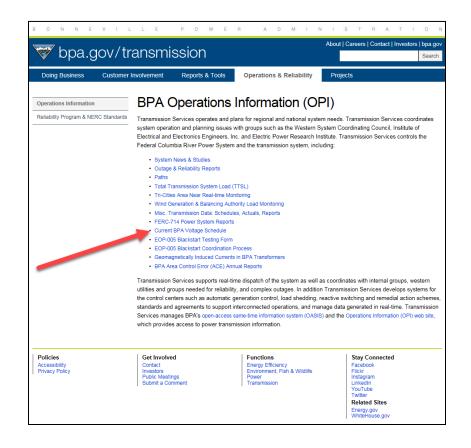
Joint Operating Committee February 21st, 2019

Frank Puyleart



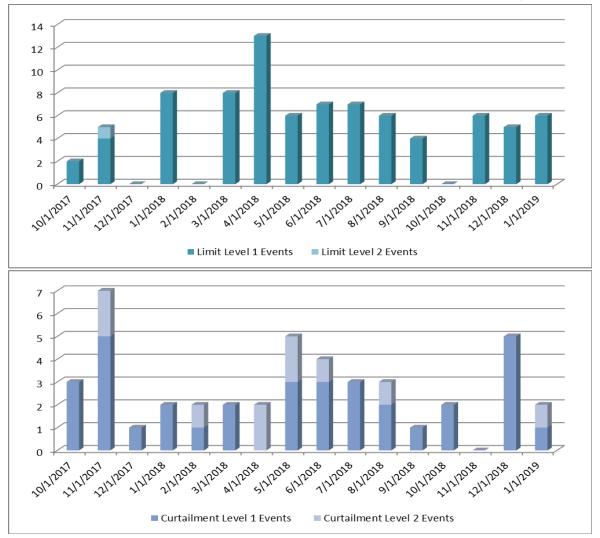
BPA Voltage Control

All current Voltage **Schedules** for BPA are found under the "Current **BPA Voltage** Schedule" link here:



https://www.bpa.gov/transmission/OperationsReliability/Pages/OperationsInformation.aspx

OCBR Events for FY18 through Jan 19



OCBR Curtailment Reminder

- OCBR Curtailments apply to all non-Federal Scheduled generation in the BAA
- OCBR Curtailments occur during severe undergeneration and/or load over-consumption events.
- Unlike Transmission Curtailments, Generators should <u>NOT</u> reduce generation for an OCBR Curtailment.
 - Reducing Generation for OCBR Curtailments could cause reliability concerns and deeper OCBR Curtailments for that Generator.

- BPA presented at the May 2015 JOC with changes forthcoming to Operating Controls for Balancing Reserves (OCBR)
- Two of those changes are planned to be implemented in 2019:
 - OCBR In-Effect Periods are being extended
 - OCBR Blackout Periods are being removed
- An email notice from Tech Forum will be sent prior to the implementation of these changes.

In-Effect Periods

- The length of time in which the system remains in OCBR event level.
- If a prior level is in effect, the next level can be reached during this time
- Currently:
 - Both Curtailments and Limitations are in effect for the remainder of the hour
 - During Limitations, the OCBR State Flag resets to Normal at the top of the hour
 - During Curtailments, the OCBR State Flag resets to Normal at 10 minutes prior to the top of the hour.

In-Effect Periods, continued

- New In-Effect Periods when Events are implemented at:
 - \rightarrow xx:00 xx:49:59
 - Limitations remain in-effect until to the top of current hour (1 hour max)
 - Curtailments apply to eTags currently in-effect and until to the top of current hour (1 hour max)
 - Reliability Limit placed on the current hour's eTags, not allowing adjustments above the Reliability Limit
 - Next higher Level can be reached anytime until the top of the current hour (1 hour max).

In-Effect Periods, continued

- New In-Effect Periods when Events are implemented at:
 - \rightarrow xx:50 xx:59:59
 - Limitations remain in-effect until to the top of next hour (1 hour 10 min max)
 - Curtailments apply to current interval and to eTags ineffect for the next hour (1 hour 10 min max)
 - Reliability Limit placed on the current and next hour's eTags, not allowing adjustments above the Reliability Limit
 - Next higher Level can be reached anytime until the top of the next hour (1 hour 10 min max).

Blackout Periods

- Currently during the defined blackout periods,
 OCBR events are not implemented.
 - Limitations are not implemented between 10 minutes prior to the top of the hour and the top of the hour.
 - Curtailments are not implemented between 15 minutes prior to the top of the hour and the top of the hour.

Blackout Periods, continued

- Blackout Periods are being removed.
- After implementation of these changes in 2019:
 - Limitation Events with the new In-Effect Period can carry forward beyond the top of the current hour.
 - Curtailment Events with the new In-Effect Period can provide relief beyond the top of the current hour.

Summary of changes for 2019

- In-Effect Periods are implemented at:
 - >xx:00 xx:49:59 to the top of current hour (1 hour max)
 - >xx:50 xx:59:59 to the top of the next hour (1hr. 10 min. max)
 - ➤ If a prior level is in effect, the next level can be reached.
- Blackout Periods will be removed