

**SPP TLR 5 Investigation Report  
Flowgate 6007  
(Gentleman – Red Willow 345 kV)  
(GENTLMREDWIL)  
TLR Level 5: August 3-4, 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 3-4, 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 23:00 on August 3 until 00:30 CST on August 4, 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 5A TLR was issued, the Limiting Element was rated at 455 MVA. Flow on the Limiting Element was 411 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 3-5.

**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 6. 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 7.

**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 3-5.

## Event History

**Issuing RC:** SWPP  
**Flowgate:** 6007 - GENTLMN3 345 REDWILO3 345 1  
**Event Begin:** 2010-08-03 22:06  
**Event End:** 2010-08-04 04:49  
**Event Duration:** 6 Hours

TLR Level	TLR Date	TLR Confirm Time	Run Time	Requested Relief	Remaining Relief	Relief Provided	Total Cuts	
							Tags	MW
<a href="#">TLR Level 3B</a>	08/03/2010 22:15	08/03/2010 22:06	08/03/2010 22:06:05	35.0	100.5	0.0	3	196
<a href="#">TLR Level 5A</a>	08/03/2010 23:00	08/03/2010 22:38	08/03/2010 22:37:10	0.0	0.0	49.7	2	150
<a href="#">TLR Level 5A</a>	08/04/2010 00:00	08/03/2010 23:44	08/03/2010 23:43:26	0.0	0.0	49.7	2	150
<a href="#">TLR Level 3B</a>	08/04/2010 00:30	08/04/2010 00:19	08/04/2010 00:18:48	0.0	117.0	0.0	0	0
<a href="#">TLR Level 1</a>	08/04/2010 00:50	08/04/2010 00:39	08/04/2010 00:38:24	0.0	0.0	0.0	0	0
<a href="#">TLR Level 0</a>	08/04/2010 05:00	08/04/2010 04:49	08/04/2010 04:48:45	0.0	0.0	0.0	0	0

## Event Summary

FILE SAVED AS: SWPP\_6007\_20100803\_2215.htm

Incident: SWPP_6007_20100803_2215	Date: 08/03/2010	Reliability Coordinator: SWPP
Initial Conditions: increasing load		
Flowgate: 6007 - GENTLMN3 345 REDWILO3 345 1	Rating: 455	LODF: N/A
TLR Direction: Normal		
Effective StartTime: 08/03/2010 22:15	Effective EndTime: 08/04/2010 05:00	TLR Duration: 6 Hours and 45 Minutes

## TLR Actions

Confirm Time	Level	Effective Hour	Priority	Schedule								NNL Relief			Market Relief				Flow			TLR Action Comments
				Total Tags Cut / Hold	IDC Cut		RC Cut Acknowledge		Hold		CA	IDC MW	RC Ackn MW	Type	Mkt	IDC MW	RC Ackn MW	Current	Post Cont.	Cont. Flow		
					MW	Relief	MW	Relief	MW	Relief												
Aug 03 22:06	TLR 3B	CURRENT	1-NS 2-NH 6-NN <b>Total</b>	1 / 0 1 / 0 1 / 0 3 / 0	52 104 40 196	3.0 7.2 9.3 19.5	52 104 40 196	3.0 7.2 9.3 19.5	0 0 0 0	0.0 0.0 0.0 0.0	NONE	ED-2  ED-6  FIRM-7 <b>Total</b>	MISO SWPP MISO SWPP MISO SWPP	0.0 1.0 0.0 103.0 0.0 0.0 104.0	0.0 1.0 0.0 103.0 0.0 0.0 104.0	427	N/A	N/A	N/A			
		NEXT	2-NH 6-NN <b>Total</b>	1 / 0 1 / 0 2 / 0	50 100 196	4.4 23.4 27.7	50 100 150	4.4 23.4 27.7	0 0 0	0.0 0.0 0.0	NONE	ED-2  ED-6  FIRM-7 <b>Total</b>	MISO SWPP MISO SWPP MISO SWPP	0.0 1.0 0.0 21.0 0.0 22.0	0.0 1.0 0.0 21.0 0.0 22.0							
Aug 03 22:38	TLR 5A	NEXT	2-NH 6-NN <b>Total</b>	1 / 0 1 / 0 2 / 0	50 100 150	4.3 23.4 27.7	50 100 150	4.3 23.4 27.7	0 0 0	0.0 0.0 0.0	NONE	ED-2  ED-6  FIRM-7  FIRM-CREDIT <b>Total</b>	MISO SWPP MISO SWPP MISO SWPP MISO SWPP	0.0 1.0 0.0 21.0 0.0 0.0 22.0	0.0 1.0 0.0 21.0 0.0 0.0 22.0	411	N/A	N/A	N/A			
Aug 03 23:44	TLR 5A	NEXT	2-NH 6-NN <b>Total</b>	1 / 0 1 / 0 2 / 0	50 100 150	4.3 23.4 27.7	50 100 150	4.3 23.4 27.7	0 0 0	0.0 0.0 0.0	NONE	ED-2  ED-6  FIRM-7  FIRM-CREDIT <b>Total</b>	MISO SWPP MISO SWPP MISO SWPP MISO SWPP	0.0 1.0 0.0 21.0 0.0 0.0 22.0	0.0 1.0 0.0 21.0 0.0 0.0 22.0	415	N/A	N/A	N/A			

