

**SPP TLR 5 Investigation Report
Flowgate 6007
(Gentleman – Red Willow 345 kV)
(GENTLMREDWIL)
TLR Level 5: August 13, 2010
Report Issued: December 13, 2010**

1. Description of purpose/cause of hold/curtailment.

This report is submitted in accordance with the NERC Transmission Loading Relief Investigation Procedure for the Level 5 TLR event that occurred on Flowgate 6007 on August 13, 2010. Flowgate 6007 is an SPP flowgate. This flowgate is used to monitor and control voltage and loading on several facilities in the area. The Level 5 TLR was in effect from 00:25 until 1:45 CST on August 13, 2010. Projected flows on the Gentleman – Red Willow 345 kV line were expected to exceed the SOL.

2. Facility/flowgate limitations and flows at the time the TLR was initiated.

The rating of this flowgate is determined by periodic review by NPPD depending upon current and anticipated system conditions. At the time the Level 5B TLR was issued, the Limiting Element was rated at 445 MVA. Flow on the Limiting Element was 450 MVA.

3. TLR levels, timing, and relief requested amounts.

TLR levels, timing and relief requested amounts are shown in the Event History and NERC TLR Log on pages 3-6.

4. Transmission and generation outages or changes from prediction that may have contributed.

There were no unplanned outages that contributed to this TLR.

5. Procedures implemented prior to hold/curtailment.

There were not enough non-firm transactions or market flows that impacted the flowgate by more than 5% to relieve the loading. The TLR was escalated to a Level 5 in order to curtail firm transactions and firm market flow to alleviate loading on the flowgate.

6. The initial investigation shall compare all transaction curtailment lists as generated by the IDC with the list of transactions flowing as determined by the IDC (Whole Transaction Lists) both before and after curtailment. The reasons for any transactions that were excluded from curtailment shall be provided. For those transactions not curtailed, the Reliability Authority will identify those entities and any affiliation with said entities.

There were no known transactions excluded from curtailment for this TLR.

7. List of known transactions not in the IDC with Transaction Contribution Factors greater than the curtailment threshold and actions taken to curtail such transactions.

There were no known transactions not in the IDC.

8. Excerpts from the RA Operations Log containing information relevant to the TLR event.

Information was provided to Reliability Coordinators through the IDC and the RCIS. Also the SPP Reliability Coordinators logged information describing the actions taken at each issuance of the TLR, see page 7. Times in the RC Log are CDT.

9. Flowgate limitations as identified by security analysis processes conducted by the Reliability Authority for the day prior to the TLR event.

The next day study process did not indicate an issue with this flowgate based upon conditions at the time of the daily peak.

10. State Estimator snapshots and security analysis, including any contingency analysis or stability analysis, along with any other recorded data indicating need for TLR.

The SPP Reliability Coordinator was monitoring their state estimator, RTCA and RTLODF applications for current flowgate loading and other potential issues during this time. eDNA data historian recorded all line flows before, during and after the Level 5 TLR event, see page 8.

11. ATC limitations before, during, and after the TLR event.

SPP Tariff Administration grants transmission service using an AFC process. This process evaluates each transmission request on a case by case basis. SPP Tariff Administration was not granting any transmission requests that impacted the congested flowgate by 3 % or greater at the time of the Level 5 TLR.

12. Description of actions taken to avoid future hold/curtailments.

This TLR was caused by a combination of generation patterns, load, and system flows. Reconfiguration is sometimes a viable companion to TLR on this flowgate. However, it was not available at the time of this TLR.

13. Provide IDC generated Congestion Management Reports showing transaction curtailment list and Control Area NNL (network and native load) curtailment responsibility.

Congestion Management Reports for each issuance of the TLR have been reviewed and are archived in the IDC. These screen shots have not been included to reduce the size of this report.

14. Re-dispatch actions taken.

SPP EIS Market redispatch was implemented during the entire TLR event. Firm and non-firm Market Flow were reduced on the flowgate as reported in the TLR Event History and NERC TLR Log on pages 3-6.

