

ICTE TLR 5 Investigation Report
Flowgate 1966
(Sheridan - Mabelvale 500 kV for the loss of White Bluff - Keo 500 kV)
TLR Level 5: August 9, 2010
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 TLR 5 event that occurred on Flowgate 1966 on August 9, 2010. Flowgate 1966 is an Entergy flowgate. The TLR 5 was in effect from 12:38 PM until 11:32 PM on August 9, 2010. Projected post-contingent flows on the Sheridan - Mabelvale 500 kV line for the loss of the White Bluff - Keo 500 kV line exceeded the SOL.

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

At the time the TLR 5a was issued, the Limiting Element was rated at 1732 MVA. Flow on the Limiting Element was 964 MVA. Flow on the Contingent Element was 1366 MVA. The LODF was approximately 76%. Post-contingent flow on the Limiting Element was approximately 2006 MVA.

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

TLRs levels, timing and relief requested amounts are shown on pages 2, 3 and 4.

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

There were no unplanned outages.

5. Procedures implemented prior to hold/curtailment.

Curtailed non-firm transactions, not enough non-firm to alleviate 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 ICTE Reliability Coordinators logged information describing the actions taken at each issuance of the TLR, included in this document.

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. Mitigation plan was to use the congestion management process.

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 ICTE Reliability Coordinator was monitoring their state estimator for potential issues during this time. Screen shots were taken during each issuance of the TLR level 5.

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

ICT Tariff Administration grants transmission service using an AFC process. This process evaluates each transmission request on a case by case basis. There are no ATC values for individual corridors to or from the Entergy system. ICT Tariff Administration was not granting any transmission requests that impacted the congested flowgate by 3 % or greater at the time of the TLR 5.

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

This TLR was caused by a combination of generation patterns, load, and system flows. 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 kept on file. These screen shots are not being provided to reduce the size of this report.

14. Re-dispatch actions taken.

Entergy achieved their NNL obligation by moving generation on White Bluff, Lynch 3, and Mablevale.

| Event History | | | | | | | | |
|------------------------------|------------------|----------------------------------------------------------------|---------------------|------------------|------------------|-----------------|------------|-----|
| Issuing RC: | | ICTE | | | | | | |
| Flowgate: | | 1966 - Sheridan - Mabelvale 500kv ftlo White Bluff - Keo 500kv | | | | | | |
| Event Begin: | | 2010-08-09 10:50 | | | | | | |
| Event End: | | 2010-08-09 23:30 | | | | | | |
| Event Duration: | | 13 Hours | | | | | | |
| TLR Level | TLR Date | TLR Confirm Time | Run Time | Requested Relief | Remaining Relief | Relief Provided | Total Cuts | |
| | | | | | | | Tags | MW |
| TLR Level 4 | 08/09/2010 10:50 | 08/09/2010 10:40 | 08/09/2010 10:38:56 | 0.0 | 0.0 | 0.0 | 10 | 487 |
| TLR Level 5A | 08/09/2010 12:00 | 08/09/2010 11:38 | 08/09/2010 11:37:13 | 424.0 | 0.0 | 431.8 | 73 | 933 |
| TLR Level 5A | 08/09/2010 13:00 | 08/09/2010 12:34 | 08/09/2010 12:28:21 | 132.0 | 0.0 | 235.5 | 70 | 642 |
| TLR Level 5A | 08/09/2010 14:00 | 08/09/2010 13:32 | 08/09/2010 13:30:48 | 285.0 | 0.0 | 358.4 | 75 | 750 |
| TLR Level 5A | 08/09/2010 15:00 | 08/09/2010 14:35 | 08/09/2010 14:33:01 | 247.0 | 0.0 | 357.8 | 75 | 751 |
| TLR Level 5A | 08/09/2010 16:00 | 08/09/2010 15:35 | 08/09/2010 15:31:00 | 278.0 | 0.0 | 389.6 | 75 | 771 |
| TLR Level 5A | 08/09/2010 17:00 | 08/09/2010 16:31 | 08/09/2010 16:28:49 | 309.0 | 0.0 | 457.5 | 73 | 926 |
| TLR Level 5A | 08/09/2010 18:00 | 08/09/2010 17:31 | 08/09/2010 17:28:29 | 191.0 | 0.0 | 339.0 | 71 | 638 |
| TLR Level 5A | 08/09/2010 19:00 | 08/09/2010 18:37 | 08/09/2010 18:36:50 | 90.0 | 0.0 | 234.7 | 67 | 488 |
| TLR Level 5A | 08/09/2010 20:00 | 08/09/2010 19:35 | 08/09/2010 19:29:55 | 322.0 | 0.0 | 399.0 | 65 | 834 |
| TLR Level 5A | 08/09/2010 21:00 | 08/09/2010 20:33 | 08/09/2010 20:27:33 | 308.0 | 0.0 | 385.2 | 50 | 495 |
| TLR Level 5A | 08/09/2010 22:00 | 08/09/2010 21:32 | 08/09/2010 21:29:39 | 184.0 | 0.0 | 259.6 | 38 | 285 |
| TLR Level 1 | 08/09/2010 22:40 | 08/09/2010 22:32 | 08/09/2010 22:31:02 | 0.0 | 0.0 | 0.0 | 0 | 0 |
| TLR Level 0 | 08/09/2010 23:30 | 08/09/2010 23:07 | 08/09/2010 23:07:08 | 0.0 | 0.0 | 0.0 | 0 | 0 |

