

# **Redispatch and Curtailment Procedures**

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## **BPA Transmission Business Practice**

Version ~~13~~14

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# Redispatch and Curtailment Procedures

## Version ~~13~~14

This Business Practice describes the Redispatch and Curtailment Procedures used to mitigate transmission system overloads and other reliability-related problems.<sup>1</sup>

### OATT Reference

- [Open Access Transmission Tariff \(OATT\)](#): Sections 13.6; 14.7; 33

For more information, visit the [BPA Transmission Business Practices webpage](#) or submit questions to [techforum@bpa.gov](mailto:techforum@bpa.gov).

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## A. General Requirements & Procedures

1. Curtailment or redispatch orders are initiated by BPA Transmission Services when:
  - a. Power flows are nearing or exceeding the established System Operating Limit (SOL) for a Managed Path or Bulk Electric System (BES) Element (within-interval curtailment);
  - b. Real-time analysis identifies curtailments are required to mitigate transmission constraints, including potential post-contingency reliability issues;
  - c. The forecasted flows or schedules exceed BPA’s Total Transfer Capability (TTC) or SOL for a Managed Path or BES Element for future intervals (future-interval curtailment); or
  - d. BPA Transmission Services determines that an emergency or unforeseen condition impairs or degrades, or threatens to impair or degrade, the reliability of the transmission system.

<sup>1</sup> Capitalized terms are defined in the BPA OATT or Acronyms and Glossary for BPA Transmission Business Practices, as amended from time to time.

2. BPA will curtail on a forecast basis approximately 15 minutes prior to the start of each interval and will curtail only the intervals for which the e-Tag scheduling window has closed (i.e., 20 minutes prior to the start time of the interval).
3. BPA Transmission Services uses the following methods to reduce flow:
  - a. Switching actions (impedance changes) as defined in the relevant Dispatcher Standing Order (DSO).
  - b. Bilateral Redispatch for Congestion Management
  - c. Discretionary Redispatch may be requested from BPA Power Services.
  - d. Curtailment Calculator, which determines e-Tag reductions for Managed Paths according to ~~NERC~~-industry curtailment priority and may include redispatch for Network Loads. Such redispatch includes NT Redispatch pursuant to Section 33 of the OATT, and may include redispatch requested from Network Customers to effectively relieve congestion on the Managed Path.
  - e. Emergency Redispatch from BPA Power Services.
4. Generating facilities that are unable to modify operation due to a force majeure when given a Reliability Order must immediately notify BPA Transmission Services' Dispatch by phone.
5. All generating facilities interconnected to or taking transmission service from BPA Transmission Services are subject to the Failure to Comply Penalty. The consequences of non-compliance are defined in the Failure to Comply Business Practice in effect at the time.

## **B. Bilateral Redispatch for Congestion Management**

1. Bilateral Redispatch for Congestion Management is a program in which BPA establishes agreements with third parties for INC Resources and DEC Resources for the purpose of providing flow relief.
2. A customer must have an executed bilateral agreement with BPA to supply Bilateral Redispatch for Congestion Management.
3. Requests to deploy Bilateral Redispatch for Congestion Management will be issued by BPA Transmission Services.
4. Schedules associated with Bilateral Redispatch for Congestion Management are to be submitted in accordance with Section L of the Scheduling Transmission Service Business Practice.

## **C. Redispatch Provided by BPA Power Services (Excludes Bilateral Redispatch)**

This section of the Redispatch and Curtailment Procedures Business Practice establishes parameters and procedures for redispatch of the federal hydro system and alternative means for redispatch by BPA Power Services at the request of BPA Transmission Services. BPA Transmission Services may request redispatch during any period when it determines that a transmission constraint exists on the Transmission System and such constraint may

impair the reliability of the system. BPA Transmission Services may not request redispatch under this section to make additional firm or non-firm transmission sales.

Currently, NT Redispatch only applies to federal resources. Without customers waiving their right to challenge, prior to inclusion of any non-federal resources (including off-system resources) in NT Redispatch, Bonneville must hold a public process to determine the appropriate rules and protocols associated with non-federal redispatch and Parties will negotiate in good faith to incorporate those rules, as mutually agreed-upon in executed customer-specific Network Operating Agreements.

