

SPP TLR 5 Investigation Report
Flowgate 16700
(Tolk – Tuco 230 kV line for the loss of Tolk – Yoakum 230 kV)
(TEMP12_16700)
TLR Level 5: November 06-07, 2010
Report Issued: January 21, 2011

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 5203 on November 6-7, 2010. Flowgate 5203 is an SPP flowgate. The Level 5 TLR was in effect from 23:00 on November 6 until 1:00 CST on November 7, 2010. Loading in the region caused the projected post-contingent flows on the Tolk – Tuco 230 kV line to exceed the SOL.

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

At the time the Level 5A TLR was first issued, the Limiting Element was rated at 351 MVA. Flow on the Limiting Element was 271 MVA. Flow on the Contingent Element was 236 MVA. The LODF was approximately 27%. Post-contingent flow on the Limiting Element was approximately 335 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 impacting the flowgate by more than 5% prior to the Level 5 TLR. The TLR was escalated to a Level 5 in order to curtail firm transactions and firm market flow to relieve loading.

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.

The Southwest Power Pool outage coordination process identified potential for loading during the temporary outage of the Plant X – Sundown 230 kV line. Due to the duration of the outage, projected generation outputs in the area are unreliable, so this temporary flowgate was put in place to re-dispatch generation through the EIS market.

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 the temporary outage of the Plant X – Sundown 230 kV line. Since the temporary outage was the most significant factor contributing to this loading, no further action was necessary.

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. Non-firm Market Flow was 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: 16700 - Temp 12 - Tolk - Tuco 230kV (flo) Tolk - Yoakum 230kV
Event Begin: 2010-11-06 17:42
Event End: 2010-11-07 09:31
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 3B	11/06/2010 17:55	11/06/2010 17:42	11/06/2010 17:41:43	50.0	46.3	3.7	1	23
TLR Level 3A	11/06/2010 19:00	11/06/2010 18:28	11/06/2010 18:27:22	27.0	23.3	3.7	1	23
TLR Level 3A	11/06/2010 20:00	11/06/2010 19:28	11/06/2010 19:27:59	41.0	37.3	3.7	1	23
TLR Level 3A	11/06/2010 21:00	11/06/2010 20:26	11/06/2010 20:26:03	52.0	48.3	3.7	1	23
TLR Level 3A	11/06/2010 22:00	11/06/2010 21:26	11/06/2010 21:25:50	70.0	66.3	3.7	1	23
TLR Level 5A	11/06/2010 23:00	11/06/2010 22:34	11/06/2010 22:32:14	323.0	0.0	323.0	1	3
TLR Level 5A	11/07/2010 00:00	11/06/2010 23:28	11/06/2010 23:27:44	47.0	0.0	47.0	1	3
TLR Level 3A	11/07/2010 01:00	11/07/2010 00:27	11/07/2010 00:26:39	44.0	43.5	0.5	1	3
TLR Level 3A	11/07/2010 02:00	11/07/2010 01:27	11/07/2010 01:27:08	0.0	0.0	0.0	0	0
TLR Level 3A	11/07/2010 03:00	11/07/2010 02:26	11/07/2010 02:25:54	50.0	31.5	18.5	1	3
TLR Level 3A	11/07/2010 04:00	11/07/2010 03:27	11/07/2010 03:26:53	45.0	30.5	14.5	1	3
TLR Level 3A	11/07/2010 05:00	11/07/2010 04:29	11/07/2010 04:27:26	0.0	0.0	0.0	0	0
TLR Level 3A	11/07/2010 06:00	11/07/2010 05:38	11/07/2010 05:37:27	14.0	13.5	0.5	1	3
TLR Level 3A	11/07/2010 07:00	11/07/2010 06:27	11/07/2010 06:26:47	5.0	4.5	0.5	1	3
TLR Level 3A	11/07/2010 08:00	11/07/2010 07:26	11/07/2010 07:26:25	5.0	4.5	0.5	1	3
TLR Level 3A	11/07/2010 09:00	11/07/2010 08:26	11/07/2010 08:26:23	1.0	0.5	0.5	1	3
TLR Level 0	11/07/2010 10:00	11/07/2010 09:31	11/07/2010 09:31:07	0.0	0.0	0.0	0	0

