reserve sharing opportunities ask the transmission dispatcher to request the Reliability Coordinator to declare an Energy Emergency ALERT 1 when there is concern about sustaining required operating reserves.

Attachment 1 – TMT Emergency Protocols

Emergency Actions List

The following is a prioritized list of emergency actions. This list may be updated as necessary through coordination with the TMT. The order of the list will be followed as best as possible. The order and extent of the actual implementation of the actions in this list will be dictated by each specific emergency.

Implementation of actions from the Emergency Actions List will not occur unless BPA declares a transmission system emergency or BPA requests the declaration of a power system emergency. .

Emergency Actions List (Updated via TMT as of May 27, 2009)

April – August period (MW amounts are approximate)

- Increase generation at JDA to operate outside 1% up to full load
- Increase generation at TDA to operate outside 1% up to full load
- Reduce spill at LWG to RSW only (~9 kcfs) 70MW
- Reduce spill at LGS to RSW only
- Reduce spill at IHR to RSW with limited training spill (19 kcfs) 133MW
- Reduce spill at LMN to RSW only (~9 kcfs) 63 MW
- Reduce spill at LWG to 0 63MW
- Reduce spill at LGS to 0 77MW
- Reduce spill at LMN to 0 119 MW
- Reduce spill at IHR to RSW only (~9 kcfs) 133MW
- Reduce spill at IHR to 0 180MW
- Increase generation at MCN to operate outside 1% up to 16.5 kcfs per unit
- Increase generation at BON PH I to operate outside 1% up to full load
- Reduce spill at MCN to 20% of flow 180MW
- Reduce spill at BON to 50 kcfs while maintain B2CC spill 105/210MW
- Reduce MCN to TSW's only
- Reduce spill at BON to 0 200MW
- Reduce spill at JDA to 0 338MW
- Reduce spill at TDA to 30% 106MW
- Reduce spill at MCN to 0 (to save water for future hours)
- Reduce spill at TDA to 0 324MW
- Increase generation at BON PH II to operate outside 1% up to full load

September– March period

- Increase generation at JDA to operate outside 1% up to full load (Sep-Oct)
- Increase generation at TDA to operate outside 1% up to full load (Sep-Oct)
- Increase generation at MCN to operate outside 1% up to 16.5 kcfs per unit (Sep-Oct)
- Increase generation at BON to operate outside 1% up to full load (Sep-Oct)
- Shut off adult fish attraction BON
- Shut off TDA sluiceway
- Violation of BiOp ramp rates at HGH and LIB
- Increase project drafts that might impact spring refill.(HGH/LIB/DWR/ALF)

Definitions

Balancing Authority - The responsible entity that integrates resource plans ahead of time, maintains load-interchange-generation balance within a Balancing Authority Area, and supports Interconnection frequency in real time.

Balancing Authority Area - The collection of generation, transmission, and loads within the metered boundaries of the Balancing Authority. The Balancing Authority maintains load resource balance within this area.

BPA Power system – This term includes the Federal Columbia River hydropower projects and transmission system.

Energy Emergency Alerts – Procedures by which a Load Serving Entity can obtain capacity and energy when it has exhausted all other options and can no longer provide its customers' expected energy requirements. An Energy Emergency Alert may be initiated by Reliability Coordinator at 1) the Reliability Coordinator's own request, or 2) upon the request of a Balancing Authority, or 3) upon the request of a Load Serving Entity. 1

Energy Emergency Alert 1 - All available resources in use.

- Balance Authority, Reserve Sharing Group, or Load Serving Entity foresees or is experiencing conditions where all available resources are committed to meet firm load, firm transactions, and reserve commitments, and is concerned about sustaining its required Operating Reserves, and
- Non-firm wholesale energy sales (other than those that are recallable to meet reserve requirements) have been curtailed.

Energy Emergency Alert 2 – Load management procedures in effect.

- Balancing Authority, Reserve Sharing Group, or Load Serving Entity is no longer able to provide its customer' expected energy requirements, and is designated an Energy Deficient Entity.
- Energy Deficient Entity foresees or has implemented procedures up to, but excluding, interruption of firm load commitments.

Energy Emergency Alert 3 – Firm load interruption imminent or in progress.

- Balancing Authority or Load Serving Entity foresees or has implemented firm load obligation interruption. The available energy to the Energy Deficient Entity, as determined from Alert 2, is only accessible with actions taken to increase transmission transfer capabilities.

Energy Emergency Alert 0 - Termination

- When the Energy Deficient Entity believes it will be able to supply its customers' energy requirements, it shall request of its Reliability Coordinator that the Energy Emergency be terminated.

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Merchant Alert – The WECC Merchant Alert is a communication tool that provides load serving entities a means to exchange information regarding issues that could impact the reliable operation of the power system when there is a concern that an entity may not have sufficient resources to meet its obligations.

Redispatch – The intentional incrementing of location-specific generation and the corresponding decrementing of different location-specific generation to mitigate loading on constrained transmission facilities.