TLR Schedule Totals

| Priority | Schedule | | | |
|--------------|-----------------------|-------------|-----------------------|------------|
| | Total Tags Cut / Hold | IDC Cut MW | RC Cut Acknowledge MW | Hold MW |
| 0 | 0 | 0 | 0 | 0 |
| 1 | 9 | 783 | 783 | 0 |
| 2 | 17 | 1280 | 1228 | 80 |
| 3 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 |
| 6 | 41 | 2787 | 2787 | 0 |
| 7 | 870 | 2957 | 2957 | 408 |
| Total | 737 | 7537 | 7485 | 488 |

TLR NNL Totals

| CA | NNL Relief | |
|--------------|---------------|---------------|
| | IDC MW | RC Ackn MW |
| EES | 704.0 | 705.0 |
| SOCO | 253.0 | 259.0 |
| TVA | 68.0 | 68.0 |
| Total | 1025.0 | 1039.0 |

TLR Market Flow Totals

| Market | Type | Market Relief | |
|-----------------------|--------|---------------|---------------|
| | | IDC MW | RC Ackn MW |
| SWPP | ED-2 | 0.0 | 0.0 |
| | ED-8 | 1064.0 | 1064.0 |
| | FIRM-7 | 273.5 | 273.4 |
| Total for SWPP | | 1337.5 | 1337.4 |
| Total | | 1337.5 | 1337.4 |

| | | | |
|--------|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| 8/9/10 | 1112 | Assessed as ICP, PC 100%, EES notified | Flow Gate Assessment |
| 8/9/10 | 1138 | Issued TLR 4, PC 108%, Ref 277615. AFCs held till 1800. | TLR - 4 Initial |
| 8/9/10 | 1240 | Issued TLR 5A, PC 116 %, Ref 277615, NNL: EES 63.5, SOCO 25.4, TVA 6, No Non-Firm available, AFCs held till 1800. | TLR - 5a Initial |
| 8/9/10 | 1340 | Re-Issued TLR 5A, PC 116 %, Ref 277615, NNL: EES 35.3, SOCO 13.0, TVA 3.4, No Non-Firm available, AFCs held till 1800. | TLR - 5a Reissue |
| 8/9/10 | 1436 | Re-Issued TLR 5A, PC 116 %, Ref 277615, NNL: EES 70.5, SOCO 25.1, TVA 6.5, No Non-Firm available, AFCs held till 1800. | TLR - 5a Reissue |
| 8/9/10 | 1532 | Re-Issued TLR 5A, PC %, Ref 277615, NNL: EES 71.1, SOCO 25.3, TVA 6.6, No Non-Firm available, AFCs held till 1800. | TLR - 5a Reissue |
| 8/9/10 | 1631 | Re-Issued TLR 5A, PC 101%, Ref 277615, NNL: EES 96.6, SOCO 34.7, TVA 9.1, No Non-Firm available, AFCs held till 1800. | TLR - 5a Reissue |
| 8/9/10 | 1728 | Re-Issued TLR 5A, PC %, Ref 277615, NNL: EES 97.3, SOCO 32.3, TVA 9.2, No Non-Firm available, AFCs held till 1800. | TLR - 5a Reissue |
| 8/9/10 | 1752 | ICT tariff (Bill) contacted ICT and reported that the internal non-firm AFC's which expire at 18:00, will be extended for an additional 6 hours (Thru HE 0000) | Other |

| | | | |
|---------|------|------------------------------------------------------------------------------------------------|-------------------|
| 8/9/10 | 1831 | Re-issued TLR 5a PC 90% EES NNL: 93.3. SOCO NNL 33.7, TVA NNL 8.8. | TLR - 5a Reissue |
| 8/9/10 | 1937 | Re-issued TLR 5a PC 84% EES NNL: 49.2. SOCO NNL 17.5, TVA NNL 4.5 | TLR - 5a Reissue |
| 8/9/10 | 1938 | No new internal schedules to curtail. | Internal Non-Firm |
| 8/9/10 | 2035 | Re-issued TLR 5a PC 91% EES NNL: 49.6. SOCO NNL 17.8, TVA NNL 4.7 | TLR - 5a Reissue |
| 8/9/10 | 2036 | No new internal schedules to curtail. | Internal Non-Firm |
| 8/9/10 | 2133 | Re-issued TLR 5a PC 95% EES NNL: 49.7. SOCO NNL 17.6 TVA NNL 4.7 | TLR - 5a Reissue |
| 8/9/10 | 2133 | No new internal schedules to curtail. | Internal Non-Firm |
| 8/9/10 | 2232 | Re-issued TLR 5a PC 62% EES NNL: 27.6. SOCO NNL 10.8 TVA NNL 2.7 | TLR - 5a Reissue |
| 8/9/10 | 2232 | No new internal schedules to curtail. | Internal Non-Firm |
| 8/9/10 | 2332 | Issued TLR - 1 PC 34% updated REF#277615 Called Bill ICT Tariff to restore AFC's on Fg 1966 | TLR - 1 |
| 8/10/10 | 0007 | Issued TLR 0 PC 37% EES notified ened REF# 277615 | TLR - 0 |