Nov 06 23:28	TLR 5A	NEXT	6-NN Total	1 / 0 1 / 0	3 3	0.5 0.5	3 3	0.5 0.5	0 0	0.0 0.0	NONE	ED-2 ED-6 FIRM-7 FIRM-CREDIT Total	SWPP SWPP SWPP SWPP	0.0 24.0 22.5 0.0 46.5	0.0 24.0 22.5 0.0 46.5	348	N/A	N/A	N/A
Nov 07 00:27	TLR 3A	NEXT	6-NN Total	1 / 0 1 / 0	3 3	0.5 0.5	3 3	0.5 0.5	0 0	0.0 0.0	NONE	ED-2 ED-6 FIRM-7 Total	SWPP SWPP SWPP	0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0	333	N/A	N/A	N/A
Nov 07 01:27	TLR 3A	NEXT	NONE								NONE	ED-2 ED-6 FIRM-7 Total	SWPP SWPP SWPP	0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0	320	N/A	N/A	N/A
Nov 07 02:26	TLR 3A	NEXT	6-NN Total	1 / 0 1 / 0	3 3	0.5 0.5	3 3	0.5 0.5	0 0	0.0 0.0	NONE	ED-2 ED-6 FIRM-7 Total	SWPP SWPP SWPP	0.0 18.0 0.0 18.0	0.0 18.0 0.0 18.0	325	N/A	N/A	N/A
Nov 07 03:27	TLR 3A	NEXT	6-NN Total	1 / 0 1 / 0	3 3	0.5 0.5	3 3	0.5 0.5	0 0	0.0 0.0	NONE	ED-2 ED-6 FIRM-7 Total	SWPP SWPP SWPP	0.0 14.0 0.0 14.0	0.0 14.0 0.0 14.0	341	N/A	N/A	N/A
Nov 07 04:29	TLR 3A	NEXT	NONE								NONE	ED-2 ED-6 FIRM-7 Total	SWPP SWPP SWPP	0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0	351	N/A	N/A	N/A
Nov 07 05:38	TLR 3A	NEXT	6-NN Total	1 / 0 1 / 0	3 3	0.5 0.5	3 3	0.5 0.5	0 0	0.0 0.0	NONE	ED-2 ED-6 FIRM-7 Total	SWPP SWPP SWPP	0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0	349	N/A	N/A	N/A
Nov 07 06:27	TLR 3A	NEXT	6-NN Total	1 / 0 1 / 0	3 3	0.5 0.5	3 3	0.5 0.5	0 0	0.0 0.0	NONE	ED-2 ED-6 FIRM-7 Total	SWPP SWPP SWPP	0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0	350	N/A	N/A	N/A
Nov 07 07:26	TLR 3A	NEXT	6-NN Total	1 / 0 1 / 0	3 3	0.5 0.5	3 3	0.5 0.5	0 0	0.0 0.0	NONE	ED-2 ED-6 FIRM-7 Total	SWPP SWPP SWPP	0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0	349	N/A	N/A	N/A
Nov 07 08:28	TLR 3A	NEXT	6-NN Total	1 / 0 1 / 0	3 3	0.5 0.5	3 3	0.5 0.5	0 0	0.0 0.0	NONE	ED-2 ED-6 FIRM-7 Total	SWPP SWPP SWPP	0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0	344	N/A	N/A	N/A
Nov 07 09:31	TLR 0	CURRENT	NONE								NONE	NONE				329	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	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	15	165	165	0
7	0	0	0	0
Total	15	165	165	0

TLR Market Flow Totals

Market	Type	Market Relief	
		IDC MW	RC Ackn MW
SWPP	ED-2	0.0	0.0
	ED-6	378.0	378.0
	FIRM-7	23.0	23.0
Total for SWPP		401.0	401.0
Total		401.0	401.0

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