Aug 04 00:19	TLR 3B	CURRENT	NONE								NONE	ED-2	MISO	0.0	0.0	394	N/A	N/A	N/A
		NEXT	2-NH 6-NN Total	3 / 0 1 / 0 4 / 0	107 100 0	8.3 23.4 31.6	107 100 207	8.3 23.4 31.6	0 0 0	0.0 0.0 0.0	NONE	ED-2 ED-6 FIRM-7 Total	MISO SWPP MISO SWPP MISO SWPP	0.0 1.0 0.0 150.0 0.0 0.0	0.0 1.0 0.0 150.0 0.0 0.0				
Aug 04 00:39	TLR 1	CURRENT	NONE								NONE	NONE			408	N/A	N/A	N/A	
Aug 04 04:49	TLR 0	CURRENT	NONE								NONE	NONE			476	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	1	52	52	0
2	7	361	361	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	5	440	440	0
7	0	0	0	0
<b>Total</b>	<b>13</b>	<b>853</b>	<b>853</b>	<b>0</b>

### TLR Market Flow Totals

Market	Type	Market Relief	
		IDC MW	RC Ackn MW
MISO	ED-2	0.0	0.0
	ED-6	0.0	0.0
	FIRM-7	0.0	0.0
Total MISO		0.0	0.0
SWPP	ED-2	4.0	4.0
	ED-6	295.0	295.0
	FIRM-7	0.0	0.0
Total for SWPP		299.0	299.0
<b>Total</b>		<b>299.0</b>	<b>299.0</b>

<b>Reliability Log for August, 3</b>			<b>2010</b>
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Time	Initials	Comments	
2306	LWB	Issued TLR Level 3B on GENTLMN3 345 REDWILO3 345 1 Flgt. 6007curtailments	
2337	LWB	Issued TLR Level 5A on GENTLMN3 345 REDWILO3 345 1 Flgt. 6007-curtailments-feasibility	

<b>Reliability Log for August, 4</b>			<b>2010</b>
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Time	Initials	Comments	
0043	LWB	Re-issued TLR Level 5A on GENTLMN3 345 REDWILO3 345 1 Flgt. 6007-curtailments-feasibility	
0118	LWB	Re-issued TLR Level 3B on GENTLMN3 345 REDWILO3 345 1 Flgt. 6007-curtailments.	
0137	LWB	Red Willow PCB 1110 Opened per Op guide.	
0138	LWB	Issued TLR Level 1 on GENTLMN3 345 REDWILO3 345 1 Flgt. 6007.	
0548	LRG	Issued TLR Level 0 on GENTLMN3 345 REDWILO3 345 1 Flgt. 6007.	


# GENTLMREDWIL - 6007