### Definitions

1. Under this section redispatch includes:

1.a. The intentional incrementing or decrementing of generating units or projects by BPA Power Services, or the limitation of generation at specific locations by BPA Power Services, at the request of BPA Transmission Services, and

2.b. Transmission purchases and/or power purchases or sales made by BPA Power Services to respond to requests for redispatch.

### Procedures

1. Redispatch will not result in changes to the original e-Tags.
2. There are currently three types of redispatch under this Section C:
  - a. Discretionary Redispatch
    - i. BPA Transmission Services may request Discretionary Redispatch from BPA Power Services prior to curtailing any firm or non-firm PTP e-Tags or secondary NT e-Tags in order to avoid or reduce Curtailments.
    - ii. BPA Transmission Services will request Discretionary Redispatch from BPA Power Services by phone call.
    - iii. BPA Power Services may respond to requests for Discretionary Redispatch by offering, at each generating unit or project, either no redispatch or any amount of redispatch up to the amount requested at each generating unit or project.
  - b. NT Redispatch under Section 33 of the OATT
    - i. BPA Transmission Services can order NT Redispatch from BPA Power Services to avoid or reduce Curtailment of firm NT e-Tags. This would happen only after BPA Transmission Services has curtailed non-firm PTP e-Tags and secondary NT e-Tags in a sequence consistent with the NERC-industry Ccurtailment priority.
    - ii. For NT Redispatch, BPA Transmission Services shall request redispatch from BPA Power Services and shall curtail firm PTP schedules in amounts proportionate to the Network Resource and firm PTP flows on the affected Managed Path at the time of the request.
    - iii. BPA Transmission Services will order NT Redispatch from BPA Power Services by phone call specifying that the purpose is for NT Redispatch. BPA Power Services must provide NT Redispatch to the extent that it can do so without violating non-power constraints.

- c. Emergency Redispatch
  - i. BPA Transmission Services can call on Emergency Redispatch from BPA Power Services when it declares a transmission system emergency. BPA Power Services must provide Emergency Redispatch when an Emergency is called.
3. BPA Transmission Services may request redispatch for the following maximum time periods:
  - a. If BPA Transmission Services requests redispatch before twenty minutes after the hour, it may request redispatch only for the remainder of the hour.
  - b. If BPA Transmission Services requests redispatch at or after twenty minutes after the hour, it may request redispatch for the remainder of the hour and the next hour.
  - c. Any Discretionary Redispatch provided from the FCRPS shall be applied to the relief requested under NT Redispatch should NT Redispatch be requested for the same period.
4. In response to any redispatch request, including requests for redispatch specific to Network Load located either within or outside of the BPA balancing authority area, BPA Power Services may provide redispatch through redispatch of federal generation, purchases and/or sales of energy, or purchases of transmission. BPA Power Services will inform BPA Transmission Services at the time of the request if it intends to implement the redispatch through purchases or sales.

## **D. Curtailment Procedures**

1. In addition to BPA Transmission Services' Redispatch Order, Customers must follow any subsequent Reliability Orders, such as Curtailments.
2. BPA Transmission Services will communicate Curtailments via the e-Tag.
  - a. BPA Transmission Services will use the Curtailment Calculator to determine which e-Tags will be curtailed for all Managed Paths. For Managed Paths within the BPA network, e-Tags with impacts greater than 10% on the Managed Path will be considered for Curtailment.
  - b. The generator indicated on the e-Tag must modify its operations appropriately.
  - c. For generating facilities that do not monitor e-Tags, the Purchasing Selling Entity (PSE) listed on the e-Tag is responsible to inform the generator of the necessary actions to take.
  - d. For within-interval Curtailments, generating facilities must move to the new schedule within 10 minutes following the e-Tag Curtailment. For future-interval Curtailments, generating facilities must move to the new schedule during the normal ramp for the affected interval.
  - e. Load Serving Entities (LSE) must re-supply generation or shed load in response to curtailed e-Tags.
3. E-Tag Curtailments initiated by other Reliability Entities and approved by BPA Transmission Services are Reliability Orders to generating facilities, loads and Customers within the BPA Balancing Authority Area.

