

SPP TLR 5 Investigation Report
Flowgate 17027
(Temp 35: Hereford - Friona (ftlo) Tolk - Roosevelt 230kV Ckt 2)
TLR Level 5: April 8, 2011
Report Issued:

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 17027 on April 8, 2011. Flowgate 17027 is an SPP flowgate. The Level 5 TLR was in effect from 7:05 until 23:00 CST on April 8, 2011. Projected post-contingent flows on the Temp 35: Hereford - Friona (ftlo) Tolk - Roosevelt 230kV Ckt 2 line did not exceed the SOL.

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

At the time the Level 5B TLR was issued, the Limiting Element was rated at 96 MVA. Flow on the Limiting Element was 15 MVA. Flow on the Contingent Element was 116 MVA. The LODF was approximately 0.0%. Post-contingent flow on the Limiting Element was approximately 15 MVA.

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

TLRs levels, timing and relief requested amounts are shown in the Event History and NERC TLR Log.

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

The outage of Tolk – Roosevelt 230 kV contributed to the TLR 5.

5. Procedures implemented prior to hold/curtailment.

There were no available non-firm transactions to curtail. Next hour flows predicted that not enough non-firm could be curtailed 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. 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.

In the next day process, we did see an issue with this flowgate, based off of the peak study.

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.

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 the outage of Tolk - Roosevelt. Due to this situation, no actions were taken to avoid future hold/curtailments.

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.

Event History

Issuing RC: SWPP
Flowgate: 17027 - Temp 35: Hereford - Friona (ftlo) Tolk - Roosevelt 230kV Ckt 2
Event Begin: 2011-04-08 07:05
Event End: 2011-04-08 23:00
Event Duration: 16 Hours

TLR Level	TLR Date	TLR Confirm Time	Run Time	Requested Relief	Remaining Relief	Relief Provided	Total Cuts	
							Tags	MW
TLR Level 5A	04/08/2011 07:05	04/08/2011 06:47	04/08/2011 06:46:42	29.0	0.0	29.0	1	32
TLR Level 5B	04/08/2011 07:15	04/08/2011 07:05	04/08/2011 07:02:23	140.0	61.7	78.3	1	58
TLR Level 5A	04/08/2011 09:00	04/08/2011 08:28	04/08/2011 08:26:25	122.0	35.2	86.8	1	100
TLR Level 5A	04/08/2011 10:00	04/08/2011 09:27	04/08/2011 09:26:46	3.0	0.0	3.1	1	4
TLR Level 5B	04/08/2011 10:30	04/08/2011 10:16	04/08/2011 10:16:09	100.0	6.6	93.4	1	96
TLR Level 5A	04/08/2011 12:00	04/08/2011 11:26	04/08/2011 11:26:16	116.0	22.2	93.8	1	100
TLR Level 5A	04/08/2011 13:00	04/08/2011 12:27	04/08/2011 12:26:56	113.0	26.2	86.8	1	100
TLR Level 5A	04/08/2011 14:00	04/08/2011 13:26	04/08/2011 13:25:54	110.0	26.2	83.8	1	100
TLR Level 5A	04/08/2011 15:00	04/08/2011 14:26	04/08/2011 14:26:13	107.0	23.2	83.8	1	100
TLR Level 5A	04/08/2011 16:00	04/08/2011 15:26	04/08/2011 15:26:05	110.0	31.4	78.6	1	100
TLR Level 5A	04/08/2011 17:00	04/08/2011 16:27	04/08/2011 16:27:18	103.0	19.2	83.8	1	100
TLR Level 5A	04/08/2011 18:00	04/08/2011 17:33	04/08/2011 17:32:34	112.0	28.2	83.8	1	100
TLR Level 5A	04/08/2011 19:00	04/08/2011 18:30	04/08/2011 18:29:56	89.0	5.2	83.8	1	100
TLR Level 5A	04/08/2011 20:00	04/08/2011 19:27	04/08/2011 19:27:08	96.0	12.2	83.8	1	100
TLR Level 5A	04/08/2011 21:00	04/08/2011 20:38	04/08/2011 20:33:48	72.0	0.0	72.0	1	86
TLR Level 5A	04/08/2011 22:00	04/08/2011 21:31	04/08/2011 21:27:46	81.0	0.0	81.0	1	86
TLR Level 5A	04/08/2011 23:00	04/08/2011 22:35	04/08/2011 22:33:09	92.0	0.0	92.0	1	85
TLR Level 0	04/08/2011 23:00	04/08/2011 22:57	04/08/2011 22:56:56	0.0	0.0	0.0	0	0

