

**ICTE TLR 5 Investigation Report**  
**Flowgate 1911**  
**(Hartburg-Inland Orange 230 kV ftlo Hartburg-Cypress 500 kV)**  
**TLR Level 5: June 17, 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 17, 2011. Flowgate 1911 is an Entergy flowgate. The TLR 5 was in effect from 12:11 PM until 8:27 PM on June 17, 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 5b was issued, the Limiting Element was rated at 721 MVA. Flow on the Limiting Element was 412 MVA. Flow on the Contingent Element was 921 MVA. The LODF was approximately 44%. Post-contingent flow on the Limiting Element was approximately 817 MVA.

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

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

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

- There was an unplanned generator 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 outage on the Lewis Creek 2 and Sabine 3 generators that impacted the TLR 5 event. The decrement generators in the area of the constraint have an average generator shift factor of -8% while increment generators in the area have an average generator shift factor of 22%. Due to regulating and economic reasons decrement generation in the area was operating at or near pmax while increment generation in the area was operating at a lower level.

**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.**

Excluded Reliability Purchase SPA\_WRGSRT0517810\_EES.

**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 see an issue with this flowgate, based off of the peak study, however it was below 100%.

**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)																						
AFC Initialization Summary Report		06/17 HBO																						
Timestamp		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
Prior to Day Ahead	6/15/11 18:59	204	223	257	278	282	271	248	304	222	153	125	64	78	49	39	24	31	49	66	88	67	93	164
Day Ahead	6/16/11 11:07	247	266	308	323	327	321	304	332	269	191	181	82	73	55	32	17	28	42	54	70	73	102	180

		Sum of impact of firm reservations and rfoale baseflow on HBIN_HBCYP (MW)																						
AFC Initialization Summary Report		06/17 HBO																						
Timestamp		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
Prior to Day Ahead	6/15/11 18:59	481	462	428	407	403	414	437	381	463	532	560	621	607	636	646	661	654	636	619	597	618	562	621
Day Ahead	6/16/11 11:07	438	419	377	362	358	364	381	363	416	494	504	603	612	630	663	668	657	643	631	615	612	583	606

TFC of HBIN_HBCYP	685
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AFC Initialization Summary Report	Average Firm AFC available on HBIN_HBCYP (MW)
Prior to Day Ahead	147
Day Ahead	169
Difference	22

AFC Initialization Summary Report	Ave. of impact of firm reservations and rfoale baseflow on HBIN_HBCYP (MW)
Prior to Day Ahead	538
Day Ahead	517
Difference	-22

AFC Initialization Summary Report Timestamp (CDT)		AFC available on HBIN_HBCYP (MW)																								
		06/17 HBO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21		22	
Prior to Day Ahead	6/15/11 18:59	204	223	257	278	282	271	248	304	222	153	125	64	78	49	39	24	31	49	66	88	67	93	164	Firm	
Day Ahead	6/16/11 11:07	247	266	308	323	327	321	304	332	269	191	181	82	73	55	32	17	28	42	54	70	73	102	180	Firm	
Operating Horizon	6/17/11 0:23	459	311	335	343	348	328	321	266	234	186	115	84	41	25	15	6	3	13	43	51	51	60	134	Non-Firm	
Operating Horizon	6/17/11 2:37			442	347	352	331	319	266	235	191	121	90	47	30	21	12	9	19	49	57	56	66	139	Non-Firm	
Operating Horizon	6/17/11 3:21				393	331	328	297	264	212	166	94	61	15	-3	-15	-24	-27	-16	16	26	27	38	113	Non-Firm	
Operating Horizon	6/17/11 3:41				393	331	328	297	264	212	166	94	61	15	-3	-15	-24	-27	-16	16	26	27	38	113	Non-Firm	
Operating Horizon	6/17/11 4:21				436	309	300	264	211	160	88	55	9	-9	-20	-29	-32	-21	10	20	21	32	108	Non-Firm		
Operating Horizon	6/17/11 5:21					356	304	291	222	173	102	68	24	4	-8	-16	-22	-8	24	34	35	46	120	Non-Firm		
Operating Horizon	6/17/11 7:23							421	193	167	78	47	4	-12	-21	-30	-33	-23	7	15	14	24	102	Non-Firm		
Operating Horizon	6/17/11 8:20							421	143	111	49	6	-10	-19	-28	-31	-20	10	18	17	26	102	Non-Firm			
Operating Horizon	6/17/11 9:20								421	62	62	-19	-35	-44	-52	-55	-44	-14	-6	-6	3	80	Non-Firm			
Operating Horizon	6/17/11 11:02													86	106	12	4	1	10	13	10	24	33	57	129	Non-Firm
Operating Horizon	6/17/11 11:32													421	106	107	3	0	9	12	9	23	33	57	123	Non-Firm
Operating Horizon	6/17/11 12:37													0	0	0	0	0	0	12	25	36	60	126	Non-Firm	
Operating Horizon	6/17/11 13:33													0	0	0	0	0	-40	40	53	77	151	Non-Firm		
Operating Horizon	6/17/11 14:31													0	0	0	0	0	-45	36	49	74	149	Non-Firm		
Operating Horizon	6/17/11 15:30													0	0	0	0	0	-51	-35	-24	0	74	Non-Firm		
Operating Horizon	6/17/11 16:28													0	0	0	0	0	36	-32	-21	3	77	Non-Firm		
Operating Horizon	6/17/11 17:28																		0	22	119	52	76	144	Non-Firm	
Operating Horizon	6/17/11 19:25																			0	0	0	0	0	Non-Firm	
Operating Horizon	6/17/11 19:29																			0	0	0	0	0	Non-Firm	
Operating Horizon	6/17/11 20:28																			0	0	0	0	0	Non-Firm	
Operating Horizon	6/17/11 21:24																				0	0	0	0	Non-Firm	
Operating Horizon	6/17/11 22:25																					0	0	421	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 generation outages, 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 953 MW of NNL and LAGN had 59 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:		2011-06-17 12:25						
Event End:		2011-06-17 22:30						
Event Duration:		10 Hours						
TLR Level	TLR Date	TLR Confirm Time	Run Time	Requested Relief	Remaining Relief	Relief Provided	Total Cuts	
							Tags	MW
<a href="#">TLR Level 5B</a>	06/17/2011 12:25	06/17/2011 12:11	06/17/2011 12:10:26	85.0	0.0	85.9	25	270
<a href="#">TLR Level 5A</a>	06/17/2011 14:00	06/17/2011 13:29	06/17/2011 13:27:15	18.0	0.0	85.8	25	255
<a href="#">TLR Level 5A</a>	06/17/2011 15:00	06/17/2011 14:36	06/17/2011 14:26:15	54.0	0.0	122.7	29	363
<a href="#">TLR Level 5A</a>	06/17/2011 16:00	06/17/2011 15:29	06/17/2011 15:25:35	90.0	0.0	188.1	30	551
<a href="#">TLR Level 5A</a>	06/17/2011 17:00	06/17/2011 16:30	06/17/2011 16:25:18	38.0	0.0	188.5	30	560
<a href="#">TLR Level 5A</a>	06/17/2011 18:00	06/17/2011 17:28	06/17/2011 17:25:36	39.0	0.0	189.2	29	569
<a href="#">TLR Level 5A</a>	06/17/2011 19:00	06/17/2011 18:28	06/17/2011 18:25:59	30.0	0.0	180.0	28	556
<a href="#">TLR Level 5A</a>	06/17/2011 20:00	06/17/2011 19:28	06/17/2011 19:26:43	0.0	0.0	139.1	26	419
<a href="#">TLR Level 5A</a>	06/17/2011 21:00	06/17/2011 20:27	06/17/2011 20:26:04	0.0	0.0	98.7	26	285
<a href="#">TLR Level 1</a>	06/17/2011 22:00	06/17/2011 21:26	06/17/2011 21:25:59	0.0	0.0	0.0	0	0
<a href="#">TLR Level 0</a>	06/17/2011 22:30	06/17/2011 22:22	06/17/2011 22:21:45	0.0	0.0	0.0	0	0

