

ICTE TLR 5 Investigation Report
Flowgate 1911
(Hartburg-Inland Orange 230 kV ftlo Hartburg-Cypress 500 kV)
TLR Level 5: June 13, 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 1911 on June 13, 2011. Flowgate 1911 is an Entergy flowgate. The TLR 5 was in effect from 12:37 PM until 9:29 PM on June 13, 2011. Projected post-contingent flows on the Hartburg-Inland Orange 230 kV ftlo Hartburg-Cypress 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 685 MVA. Flow on the Limiting Element was 361 MVA. Flow on the Contingent Element was 833 MVA. The LODF was approximately 44%. Post-contingent flow on the Limiting Element was approximately 728 MVA.

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

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

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

- There was an unplanned outage 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 was an unplanned outage on the Nelson-Richard 500 kv due to storm damage that impacted the TLR 5 event. Decrement generation in the area has an average generator shift factor of -14% and increment generation in the area has an average generator shift factor of 20%. Due to regulating and economic reasons, decrement generation was operating close to max while increment generation was operating lower than max. Load and generation patterns along with the unplanned outage impacted this TLR 5 event.

5. Procedures implemented prior to hold/curtailment.

There were not enough non-firm transactions with greater than 5% TDF available for curtailment 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.

Reliability purchase SPA_WRGSRT0517381_EES was excluded.

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.

		Firm AFC available on HBIN_HBCYP (MW)																								06/14
		06/13	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	06/14
		HB0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	HB0
Prior to Day Ahead	6/11/11 18:54	229	287	294	274	279	294	292	303	238	171	79	-28	-82	-56	-36	-26	-33	-44	-64	-67	-52	-7	129	133	196
Day Ahead	6/12/11 11:17	242	300	306	286	291	306	304	316	252	186	96	-3	-55	-24	-3	8	0	-12	-24	-38	-24	18	146	147	210
Prior to Day Ahead	6/12/11 18:53																									207
Day Ahead	6/13/11 11:24																									233

		Sum of impact of firm reservations and rfoale baseflow on HBIN_HBCYP (MW)																								06/14
		06/13	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	06/14
		HB0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	HB0
Prior to Day Ahead	6/11/11 18:54	456	398	391	411	406	391	393	382	447	514	606	713	767	741	721	710	718	729	739	752	737	692	556	562	489
Day Ahead	6/12/11 11:17	443	385	379	399	394	379	381	369	433	499	589	688	740	709	688	677	685	697	709	723	709	667	540	538	475
Prior to Day Ahead	6/12/11 18:53																									478
Day Ahead	6/13/11 11:24																									462

TFC of HBIN_HBCYP
865

		Average Firm AFC available on HBIN_HBCYP (MW)
Prior to Day Ahead	6/11/2011 18:54, 6/12/2011 18:53	112
Day Ahead	6/12/2011 11:17, 6/13/2011 11:24	133
Difference		21

		Ave. of impact of firm reservations and rfoale baseflow on HBIN_HBCYP (MW)
Prior to Day Ahead	6/11/2011 18:54, 6/12/2011 18:53	573
Day Ahead	6/12/2011 11:17, 6/13/2011 11:24	552
Difference		-21