Event Summary

FILE SAVED AS: SWPP_17027_20110408_0605.htm

Incident: SWPP_17027_20110408_0605	Date: 04/08/2011	Reliability Coordinator: SWPP
Initial Conditions: load on blackwater tie		
Flowgate: 17027 - Temp 35: Hereford - Friona (ft...	Rating: 96	LODF: 0.00%
TLR Direction: Normal		
Effective StartTime: 04/08/2011 07:05	Effective EndTime: 04/08/2011 23:00	TLR Duration: 15 Hours and 55 Minutes

TLR Actions

Confirm Time	Level	Effective Hour	Priority	Schedule						NINL Relief			Market Relief				Flow			TLR Action Comments
				Total Tags Cut / Hold	IDC Cut MW	Relief	RC Cut Acknowledge MW	Relief	Hold MW	Relief	CA	IDC MW	RC Ackn MW	Type	Mkt	IDC MW	RC Ackn MW	Current	Post Cont.	
Apr 08 06:47	TLR 5A	NEXT	7-F	1 / 0	32	3.5	32	3.5	0	0.0	NONE	ED-2 ED-5 FIRM-7 FIRM-CREDIT	SWPP SWPP SWPP SWPP	0.0 0.0 25.5 0.0	0.0 0.0 25.5 0.0	15	15	116	N/A	
			Total	1 / 0	32	3.5	32	3.5	0	0.0										25.5
Apr 08 07:09	TLR 5B	CURRENT	7-F	1 / 0	58	6.3	58	6.3	0	0.0	NONE	ED-2 ED-5 FIRM-7	SWPP SWPP SWPP	0.0 0.0 72.0	0.0 0.0 72.0	27	27	184	N/A	
			Total	1 / 0	58	6.3	58	6.3	0	0.0										72.0
		NEXT	7-F	1 / 0	100	10.8	100	10.8	0	0.0	NONE	NONE								
		Total	1 / 0	58	10.8	100	10.8	0	0.0											
Apr 08 08:28	TLR 5A	NEXT	7-F	1 / 0	100	10.8	100	10.8	0	0.0	NONE	ED-2 ED-5 FIRM-7 FIRM-CREDIT	SWPP SWPP SWPP SWPP	0.0 0.0 76.0 0.0	0.0 0.0 76.0 0.0	24	24	154	N/A	
			Total	1 / 0	100	10.8	100	10.8	0	0.0										76.0
Apr 08 08:57	TLR 5A	NEXT	7-F	1 / 0	4	0.4	4	0.4	0	0.0	NONE	ED-2 ED-5 FIRM-7 FIRM-CREDIT	SWPP SWPP SWPP SWPP	0.0 0.0 2.7 0.0	0.0 0.0 2.7 0.0	25	25	189	N/A	
			Total	1 / 0	4	0.4	4	0.4	0	0.0										2.7
Apr 08 10:19	TLR 5B	CURRENT	7-F	1 / 0	96	10.4	96	10.4	0	0.0	NONE	ED-2 ED-5 FIRM-7	SWPP SWPP SWPP	0.0 1.0 82.0	0.0 1.0 82.0	28	28	164	N/A	
			Total	1 / 0	96	10.4	96	10.4	0	0.0										83.0
		NEXT	7-F	1 / 0	100	10.8	100	10.8	0	0.0	NONE	NONE								
		Total	1 / 0	96	10.8	100	10.8	0	0.0											
Apr 08 11:29	TLR 5A	NEXT	7-F	1 / 0	100	10.8	100	10.8	0	0.0	NONE	ED-2 ED-5 FIRM-7 FIRM-CREDIT	SWPP SWPP SWPP SWPP	0.0 0.0 83.0 0.0	0.0 0.0 83.0 0.0	28	28	164	N/A	
			Total	1 / 0	100	10.8	100	10.8	0	0.0										83.0
Apr 08 12:27	TLR 5A	NEXT	7-F	1 / 0	100	10.8	100	10.8	0	0.0	NONE	ED-2 ED-5 FIRM-7 FIRM-CREDIT	SWPP SWPP SWPP SWPP	0.0 0.0 78.0 0.0	0.0 0.0 78.0 0.0	23	23	127	N/A	
			Total	1 / 0	100	10.8	100	10.8	0	0.0										76.0
Apr 08 13:28	TLR 5A	NEXT	7-F	1 / 0	100	10.8	100	10.8	0	0.0	NONE	ED-2 ED-5 FIRM-7 FIRM-CREDIT	SWPP SWPP SWPP SWPP	0.0 0.0 73.0 0.0	0.0 0.0 73.0 0.0	23	23	124	N/A	
			Total	1 / 0	100	10.8	100	10.8	0	0.0										73.0
Apr 08 14:26	TLR 5A	NEXT	7-F	1 / 0	100	10.8	100	10.8	0	0.0	NONE	ED-2 ED-5 FIRM-7 FIRM-CREDIT	SWPP SWPP SWPP SWPP	0.0 0.0 73.0 0.0	0.0 0.0 73.0 0.0	27	27	130	N/A	
