

**ICTE TLR 5 Investigation Report
Flowgate 1347
(White Bluff-Sheridan 500 kV for the loss of Mabelvale-Sheridan 500 kV)
TLR Level 5: January 1 and 2, 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 TLR 5 event that occurred on Flowgate 1347 on January 1, 2011. Flowgate 1347 is an Entergy flowgate. The TLR 5 was in effect from 22:30 PM on January 1, 2011 until 11:30 AM on January 2, 2011. Projected post-contingent flows on the White Bluff-Sheridan 500 kV line for the loss of the Mabelvale-Sheridan 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 1314 MVA. Flow on the Contingent Element was 775 MVA. The LODF was approximately 81%. Post-contingent flow on the Limiting Element was approximately 1943 MVA.

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

TLRs levels, timing and relief requested amounts are shown on pages 4, 5, and 6.

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

Listed cause, Heavy north to south power transfer.

- There were no unplanned outages on the ICTE system associated with this flowgate.
- There were no abnormal load changes.
- There was 0 mw of non-firm service impacting the flowgate day of since the RC was in a TLR 5 event.

There were no unplanned/planned transmission outages that significantly impacted the TLR 5 event. The constraint is a North to South flowgate. Units in the Entergy BA (including internal IPPs and QFs) North of the constraint have an average Generation Shift Factor (GSF) of -25%, while units south have an average GSF of 30%. The base loaded units north of the constraint were for the most part loaded at their PMAX for the duration of the event. Other base loaded units south of the constraint were for the most part operating at PMAX during the event. Other generating units south of the constraint had lowered due to a decrease in load and for regulation reasons. IPP/QF generation stayed approximately the same through the TLR 5 event.

5. Procedures implemented prior to hold/curtailment.

Curtailed non-firm transactions, not enough non-firm to alleviate the flowgate. The system was not re-dispatched to prevent curtailment of firm service. The ICT RC verifies with Entergy's Shift Supervisor before a TLR 5 event is called if there are any re-dispatch options available. The Entergy Shift Supervisor to-date has not offered any re-dispatch solutions to prevent a TLR 5 event.

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.

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 not 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 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.

AFC Initialization Summary Report Timestamp		Firm AFC available on WHBSHE_MABEL (MW)																
		01/01 HB19	20	21	22	23	01/02 HB 0	1	2	3	4	5	6	7	8	9	10	11
Prior to Day Ahead	12/30/10 18:32	1029	1042	1044	1009	1022	544	539	533	528	535	546	549	603	632	632	684	568
Day Ahead	12/31/10 10:44	897	908	905	862	871	398	391	386	380	384	399	409	469	501	498	446	424
Prior to Day Ahead	12/31/10 18:30						285	357	343	339	362	376	360	413	442	445	425	375
Day Ahead	1/1/11 10:39						182	273	256	243	261	277	250	277	291	294	283	238

AFC Initialization Summary Report Timestamp		Sum of impact of firm reservations and rtbalc baseflow on WHBSHE_MABEL (MW)																
		01/01 HB19	20	21	22	23	01/02 HB 0	1	2	3	4	5	6	7	8	9	10	11
Prior to Day Ahead	12/30/10 18:32	703	690	688	723	710	1188	1193	1199	1204	1197	1186	1183	1129	1100	1100	1148	1164
Day Ahead	12/31/10 10:44	835	824	827	870	861	1334	1341	1346	1352	1348	1333	1323	1263	1231	1234	1286	1308
Prior to Day Ahead	12/31/10 18:30						1447	1375	1389	1393	1370	1356	1372	1319	1290	1287	1307	1357
Day Ahead	1/1/11 10:39						1550	1459	1478	1489	1471	1455	1462	1455	1441	1438	1449	1494
Difference for Prior to Day Ahead		-132	-134	-139	-147	-151	-146	-148	-147	-148	-151	-147	-140	-134	-131	-134	-138	-144
Difference for Day Ahead							-103	-84	-87	-86	-101	-89	-110	-136	-151	-151	-142	-137

TFC of WHBSHE_MABEL
1732

AFC Initialization Summary Report Timestamp	Average Firm AFC available on WHBSHE_MABEL (MW)
Prior to Day Ahead 12/30/2010 18:32, 12/31/2010 18:30	618
Day Ahead 12/31/2010 10:44, 1/1/2011 10:39	477
Difference	-139