4. BPA Transmission Services will implement the following four-step process for Curtailments on managed 1:1 paths:

Step 1 - TSRs receive reliability limits on the path pro-rata by industry curtailment priority until the reserved rights equal the path's Operating Limit. The reserved rights are:

- i) For NT: the higher of the sum of NT reservations or the sum of approved schedules associated to those NT reservations.
- ii) For PTP: the sum of PTP reservations.

Step 2 - E-Tags are reduced to the reliability limits calculated in Step 1.

Step 3 - If the e-Tag reduction from Step 2 is lower than the Operating Limit, then the amount over-cut is redistributed back to e-Tags pro-rata by industry curtailment priority until the sum of the e-Tags is equal to the path's Operating Limit.

Step 4 - Implement e-Tag Curtailments based on the outcome of Step 1 through Step 3.

4.5. For Curtailments on managed flow-based paths (and when managing flows on NWACI and Satsop), BPA Transmission Services will curtail schedules pro-rata according to NERC industry Curtailment priority.

5.6. For all Curtailments, BPA Transmission Services will curtail 7-F schedules and order generating facilities that have an obligation to redispatch at the request of BPA Transmission Services under Section 33 of the OATT to provide NT Redispatch on a pro-rata basis if the overload persists. BPA Transmission Services will curtail 7-F in proportion to the 7-F flow on the affected Managed Path and request NT Redispatch in proportion to the 7-FN and unscheduled firm NT flow on the affected Managed Path.

6.7. If a generator within the BPA Balancing Authority Area is operating at its minimum generation level within the interval, and e-Tag Curtailments occur within that interval, the generator shall move completely offline, even if the Curtailment is relatively small in proportion to the generation for that interval.

7.8. A generator that does not respond appropriately to a Curtailment is subject to a Failure to Comply Penalty.

8.9. A generator that has received Operating Reserves from BPA Transmission Services but has not recovered sufficient generation to meet schedules following the expiration of the reserves must reduce e-Tags or re-supply the schedules for the succeeding intervals. If the generator or PSE is unable to reduce or re-supply schedules to match the reported generation estimate, BPA Transmission Services will, at Customer request, curtail e-Tags to match the reported generation estimate.

9.10. System emergencies or other unforeseen conditions may require Dispatchers to deviate from the pro-rata Curtailment principles in order to maintain reliability.

- a. In those circumstances, BPA Transmission Services will coordinate schedule changes or generation changes as necessary in order to maintain system reliability (situation specific).
- b. Such non-pro-rata Curtailments should last no more than two hours after the start of the event. If necessary, pro-rata Curtailments will be used beyond that time.

## **E. Circulation Procedure for the Northwest AC Intertie (NWACI) and the Pacific DC Intertie (PDCI)**

1. When power flows on the NWACI are nearing or exceeding SOL, BPA Transmission Services and the California Independent System Operator (CAISO), Los Angeles Department of Water and Power (LADWP) and WECC Reliability Coordinator (RC) may arrange to circulate power on the PDCI to lower power flows on the NWACI. Customers and/or other firm transmission rights holders will not be notified of circulation.
  - a. BPA Transmission Services and CAISO will not curtail any e-Tags if the circulation reduces flows on the NWACI below SOL.
  - b. In the event that circulation is not available (or not effective) and power flows remain above SOL limits on the NWACI, Curtailments will occur.
2. When power flows on the PDCI are nearing or exceeding SOL, BPA Transmission Services and the California Independent System Operator (CAISO), Los Angeles Department of Water and Power (LADWP) and WECC Reliability Coordinator (RC) may arrange to circulate power on the NWACI to lower power flows on the PDCI. Customers and/or other firm transmission rights holders will not be notified of circulation.
  - a. BPA Transmission Services and LADWP will not curtail any e-Tags if the circulation reduces flows on the PDCI below SOL.
  - b. In the event that circulation is not available (or not effective) and power flows remain above SOL limits on the PDCI, Curtailments will occur.
  - c. If the power flows are in a north to south direction, LADWP will initiate the Curtailments.
  - d. If the power flows are in a south to north direction, BPA Transmission Services will initiate the Curtailments.