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|  California ISO | Operating Procedure | Procedure No. | 3510E |
| | | Version No. | 2.1 |
| | | Effective Date | 4/27/2023 |
| Considerations When Requesting Unscheduled Flow Mitigation for Path 66 (COI) | | Distribution Restriction: None | |

1. Background

Values published in the unscheduled flow tool generating **Grid** Messaging System **(GMS)** messages pertaining to Western Interconnection Unscheduled Flow Mitigation Plan (WIUFMP) events can create a false appearance that the CAISO is not meeting the qualification criteria for implementing or continuing an Unscheduled Flow Mitigation Plan (UFMP) event. In an effort to address those situations, this document explains the decision making process employed by the CAISO when evaluating the level of relief necessary to mitigate USF on Path 66 under the UFMP. This process applies when initiating a USF event, increasing or decreasing the amount of relief requested, or terminating a USF event.


2. Procedure Detail

2.1 Considerations that Influence the WIUFMP in Real-Time

The following considerations influence the WIUFMP decision-making process employed by the CAISO for Path 66. While all considerations are likely to be evaluated during a USF event, not all will contribute to the decision for requested relief for each event:

- The MW decrease in USF available through independent / coordinated PST operation, taking into account that PST outages and other WECC flow mitigations may limit available relief.
- The MW increase in USF expected from moving coordinated PSTs back to neutral (when terminating Step 3).
- Consideration for wear on PST equipment resulting from unnecessary movement of tap positions over short intervals of lower USF during otherwise consistent periods of high USF (includes discussion with RC to verify no impact to other entities).
- Real-Time schedule curtailments on Path 66 when flows are approaching or have exceeded the SOL due to USF.
- North – south circulation on the PDCI (this is essentially forcing unscheduled flow onto the PDCI) when Path 66 flows approach or exceed the SOL due to USF.
- Generation re-dispatched in the current hour when Path 66 flows are approaching or have exceeded the SOL due to USF.
- The collective ACE values of areas immediately north and south of the Path 66 cut-plane.

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- Transmission Reliability Margin (TRM) exercised on PACI.


Notes regarding TRM: When anticipating the need for USF mitigation, the CAISO will apply a TRM on PACI to satisfy the accommodation requirement for the anticipated UFMP step and system conditions. The TRM allows the CAISO market software to take into account capacity set aside for USF accommodation when procuring energy. Due to Real-Time nodal (RTN) market timelines, the TRM must be applied two hours in advance of the effective operating hour, making it an imprecise tool. This may result in too much or too little applied TRM for the conditions and WIUFMP step.

- Forecasted changes in Path 66 on-path schedules as determined during WIUFMP evaluation window.

Note: Path 66 on-path schedules are a best effort forecast based on several variables. Schedule decreases/increases after close of the UFMP evaluation window but prior to entering the effective relief hour may result in over/under-mitigation. In the event of over-mitigation CAISO may request to continue USF mitigation for the following hour, possibly reducing the requested WIUFMP relief, based again on the next hour's forecasted schedules. In the case of under-mitigation, CAISO may need to take action in-hour outside of WIUFMP to mitigate USF through the aforementioned real-time schedule curtailments, PDCI circulation, re-dispatch of generation, etc.

- Expected increase in Path 66 Actual Flow next hour based on the return of Path 66 contributing off-path schedules curtailed by the unscheduled flow tool for the current hour (i.e. when stepping out of curtailment steps).
- Real-Time reductions in Path 66 transfer capability due to:
 - Changing conditions within the CAISO Balancing Area.
 - BPA imposed scheduling limit due to conditions in the Pacific Northwest.
 - A downward trend in the Path 66 dynamic limit received from BPA due to changing conditions in the Pacific Northwest.
- USF relief provided through contributing schedule curtailments is evaluated in the hour of relief to determine effectiveness and potential need for additional relief in the next hour.

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3. Supporting Information

Operationally Affected Parties

Shared with the Public

References

Resources studied in the development of this procedure and that may have an effect upon some steps taken herein include but are not limited to:

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|---------------------------|--|
| CAISO Tariff | |
| CAISO Operating Procedure | |
| NERC Requirements | |
| WECC Criterion | |
| Other References | |

Definitions

Unless the context otherwise indicates, any word or expression defined in the Master Definitions Supplement to the CAISO Tariff shall have that meaning when capitalized in this Operating Procedure.


The following additional terms are capitalized in this Operating Procedure when used as defined below:

None.

Version History

| Version | Change | Date |
|---------|---|----------|
| 1.0 | Implementation of attachment | 11/19/13 |
| 1.1 | Changed WECCNet to Reliability Messaging Tool (RMT). Removed ' <i>General note regarding values posted in webSAS and forwarded via WECCnet</i> '. | 6/24/16 |
| 1.2 | Updated formatting and grammar. Updated all references of Real-Time. Updated all SOL and RAS references, as applicable. | 3/24/17 |

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| 1.3 | Replaced all occurrences of websas with new tool in our Procedures as the “the unscheduled flow tool”. Replaced SOL with SOL due to the retirement of TOP-007-WECC-1a. Updated CISO with ISO. | 6/15/17 |
| 2.0 | Periodic Review: Section 1: Replaced Reliability Messaging Tool (RMT) with Reliability messaging system. Replaced TTC with SOL. Updated WECC USFP to WIUFMP and updated procedure title. Removed Peak RC from Operationally Affected Parties list. Added document control information in footer. Minor format and grammar updates. | 4/23/20 |
| 2.1 | Periodic Review: Updated instances of ISO and CISO to CAISO. Updated instance of Reliability messaging system to Grid Messaging System (GMS). | 4/27/23 |

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