AFC Initialization Summary Report Timestamp	Ave. of impact of firm reservations and rtbalc baseflow on WHBSHE_MABEL (MW)
Prior to Day Ahead 12/30/2010 18:32, 12/31/2010 18:30	1118
Day Ahead 12/31/2010 10:44, 1/1/2011 10:39	1255
Difference	139

AFC Initialization Summary Report Timestamp (CST)	AFC available on WHBSHE_MABEL (MW)																	
	01/01 HB19	20	21	22	23	01/02 HB 0	1	2	3	4	5	6	7	8	9	10	11	
1/1/11 18:42	843	755	824	839	850	764	751	699	633	625	613	564	598	662	663	660	755	
1/1/11 19:22	0	0	0	0	0	0	744	691	614	615	624	555	566	614	632	680	731	
1/1/11 20:22		0	0	0	0	0	749	697	621	621	632	565	572	613	630	671	739	
1/1/11 21:22			0	0	0	0	698	647	569	569	581	512	515	576	578	612	681	
1/1/11 22:22				0	0	0	672	621	544	556	547	493	478	555	536	572	653	
1/1/11 23:19					0	0	484	471	405	395	414	329	365	567	567	553	667	
1/2/11 0:22						0	468	449	421	429	418	362	369	608	584	610	690	
1/2/11 1:34							0	0	0	0	0	0	384	597	600	592	696	
1/2/11 2:18								0	0	0	0	0	370	567	582	613	678	
1/2/11 2:42									0	0	0	0	370	567	582	613	678	
1/2/11 3:17										0	0	0	365	582	599	608	684	
1/2/11 4:17											0	0	376	576	591	601	678	
1/2/11 5:16												0	348	608	624	632	711	
1/2/11 6:51													1696	444	495	495	587	
1/2/11 7:15														0	0	0	0	
1/2/11 8:16															0	0	0	
1/2/11 9:14																0	0	
1/2/11 10:50																	0	0
1/2/11 11:14																		0

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 had 1202 MW of NNL.

Event History

Issuing RC: ICTE
Flowgate: 1324 - WhiteBluff-Sheridan for loss of Mabelvale-Sheridan
Event Begin: 2011-01-01 20:25
Event End: 2011-01-02 14:45
Event Duration: 18 Hours

TLR Level	TLR Date	TLR Confirm Time	Run Time	Requested Relief	Remaining Relief	Relief Provided	Total Cuts	
							Tags	MW
TLR Level 3B	01/01/2011 20:25	01/01/2011 20:14	01/01/2011 20:12:42	100.0	0.0	100.4	12	421
TLR Level 3A	01/01/2011 22:00	01/01/2011 21:27	01/01/2011 21:24:47	180.0	43.9	136.1	5	135
TLR Level 3A	01/01/2011 22:00	01/01/2011 21:29	01/01/2011 21:28:36	104.0	0.0	104.0	5	135
TLR Level 3A	01/01/2011 23:00	01/01/2011 22:29	01/01/2011 22:27:34	279.0	158.4	120.6	3	72
TLR Level 5A	01/02/2011 00:00	01/01/2011 23:32	01/01/2011 23:30:39	354.0	0.0	357.3	36	309
TLR Level 5A	01/02/2011 01:00	01/02/2011 00:29	01/02/2011 00:27:45	133.0	0.0	256.2	31	200
TLR Level 5A	01/02/2011 02:00	01/02/2011 01:28	01/02/2011 01:26:02	151.0	0.0	227.4	33	177
TLR Level 5A	01/02/2011 03:00	01/02/2011 02:28	01/02/2011 02:26:13	172.0	0.0	233.3	37	259
TLR Level 5A	01/02/2011 04:00	01/02/2011 03:31	01/02/2011 03:26:02	178.0	0.0	239.3	38	323
TLR Level 5A	01/02/2011 05:00	01/02/2011 04:31	01/02/2011 04:26:51	178.0	0.0	238.7	37	288
TLR Level 5A	01/02/2011 06:00	01/02/2011 05:26	01/02/2011 05:25:47	221.0	0.0	281.5	40	266
TLR Level 5A	01/02/2011 07:00	01/02/2011 06:30	01/02/2011 06:27:03	197.0	0.0	283.1	40	259
TLR Level 5A	01/02/2011 08:00	01/02/2011 07:33	01/02/2011 07:31:40	248.0	0.0	339.9	41	332
TLR Level 5A	01/02/2011 09:00	01/02/2011 08:30	01/02/2011 08:27:07	244.0	0.0	364.2	42	514
TLR Level 5A	01/02/2011 10:00	01/02/2011 09:30	01/02/2011 09:26:33	224.0	0.0	355.0	40	349
TLR Level 5A	01/02/2011 11:00	01/02/2011 10:30	01/02/2011 10:25:39	208.0	0.0	338.8	36	257
TLR Level 5A	01/02/2011 12:00	01/02/2011 11:29	01/02/2011 11:26:41	111.0	0.0	237.8	32	156
TLR Level 5A	01/02/2011 13:00	01/02/2011 12:30	01/02/2011 12:27:15	108.0	0.0	180.6	30	109
TLR Level 1	01/02/2011 14:00	01/02/2011 13:26	01/02/2011 13:26:05	0.0	0.0	0.0	0	0
TLR Level 0	01/02/2011 14:45	01/02/2011 14:26	01/02/2011 14:26:15	0.0	0.0	0.0	0	0