		AFC available on HBIN_HBCYP (MW)																									
AFC Initialization Summary Report Timestamp (CDT)		06/13																						6/14			
HBO		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	HBO		
Prior to Day Ahead	6/11/11 18:54	229	287	294	274	279	294	292	303	238	171	79	-28	-82	-56	-36	-25	-33	-44	-54	-67	-52	-7	129	133	198	Firm
Day Ahead	6/12/11 11:17	242	300	306	286	291	306	304	316	252	186	96	-3	-55	-24	-3	8	0	-12	-24	-38	-24	18	145	147	210	Firm
Prior to Day Ahead	6/12/11 18:53																									207	Firm
Operating Horizon	6/13/11 0:23	447	461	463	441	444	442	422	415	352	288	263	137	40	64	67	76	80	65	60	43	48	72	194	322	Non-Firm	
Operating Horizon	6/13/11 2:36		469	456	458	436	417	410	349	285	258	132	34	59	63	72	75	60	54	38	42	67	190	319	Non-Firm		
Operating Horizon	6/13/11 3:21			469	458	460	418	411	351	287	262	136	38	65	68	61	52	65	59	42	46	70	193	322	Non-Firm		
Operating Horizon	6/13/11 3:41			469	458	460	418	411	351	287	262	136	38	65	68	61	52	65	59	42	46	70	193	322	Non-Firm		
Operating Horizon	6/13/11 4:21				469	456	445	404	350	286	260	134	36	61	63	65	63	61	56	40	44	69	192	321	Non-Firm		
Operating Horizon	6/13/11 5:21					469	443	443	350	287	262	136	38	62	65	67	63	63	57	41	46	71	193	322	Non-Firm		
Operating Horizon	6/13/11 7:16						402	379	293	259	135	39	64	68	71	67	66	60	43	46	69	190	317	Non-Firm			
Operating Horizon	6/13/11 7:19						469	469	469	248	124	28	59	65	69	65	62	55	36	40	67	188	311	Non-Firm			
Operating Horizon	6/13/11 8:19							483	483	483	123	27	59	65	68	64	62	55	35	39	67	186	313	Non-Firm			
Operating Horizon	6/13/11 9:17								393	393	393	19	51	56	59	55	53	46	27	30	59	181	307	Non-Firm			
Day Ahead	6/13/11 11:24																									233	Firm
Operating Horizon	6/13/11 11:37											135	101	115	28	29	28	35	44	36	27	49	200	313	Non-Firm		
Operating Horizon	6/13/11 12:37												278	278	278	79	78	85	94	86	80	107	206	320	403	Non-Firm	
Operating Horizon	6/13/11 13:32													0	0	0	0	0	0	310	299	303	372	399	419	Non-Firm	
Operating Horizon	6/13/11 14:31														0	0	0	0	0	30	23	48	200	309	394	Non-Firm	
Operating Horizon	6/13/11 15:30															0	0	0	0	5	-1	26	181	293	383	Non-Firm	
Operating Horizon	6/13/11 16:31																0	0	0	-66	-73	-44	111	227	315	Non-Firm	
Operating Horizon	6/13/11 17:30																	0	0	0	-14	13	170	282	369	Non-Firm	
Operating Horizon	6/13/11 19:17																		94	111	28	180	299	374	Non-Firm		
Operating Horizon	6/13/11 19:31																		236	73	94	139	246	347	Non-Firm		
Operating Horizon	6/13/11 20:28																			0	0	0	0	0	Non-Firm		
Operating Horizon	6/13/11 21:28																				0	0	0	0	Non-Firm		
Operating Horizon	6/13/11 22:28																								Non-Firm		
Operating Horizon	6/13/11 23:24																								236	413	Non-Firm
Operating Horizon	6/14/11 0:23																									685	Non-Firm

Indicates TLR Avoidance (Non-sale of Non-Firm)

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

This TLR was caused by a combination of a transmission outage, 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 948 MW of NNL and LAGN had 91 MW of NNL.

Event History

Issuing RC: ICTE
Flowgate: 1911 - Hartburg-Inland Orange 230 kV for the loss of Hartburg-Cypress 500 kV
Event Begin: 2011-06-13 13:00
Event End: 2011-06-14 00:40
Event Duration: 11 Hours

TLR Level	TLR Date	TLR Confirm Time	Run Time	Requested Relief	Remaining Relief	Relief Provided	Total Cuts	
							Tags	MW
TLR Level 5A	06/13/2011 13:00	06/13/2011 12:37	06/13/2011 12:34:44	57.0	0.0	57.6	24	343
TLR Level 5A	06/13/2011 14:00	06/13/2011 13:27	06/13/2011 13:26:04	44.0	0.0	79.3	26	427
TLR Level 5A	06/13/2011 15:00	06/13/2011 14:28	06/13/2011 14:26:01	99.0	0.0	150.4	27	697
TLR Level 5A	06/13/2011 16:00	06/13/2011 15:27	06/13/2011 15:26:08	153.0	0.0	257.3	27	1104
TLR Level 5A	06/13/2011 17:00	06/13/2011 16:28	06/13/2011 16:26:17	73.0	0.0	257.1	27	1115
TLR Level 5A	06/13/2011 18:00	06/13/2011 17:31	06/13/2011 17:29:48	74.0	0.0	257.2	26	1134
TLR Level 5A	06/13/2011 19:00	06/13/2011 18:30	06/13/2011 18:27:03	80.0	0.0	262.0	26	1183
TLR Level 5A	06/13/2011 20:00	06/13/2011 19:28	06/13/2011 19:25:58	0.0	0.0	175.3	25	801
TLR Level 5A	06/13/2011 21:00	06/13/2011 20:28	06/13/2011 20:26:22	0.0	0.0	99.4	24	485
TLR Level 5A	06/13/2011 22:00	06/13/2011 21:29	06/13/2011 21:27:57	0.0	0.0	53.1	20	291
TLR Level 1	06/13/2011 22:45	06/13/2011 22:24	06/13/2011 22:23:19	0.0	0.0	0.0	0	0
TLR Level 0	06/14/2011 00:40	06/14/2011 00:29	06/14/2011 00:28:37	0.0	0.0	0.0	0	0