			Total	1 / 0	100	10.8	100	10.8	0	0.0										73.0
Apr 08 15:28	TLR 5A	NEXT	7-F	1 / 0	100	5.6	100	5.6	0	0.0	NONE	ED-2 ED-5 FIRM-7 FIRM-CREDIT	SWPP SWPP SWPP SWPP	0.0 0.0 73.0 0.0	0.0 0.0 73.0 0.0	22	22	116	N/A	
			Total	1 / 0	100	5.6	100	5.6	0	0.0										73.0
Apr 08 16:27	TLR 5A	NEXT	7-F	1 / 0	100	10.8	100	10.8	0	0.0	NONE	ED-2 ED-5 FIRM-7 FIRM-CREDIT	SWPP SWPP SWPP SWPP	0.0 0.0 73.0 0.0	0.0 0.0 73.0 0.0	27	27	117	N/A	
			Total	1 / 0	100	10.8	100	10.8	0	0.0										73.0
Apr 08 17:33	TLR 5A	NEXT	7-F	1 / 0	100	10.8	100	10.8	0	0.0	NONE	ED-2 ED-5 FIRM-7 FIRM-CREDIT	SWPP SWPP SWPP SWPP	0.0 0.0 73.0 0.0	0.0 0.0 73.0 0.0	29	29	124	N/A	
			Total	1 / 0	100	10.8	100	10.8	0	0.0										73.0
Apr 08 18:30	TLR 5A	NEXT	7-F	1 / 0	100	10.8	100	10.8	0	0.0	NONE	ED-2 ED-5 FIRM-7 FIRM-CREDIT	SWPP SWPP SWPP SWPP	0.0 0.0 73.0 0.0	0.0 0.0 73.0 0.0	31	31	119	N/A	
			Total	1 / 0	100	10.8	100	10.8	0	0.0										73.0
Apr 08 19:27	TLR 5A	NEXT	7-F	1 / 0	100	10.8	100	10.8	0	0.0	NONE	ED-2 ED-5 FIRM-7 FIRM-CREDIT	SWPP SWPP SWPP SWPP	0.0 0.0 73.0 0.0	0.0 0.0 73.0 0.0	29	29	112	N/A	
			Total	1 / 0	100	10.8	100	10.8	0	0.0										73.0
Apr 08 20:39	TLR 5A	NEXT	7-F	1 / 0	86	9.3	86	9.3	0	0.0	NONE	ED-2 ED-5 FIRM-7 FIRM-CREDIT	SWPP SWPP SWPP SWPP	0.0 0.0 62.7 0.0	0.0 0.0 62.7 0.0	19	19	82	N/A	
			Total	1 / 0	86	9.3	86	9.3	0	0.0										62.7
Apr 08 21:31	TLR 5A	NEXT	7-F	1 / 0	86	9.3	86	9.3	0	0.0	NONE	ED-2 ED-5 FIRM-7 FIRM-CREDIT	SWPP SWPP SWPP SWPP	0.0 7.0 64.7 0.0	0.0 7.0 64.7 0.0	28	28	31	N/A	
			Total	1 / 0	86	9.3	86	9.3	0	0.0										71.7
Apr 08 22:35	TLR 5A	NEXT	7-F	1 / 0	85	9.2	85	9.2	0	0.0	NONE	ED-2 ED-5 FIRM-7 FIRM-CREDIT	SWPP SWPP SWPP SWPP	0.0 13.0 69.8 0.0	0.0 13.0 69.8 0.0	31	31	88	N/A	
			Total	1 / 0	85	9.2	85	9.2	0	0.0										82.8
Apr 08 22:57	TLR 0	CURRENT			NONE								NONE			38	38	94	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	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
7	19	1647	1647	0
Total	19	1647	1647	0

TLR Market Flow Totals

Market	Type	Market Relief	
		IDC MW	RC Ackn MW
SWPP	ED-2	0.0	0.0
	ED-5	21.0	21.0
	FIRM-7	1125.4	1125.4
Total for SWPP		1146.4	1146.4
Total		1146.4	1146.4

Date	Time	Category	Issue
4/8/2011	06:46	TLR - 5a Initial	Issued Level 5 to remove Tag on Blackwater Tie.
4/8/2011	21:20	Transmission Equipment Outage	Contacted SPS TO (Bill) about Tolck-Roosevelt 230 kV ckt #1 RTS, notified line RTS @ 2049; TO informed RC that crews finishing testing on line; would like RC to stay in level 5 until TO is sure work is complete and line will not need to be remove from service.
4/8/2011	22:56	TLR - 0	SPS TO (Vince) notified RC crews have completed testing on Tolck-Roosevelt 230 kV #1 and line has been released. Ended TLR, Notified Tariff (Jim) schedule export on Balckwater Tie can resume