Event Summary

FILE SAVED AS: ICTE_1324_20110101_1925.htm

Incident: ICTE_1324_20110101_1925 **Date:** 01/01/2011 **Reliability Coordinator:** ICTE
Initial Conditions: N/A
Flowgate: 1324 - WhiteBluff-Sheridan for loss o... **Rating:** 1732 **LODF:** 81.16%
TLR Direction: Normal
Effective StartTime: 01/01/2011 20:25 **Effective EndTime:** 01/02/2011 14:45 **TLR Duration:** 18 Hours and 20 Minutes

TLR Actions

Confirm Time	Level	Effective Hour	Priority	Schedule						NHL Relief			Market Relief			Flow		Cont. Flow	TLR Action Comments				
				Total Tags Cut / Hold	MW	Relief	RC Cut Acknowledge MW	Relief	MW	Relief	CA	IDC MW	RC Ackn MW	Type	Mkt	IDC MW	RC Ackn MW			Current	Post Cont.		
Jan 01 20:14	TLR 3B	CURRENT	1-NS	1 / 0	51	19.1	51	19.1	0	0.0	NONE			ED-2	SWPP	0.0	0.0	1255	1550	733	N/A		
		2-NH	4 / 0	279	35.1	279	35.1	0	0.0	ED-5				SWPP	28.3	28.3	ED-5					SWPP	0.0
				Total	12 / 0	518	74.1	421	74.1	0	0.0	Total	26.3	26.3	0.0	0.0							
				NEXT	1-NS	2 / 0	101	31.4	101	31.4	0	0.0	NONE			ED-2	SWPP	0.0	0.0	1245	1527	716	N/A
				2-NH	3 / 0	251	23.9	251	23.9	0	0.0	ED-5				SWPP	125.0	125.0	ED-5				
				Total	12 / 1	518	101.5	578	101.5	0	0.0	Total	134.6	134.6	0.0	0.0							
Jan 01 21:27	TLR 3A	PRELIM	NEXT	1-NS	1 / 0	51	19.1	0	0.0	0	0.0	NONE			ED-2	SWPP	0.0	0.0	1245	1527	716	N/A	
				5-NN	4 / 0	84	15.0	0	0.0	0	0.0				ED-5	SWPP	101.0	101.0					ED-5
				Total	5 / 0	135	35.1	0	0.0	0	0.0	Total	101.0	101.0	0.0	0.0							
Jan 01 21:29	TLR 3A	NEXT	NEXT	1-NS	1 / 0	51	19.1	51	19.1	0	0.0	NONE			ED-2	SWPP	0.0	0.0	1245	1527	716	N/A	
				5-NN	4 / 0	84	15.0	84	15.0	0	0.0				ED-5	SWPP	68.9	68.9					ED-5
				Total	5 / 0	135	35.1	135	35.1	0	0.0	Total	68.9	68.9	0.0	0.0							
Jan 01 22:29	TLR 3A	NEXT	NEXT	5-NN	2 / 0	22	8.5	22	8.5	0	0.0	NONE			ED-2	SWPP	0.0	0.0	1227	1788	592	N/A	
				Total	2 / 0	22	8.5	22	8.5	0	0.0				ED-5	SWPP	101.0	101.0					ED-5
				Total	2 / 0	22	8.5	22	8.5	0	0.0	Total	101.0	101.0	0.0	0.0							
Jan 01 23:32	TLR 5A	NEXT	NEXT	5-NN	2 / 0	22	8.5	22	8.5	0	0.0	EES	121.0	121.0	ED-2	SWPP	0.0	0.0	1314	1943	775	N/A	
				7-F	33 / 0	237	50.7	237	50.7	0	0.0	ED-5	SWPP	101.0	101.0	ED-5	SWPP	64.9					64.9
				Total	35 / 0	259	59.2	259	59.2	0	0.0	Total	165.9	165.9	0.0	0.0							
Jan 02 00:29	TLR 5A	NEXT	NEXT	5-NN	3 / 0	25	8.9	25	8.9	0	0.0	EES	74.0	74.0	ED-2	SWPP	0.0	0.0	1078	1559	719	N/A	
				7-F	27 / 0	125	28.3	125	28.3	0	0.0	ED-5	SWPP	101.0	101.0	ED-5	SWPP	34.7					34.7
				Total	30 / 0	150	35.2	150	35.2	0	0.0	Total	135.7	135.7	0.0	0.0							
Jan 02 01:25	TLR 5A	NEXT	NEXT	5-NN	3 / 0	25	8.9	25	8.9	0	0.0	EES	59.0	59.0	ED-2	SWPP	0.0	0.0	1042	1557	648	N/A	
				7-F	29 / 0	102	21.0	102	21.0	0	0.0	ED-5	SWPP	101.0	101.0	ED-5	SWPP	27.4					27.4
				Total	32 / 0	127	29.9	127	29.9	0	0.0	Total	128.4	128.4	0.0	0.0							