Event Summary

FILE SAVED AS: ICTE_1911_20110613_1200.htm

Incident: ICTE_1911_20110613_1200	Date: 06/13/2011	Reliability Coordinator: ICTE
Initial Conditions: N/A		
Flowgate: 1911 - Hartburg-Inland Orange 230 kV ...	Rating: 685	LODF: 47.39%
TLR Direction: Normal		
Effective StartTime: 06/13/2011 13:00	Effective EndTime: 06/14/2011 00:40	TLR Duration: 11 Hours and 40 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.	Cont. Flow
Jun 13 12:37	TLR 5A	NEXT	6-NN 7-F Total	1 / 0 23 / 0 24 / 0	150 193 343	10.4 12.8 23.2	150 193 343	10.4 12.8 23.2	0 0 0	0.0 0.0 0.0	EES LAGN Total	29.0 6.0 35.0	29.0 6.0 35.0	NONE				361	755	833	N/A
Jun 13 13:27	TLR 5A	NEXT	6-NN 7-F Total	1 / 0 25 / 0 26 / 0	150 277 427	10.4 18.4 28.8	150 277 427	10.4 18.4 28.8	0 0 0	0.0 0.0 0.0	EES LAGN Total	42.0 8.0 50.0	42.0 8.0 50.0	NONE				352	743	826	N/A
Jun 13 14:28	TLR 5A	NEXT	6-NN 7-F Total	1 / 0 29 / 0 27 / 0	150 547 697	10.4 38.4 46.8	150 547 697	10.4 38.4 46.8	0 0 0	0.0 0.0 0.0	EES LAGN Total	88.0 17.0 103.0	88.0 17.0 103.0	NONE				362	770	863	N/A
Jun 13 15:27	TLR 5A	NEXT	6-NN 7-F Total	1 / 0 26 / 0 27 / 0	150 954 1104	10.4 63.5 73.9	150 954 1104	10.4 63.5 73.9	0 0 0	0.0 0.0 0.0	EES LAGN Total	152.0 31.0 183.0	152.0 31.0 183.0	NONE				354	750	838	N/A
Jun 13 16:28	TLR 5A	NEXT	6-NN 7-F Total	1 / 0 29 / 0 26 / 0	150 984 1134	10.4 65.6 76.0	150 984 1134	10.4 65.6 76.0	0 0 0	0.0 0.0 0.0	EES LAGN Total	151.0 31.0 181.0	152.0 31.0 181.0	NONE				316	882	773	N/A
Jun 13 17:31	TLR 5A	NEXT	6-NN 7-F Total	1 / 0 25 / 0 26 / 0	150 984 1134	10.4 65.6 76.0	150 984 1134	10.4 65.6 76.0	0 0 0	0.0 0.0 0.0	EES LAGN Total	150.0 31.0 181.0	150.0 31.0 181.0	NONE				315	879	769	N/A
Jun 13 18:30	TLR 5A	NEXT	6-NN 7-F Total	1 / 0 1033 26 / 0	150 1033 1183	10.4 68.8 79.2	150 1033 1183	10.4 68.8 79.2	0 0 0	0.0 0.0 0.0	EES LAGN Total	152.0 31.0 183.0	152.0 31.0 183.0	NONE				304	859	750	N/A
Jun 13 19:28	TLR 5A	NEXT	6-NN 7-F Total	1 / 0 24 / 0 25 / 0	150 851 801	10.4 43.2 53.6	150 851 801	10.4 43.2 53.6	0 0 0	0.0 0.0 0.0	EES LAGN Total	101.0 20.0 121.0	101.0 20.0 121.0	NONE				262	566	646	N/A
Jun 13 20:28	TLR 5A	NEXT	6-NN 7-F Total	1 / 0 23 / 0 24 / 0	150 335 485	10.4 22.6 33.0	150 335 485	10.4 22.6 33.0	0 0 0	0.0 0.0 0.0	EES LAGN Total	55.0 11.0 66.0	55.0 11.0 66.0	NONE				278	596	672	N/A
Jun 13 21:29	TLR 5A	NEXT	6-NN 7-F Total	1 / 0 19 / 0 20 / 0	150 141 291	10.4 9.4 19.8	150 141 291	10.4 9.4 19.8	0 0 0	0.0 0.0 0.0	EES LAGN Total	28.0 5.0 33.0	28.0 5.0 33.0	NONE				288	608	677	N/A