Event History

Issuing RC: SWPP
Flowgate: 6007 - GENTLMN3 345 REDWILO3 345 1
Event Begin: 2010-08-12 20:40
Event End: 2010-08-13 05:04
Event Duration: 9 Hours

TLR Level	TLR Date	TLR Confirm Time	Run Time	Requested Relief	Remaining Relief	Relief Provided	Total Cuts	
							Tags	MW
TLR Level 3B	08/12/2010 20:50	08/12/2010 20:40	08/12/2010 20:39:18	0.0	0.0	0.0	0	0
TLR Level 3A	08/12/2010 22:00	08/12/2010 21:28	08/12/2010 21:28:00	71.0	3.8	67.2	5	437
TLR Level 3A	08/12/2010 23:00	08/12/2010 22:31	08/12/2010 22:30:38	100.0	41.4	58.6	4	308
TLR Level 3A	08/13/2010 00:00	08/12/2010 23:28	08/12/2010 23:27:44	106.0	47.4	58.6	4	308
TLR Level 5B	08/13/2010 00:25	08/13/2010 00:16	08/13/2010 00:13:54	0.0	0.0	0.0	0	0
TLR Level 1	08/13/2010 01:45	08/13/2010 01:36	08/13/2010 01:35:47	0.0	0.0	0.0	0	0
TLR Level 0	08/13/2010 05:15	08/13/2010 05:04	08/13/2010 05:04:08	0.0	0.0	0.0	0	0

Aug 12 23:28	TLR 3A	NEXT	6-NN Total	4 / 0 4 / 0	308 308	58.6 58.6	308 308	58.6 58.6	0 0	0.0 0.0	NONE	ED-2 ED-6 FIRM-7 Total	MISO SWPP MISO SWPP MISO SWPP	0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0	452	N/A	N/A	N/A
Aug 13 00:16	TLR 5B	CURRENT	NONE								NONE	ED-2 ED-6 FIRM-7 Total	MISO SWPP MISO SWPP MISO SWPP	0.0 3.0 8.8 68.0 0.0 1.0	0.0 3.0 8.8 68.0 0.0 1.0	450	N/A	N/A	N/A
		NEXT	1-NS 2-NH 7-F Total	2 / 0 2 / 0 1 / 0 5 / 0	100 208 1 0	23.4 35.2 0.1 58.7	100 208 1 309	23.4 35.2 0.1 58.7	0 0 0 0	0.0 0.0 0.0 0.0	NONE	NONE							
Aug 13 01:36	TLR 1	CURRENT	NONE								NONE	NONE		405	N/A	N/A	N/A		
Aug 13 05:04	TLR 0	CURRENT	NONE								NONE	NONE		389	N/A	N/A	N/A		

TLR Schedule Totals

Priority	Schedule			
	Total Tags Cut / Hold	IDC Cut MW	RC Cut Acknowledge MW	Hold MW
0	0	0	0	0
1	4	150	150	0
2	6	624	624	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	12	930	930	0
7	1	1	1	0
Total	23	1705	1705	0

TLR Market Flow Totals

Market	Type	Market Relief	
		IDC MW	RC Ackn MW
MISO	ED-2	0.0	0.0
	ED-6	8.8	8.8
	FIRM-7	0.0	0.0
Total MISO		8.8	8.8
SWPP	ED-2	3.0	3.0
	ED-6	68.0	68.0
	FIRM-7	1.0	1.0
Total for SWPP		72.0	72.0
Total		80.8	80.8

Reliability Log for August, 12 2010

Time	Initials	Comments	
2139	DGA	Issued TLR level 3B on GENTLMENREDWIL flgt 6007	
2228	DGA	Issued TLR level 3B on GENTLMENREDWIL flgt 6007	
2330	DGA	Issued TLR level 3A on GENTLMENREDWIL flgt 6007	

Reliability Log for August, 13 2010

Time	Initials	Comments	
0027	DGA	Re-issued TLR level 3A on GENTLMENREDWIL flgt 6007	
0113	DGA	Issued TLR level 5B on GENTLMENREDWIL flgt 6007 - feasibility	
0235	DGA	NPPD opened Red Willow PCB 1110 per OP Guide	
0235	DGA	Issued TLR level 1 on GENTLMENREDWIL flgt 6007	
0604	LRG	NPPD closed Red Willow PCB 1110 per OP Guide	
0604	LRG	Issued TLR level 0 on GENTLMENREDWIL flgt 6007	

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