Jan 02 02:28	TLR 5A	NEXT	NEXT	2-NH	0 / 1	0	0.0	0	0.0	63	3.2	EES	58.0	58.0	ED-2	SWPP	0.0	0.0	1121	1659	678	N/A	
				5-NN	3 / 0	25	8.9	25	8.9	0	0.0	ED-5	SWPP	101.0	101.0	ED-5	SWPP	27.4					27.4
				Total	35 / 1	134	31.4	134	31.4	63	3.2	Total	128.4	128.4	0.0	0.0							
Jan 02 03:31	TLR 5A	NEXT	NEXT	2-NH	2 / 0	128	5.9	128	5.9	0	0.0	EES	58.0	58.0	ED-2	SWPP	0.0	0.0	1100	1521	643	N/A	
				5-NN	3 / 0	25	8.8	25	8.8	0	0.0	ED-5	SWPP	101.0	101.0	ED-5	SWPP	27.6					27.6
				Total	37 / 0	273	40.8	273	40.8	0	0.0	Total	128.6	128.6	0.0	0.0							
Jan 02 04:31	TLR 5A	NEXT	NEXT	2-NH	1 / 0	75	4.2	75	4.2	0	0.0	EES	57.0	57.0	ED-2	SWPP	0.0	0.0	1155	1705	680	N/A	
				5-NN	4 / 0	75	20.4	75	20.4	0	0.0	ED-5	SWPP	101.0	101.0	ED-5	SWPP	27.6					27.6
				Total	37 / 0	288	52.7	288	52.7	0	0.0	Total	128.5	128.5	0.0	0.0							
Jan 02 05:20	TLR 5A	NEXT	NEXT	5-NN	4 / 0	75	20.4	75	20.4	0	0.0	EES	83.0	83.0	ED-2	SWPP	0.0	0.0	1185	1748	693	N/A	
				7-F	35 / 0	191	38.7	191	38.7	0	0.0	ED-5	SWPP	101.0	101.0	ED-5	SWPP	37.9					37.9
				Total	40 / 0	266	59.1	266	59.1	0	0.0	Total	138.9	138.9	0.0	0.0							
Jan 02 05:30	TLR 5A	NEXT	NEXT	5-NN	3 / 0	43	9.9	43	9.9	0	0.0	EES	88.0	88.0	ED-2	SWPP	0.0	0.0	1114	1578	695	N/A	
				7-F	37 / 1	215	45.0	215	45.0	150	15.9	ED-5	SWPP	101.0	101.0	ED-5	SWPP	39.2					39.2
				Total	40 / 1	259	54.9	259	54.9	150	15.9	Total	140.2	140.2	0.0	0.0							
Jan 02 07:33	TLR 5A	NEXT	NEXT	5-NN	3 / 0	43	9.9	43	9.9	0	0.0	EES	116.0	116.0	ED-2	SWPP	0.0	0.0	1151	1635	607	N/A	
				7-F	38 / 0	259	52.3	259	52.3	0	0.0	ED-5	SWPP	101.0	101.0	ED-5	SWPP	50.1					50.1
				Total	41 / 0	332	72.3	332	72.3	0	0.0	Total	151.1	151.1	0.0	0.0							
Jan 02 08:30	TLR 5A	NEXT	NEXT	2-NH	2 / 0	166	8.3	166	8.3	0	0.0	EES	128.0	128.0	ED-2	SWPP	0.0	0.0	1095	1750	657	N/A	
				5-NN	3 / 0	43	9.9	43	9.9	0	0.0	ED-5	SWPP	101.0	101.0	ED-5	SWPP	51.9					51.9
				Total	42 / 0	514	83.4	514	83.4	0	0.0	Total	152.9	152.9	0.0	0.0							
Jan 02 09:30	TLR 5A	NEXT	NEXT	5-NN	3 / 0	43	9.9	43	9.9	0	0.0	EES	128.0	128.0	ED-2	SWPP	0.0	0.0	984	1537	605	N/A	
				7-F	37 / 0	305	65.2	305	65.2	0	0.0	ED-5	SWPP	101.0	101.0	ED-5	SWPP	52.2					52.2
				Total	40 / 0	349	73.8	349	73.8	0	0.0	Total	153.2	153.2	0.0	0.0							
Jan 02 10:30	TLR 5A	NEXT	NEXT	5-NN	2 / 0	22	8.5	22	8.5	0	0.0	EES	124.0	124.0	ED-2	SWPP	0.0	0.0	1045	1718	629	N/A	
				7-F	34 / 0	234	48.9	234	48.9	0	0.0	ED-5	SWPP	97.0	97.0	ED-5	SWPP	60.8					60.8
				Total	36 / 0	257	57.4	257	57.4	0	0.0	Total	157.8	157.8	0.0	0.0							
Jan 02 11:29	TLR 5A	NEXT	NEXT	5-NN	3 / 0	43	9.9	43	9.9	0	0.0	EES	70.0	70.0	ED-2	SWPP	0.0	0.0	984	1525	693	N/A	
				7-F	29 / 0	113	25.3	113	25.3	0	0.0	ED-5	SWPP	101.0	101.0	ED-5	SWPP	31.3					31.3
				Total	32 / 0	166	35.2	166	35.2	0	0.0	Total	132.3	132.3	0.0	0.0							