Jun 13 22:24	TLR 1	CURRENT	NONE	NONE	NONE	211	450	505	N/A
Jun 14 00:29	TLR 0	CURRENT	NONE	NONE	NONE	87	216	252	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	10	1500	1500	0
7	242	6080	6080	0
Total	252	7580	7580	0

TLR>NNL Totals

CA	NNL Relief	
	IDC MW	RC Ackn MW
EES	948.0	948.0
LAGN	191.0	191.0
Total	1137.0	1139.0

Date	Time	Category	'Detail'
06/13/11	1048	ICP/LAP Assessment	Assessed FG as ICP PC 93%, EES SOC notified
06/13/11	1237	TLR - 5a Initial	Issued TLR 5A PC 104% AFCs suspended till 1900, NNL EES 28.7, LAGN 5.7, REF#440776
06/13/11	1238	TA Notification	AFCs suspended till 1900
06/13/11	1238	No Internal NonFirm Tags	
06/13/11	1239	TLR - Redispatch Question	no known redispatch options as well as no conditional firm schedules
06/13/11	1327	TLR - 5a Reissue	Reissued TLR 5A PC 101% AFCs suspended till 1900, NNL EES 42.1, LAGN 8.4
06/13/11	1328	Internal Non-Firm	EES SOC curtailed the nonfirm portion of 0517418
06/13/11	1428	Internal Non-Firm	As provided in the email to the Shift Supervisor, the ICT RC has issued a TLR Level 5 on Flowgate 1911 Hartburg-Inland Orange 230 kV for the loss of Hartburg-Cypress 500 kV. At this time Entergy is instructed to curtail the non-firm portion of Schedule 0517418 . These curtailments should remain in place until the TLR level is reduced below a TLR 3.”
06/13/11	1428	TLR - 5a Reissue	Reissued TLR 5A PC 105% AFCs suspended till 1900, NNL EES 86.2, LAGN 17.4

06/13/11	1527	TLR - 5a Reissue	Reissued TLR 5A PC 102% AFCs suspended till 1900, NNL EES 152.5, LAGN 30.9
06/13/11	1527	Internal Non-Firm	As provided in the email to the Shift Supervisor, the ICT RC has issued a TLR Level 5 on Flowgate 1911 Hartburg-Inland Orange 230 kV for the loss of Hartburg-Cypress 500 kV. At this time Entergy is instructed to curtail the non-firm portion of Schedule 0517418 . These curtailments should remain in place until the TLR level is reduced below a TLR 3."
06/13/11	1628	TLR - 5a Reissue	Reissued TLR 5A PC 93% AFCs suspended till 1900, NNL EES 151.5, LAGN 31.0
06/13/11	1628	No Internal NonFirm Tags	
06/13/11	1731	TLR - 5a Reissue	Reissued TLR 5A PC 92% AFCs suspended till 1900, NNL EES 150.3, LAGN 30.9
06/13/11	1731	No Internal NonFirm Tags	
06/13/11	1830	TLR - 5a Reissue	Reissued TLR 5A PC 90% AFCs suspended till 1900, NNL EES 151.9, LAGN 30.9
06/13/11	1830	No Internal NonFirm Tags	
06/13/11	1928	TLR - 5a Reissue	Reissued TLR 5A PC 77% AFCs suspended till 0100, NNL EES 101.4, LAGN 20.4
06/13/11	1928	No Internal NonFirm Tags	
06/13/11	2028	TLR - 5a Reissue	Reissued TLR 5A PC 81% AFCs suspended till 0100, NNL EES 55.4, LAGN 11.0
06/13/11	2028	No Internal NonFirm Tags	
06/13/11	2129	TLR - 5a Reissue	Reissued TLR 5A PC 83% AFCs suspended till 0100, NNL EES 28.0, LAGN 5.3
06/13/11	2129	No Internal NonFirm Tags	
06/13/11	2224	TLR - 1	Issued TLR1 OASIS Ref440776
06/13/11	2239	TA Notification	Called ICT TA to reinstate AFC on FG1911
06/14/11	0029	TLR - 0	OASIS Ref440776