
 California ISO Your Link to Power	OPERATING PROCEDURE	Procedure No.	S-315
		Version No.	3.1
		Effective Date	8/1/07
Emergency Overload Mitigation for Stability Rated Paths		Distribution Restriction: NONE	

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Purpose

To reduce flows on CAISO managed Interconnections and CAISO Internal Paths within twenty minutes, as required by the WECC, through coordinated operational measures with adjacent interconnected Balancing Areas.

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1. Conditions

To implement emergency overload mitigation, *both* of the following conditions must exist:

- The real time operating limit of the stability rated path currently exceeds, or, in the judgment of the CAISO Shift Manager, will be exceeded unless some mitigating action is taken immediately.
- Normal scheduling procedures are not timely enough to return the stability rated path to real time operating limits within the WECC Reliability criteria of twenty minutes.


Note: Access the "Transmission" category on the "EMS Navigator" screen for a list of Stability Rated Paths.

2. Communication & Mitigation

Once a Stability Rated Path is overloaded or about to be overloaded, take the following steps for notification and to mitigate the overload:

Step	CAISO Transmission Dispatcher Actions	
1	Notify the adjacent Balancing Authority of the stability rated Interconnection overload.	
2	Initiate the coordination needed to meet WECC Reliability requirements to return the overloaded Interconnection flow to less than real time operating limits within twenty minutes.	
<p><i>Note: In the event that distinct interchange schedules are being curtailed or Generation is being reduced in an external Balancing Area, the NERC interchange transaction ID number must be identified for each Schedule being curtailed. This information must be available to both the CAISO Real Time Schedulers and the BPA TBL Transmission and BPA PBL Generation Real Time Schedulers to assure that equal and opposite controller actions are taken by all involved Balancing Areas.</i></p>		
3	If... The COI or the PDCI is overloaded and the other transmission path can accommodate the changes required,	Then... Arrange circulation to transfer power flow from the overloaded path to the alternate path.

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Step	CAISO Generation Dispatcher Action
4	Alter Generation resources by established procedures and the guidance provided in Attachments A , B , C and/or D , as applicable.
Step	CAISO Real Time Scheduler
5	Establish Emergency Controller Adjustments or Dynamic Counter Schedules as necessary, per Attachments A , B , C and/or D . <i>Note: The Emergency Controller Adjustment or Dynamic Counter Schedule established will be a Balancing Area-to-Balancing Area arrangement and does not involve Scheduling Coordinators.</i>

2. Post Mitigation


Once the overload has been mitigated, take the following step:

Step	CAISO & BPA Real Time Schedulers Action
1	Implement normal curtailment scheduling procedures for subsequent scheduling hours, when possible.

3. Internal Paths

For overloaded paths internal to the CAISO, take the following step:

Step	CAISO Transmission Dispatcher Action
1	Mitigate overloads on all stability rated paths internal to the CAISO, such as Path 15 and Path 26, by the following methods (in order): <ul style="list-style-type: none"> • Move Generation by utilizing RTMA • Circulate on the DC • Make an Emergency Controller adjustment – using Generation in the south (if congestion is from the north to the south) or by using Generation in the north (if congestion is from the south to the north).

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4. COI

For an overload on COI, take the following step:

Step	CAISO Transmission Dispatcher Action
1	Mitigate COI overloads per Attachment A .

5. PDCI De-Rates in the N-S Direction


For an overload on PDCI take the following steps:

Step	CAISO Transmission Dispatcher Action
1	Mitigate PDCI overloads per Attachment C .

6. Mead

For real time overloading of the Mead-Eldorado Transmission system, take the following step:

Step	CAISO Transmission Dispatcher Action
1	Refer to Attachment B for curtailment direction on Parker_2_Gene schedules, which affect the Mead-Eldorado Transmission System.
2	Refer to T-174 Parker-Gene Overload Mitigation.

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Supporting Information

- Affected Parties**
- Adjacent Balancing Authority (BA) Operators
 - PTOs and SCs
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Responsibilities

Transmission Dispatcher	Complies with WECC Reliability Criteria to reduce the flows on CAISO managed paths to less than real time operating limits within twenty minutes.
Adjacent Balancing Authorities	Cooperates with implementation of this Emergency Procedure.
Scheduling Coordinators	Carries out CAISO instructions regarding Generation adjustments in a timely manner.
Generation Dispatcher	Immediately responds to CAISO dispatch orders, either directly conveyed or through the appropriate Scheduling Coordinators.

References

• CAISO Operating Procedure	E-505, Emergency Assistance To Other Balancing Areas
• CAISO Operating Procedure	T-174 Parker-Genie Overload Mitigation
• WECC Emergency Transmission Overload Procedure	


Policy

The CAISO takes measures, as necessary, to mitigate overloads on Stability-Rated paths within 20 minutes, including:

- Mid-hour schedule adjustments
 - Use of coordinated operations of facilities
 - Balancing Area-to-Balancing Area schedule implementation
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Definitions

Unless the context otherwise indicates, any word or expression defined in the Master Definitions Supplement to the CAISO Tariff and capitalized herein shall have the same meaning where used in this procedure.

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Version History

Version	Change	By	Date
1.0	Drafted		3/31/98
2.0	Format update, Further Clarification Removed Security Coordinator reference		3/31/00
2.1	Specific Application for COI		4/24/00
2.2	Stability Limit 10 to 20 minutes		7/26/01
2.3	Added Attachment B		2/28/02
2.4	Added Attachment C		4/18/02
2.5	Added a new section 3 for Stability Rated Path Overloads internal to the ISO		8/13/02
2.6	Annual Review – minor changes		10/7/02
2.7	Annual Review – minor changes		11/11/03
2.8	Annual review- no change.		7/14/04
2.9	Minor Changes for MD02 Phase 1B		1/23/04
3.0	Revised for COI transition to SMUD		12/1/05
3.1	Reformatted & Correction to section 3		8/1/07

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Technical Review

Reviewed By Content Expert	Signature	Date
Ops Support		
Regional Transmission		
Grid Ops		
Market Ops		
Scheduling		

Approval

Approved By	Signature	Date
Manager of Scheduling		
Director of Grid Operations		

* Signed previous version only, changes to this version were minor and did not require signature approval

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Appendix

- Attach. A: [CAISO Initiated Emergency Overload Mitigation For COI in N-S Conditions](#)
- Attach. B: [Mead – Parker Curtailment Instructions](#)
- Attach. C: [CAISO Initiated Emergency Controller Adjustments For PDCI De-rates in the N-S Direction](#)
- Attach. D: [CAISO Initiated Emergency Overload Mitigation for SCIT/EOR Nomogram De-rate](#)
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