Jan 02 12:30	TLR 5A	NEXT	6-NN 7-F Total	3 / 0 27 / 1 109	43 66 24.1	9.9 14.2 109	43 66 24.1	9.9 14.2 155	0 19.0 19.0	0.0 19.0 19.0	EES Total	38.0 38.0 38.0	38.0 38.0 38.0	ED-2 ED-5 FIRM-7 FIRM-CREDIT Total	SWPPP SWPPP SWPPP SWPPP	0.0 101.0 17.5 0.0	0.0 101.0 17.5 0.0	1008	1542	658	N/A
Jan 02 13:20	TLR 1	CURRENT			NONE							NONE			NONE			936	1418	595	N/A
Jan 02 14:20	TLR 0	CURRENT			NONE							NONE			NONE			822	1281	541	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	5	254	203	0
2	12	899	899	63
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	66	1059	975	0
7	480	2552	2552	375
Total	543	4764	4629	438

TLR>NNL Totals

CA	NNL Relief	
	IDC MW	RC Ackn MW
EES	1202.0	1202.0
Total	1202.0	1202.0

TLR Market Flow Totals

Market	Type	Market Relief	
		IDC MW	RC Ackn MW
SWPPP	ED-2	0.0	0.0
	ED-5	1707.2	1707.2
	FIRM-7	550.3	550.5
Total for SWPPP		2257.5	2257.7
Total		2257.5	2257.7

Date	Time	Category	'Detail'
01/01/11	1752	Flow Gate Assessment	Assessed FG 1324 as ICP. PC 94%
01/01/11	1912	TLR - 3b Initial	ICT RC issued TLR 3B on FG 1324, PC flow 106%. EES Notified, Oasis updated REF#361792. AFC's zero through 01:00 on the 2nd
01/01/11	2031	TLR - 3a Initial	ICT RC issued TLR 3A on FG 1324, PC flow 107%. EES Notified, Oasis updated. REF# 361792. AFC's zero though 01:00 on the 2
01/01/11	2230	TLR - 5a Initial	ICT RC issued TLR 5A on FG 1324, PC flow 105%, Oasis REF# 361792 updated. EES has 120.8MW of>NNL, SPA has 0.2MW of>NNL.
01/01/11	2327	TLR - 5a Reissue	ICT RC issued TLR 5A on FG 1324, PC flow 105%, EES has 74.4MW of>NNL, SPA has 0.1MW of>NNL.. PC 96%