### Event Summary

FILE SAVED AS: ICTE\_1911\_20110617\_1125.htm

Incident: ICTE_1911_20110617_1125	Date: 06/17/2011	Reliability Coordinator: ICTE
Initial Conditions: N/A		
Flowgate: 1911 - Hartburg-Inland Orange 230 kV ...	Rating: 685	LODF: 45.28%
TLR Direction: Normal		
Effective StartTime: 06/17/2011 12:25	Effective EndTime: 06/17/2011 22:30	TLR Duration: 10 Hours and 5 Minutes

### TLR Actions

Confirm Time	Level	Effective Hour	Priority	Schedule								NNL Relief			Market Relief			Flow			TLR Action Comments			
				Total Tags Cut / Hold		IDC Cut		RC Cut Acknowledge		Hold		CA	IDC MW	RC Ackn MW	Type	Mkt	IDC MW	RC Ackn MW	Current	Post Cont.		Cont. Flow		
				MW	Relief	MW	Relief	MW	Relief	MW	Relief													
Jun 17 12:11	TLR 5B	CURRENT	7-F	25 / 0	270	18.9	270	18.9	0	0.0	EES	63.0	63.0	NONE			412	829	921	N/A				
			<b>Total</b>	<b>25 / 0</b>	<b>270</b>	<b>18.9</b>	<b>270</b>	<b>18.9</b>	<b>0</b>	<b>0.0</b>	LAGN	4.0	4.0								<b>Total</b>	<b>67.0</b>	<b>67.0</b>	
Jun 17 13:29	TLR 5A	NEXT	7-F	25 / 0	255	17.9	255	17.9	0	0.0	EES	64.0	64.0	NONE			392	799	900	N/A				
			<b>Total</b>	<b>25 / 0</b>	<b>255</b>	<b>17.9</b>	<b>255</b>	<b>17.9</b>	<b>0</b>	<b>0.0</b>	LAGN	4.0	4.0								<b>Total</b>	<b>68.0</b>	<b>68.0</b>	
Jun 17 14:36	TLR 5A	NEXT	7-F	29 / 0	363	25.3	363	25.3	0	0.0	EES	92.0	92.0	NONE			367	759	866	N/A				
			<b>Total</b>	<b>29 / 0</b>	<b>363</b>	<b>25.3</b>	<b>363</b>	<b>25.3</b>	<b>0</b>	<b>0.0</b>	LAGN	5.0	5.0								<b>Total</b>	<b>97.0</b>	<b>97.0</b>	
Jun 17 15:29	TLR 5A	NEXT	7-F	30 / 0	551	38.5	551	38.5	0	0.0	EES	141.0	141.0	NONE			368	765	879	N/A				
			<b>Total</b>	<b>30 / 0</b>	<b>551</b>	<b>38.5</b>	<b>551</b>	<b>38.5</b>	<b>0</b>	<b>0.0</b>	LAGN	9.0	9.0								<b>Total</b>	<b>150.0</b>	<b>150.0</b>	
Jun 17 16:30	TLR 5A	NEXT	7-F	30 / 0	560	39.2	560	39.2	0	0.0	EES	141.0	141.0	NONE			334	708	828	N/A				
			<b>Total</b>	<b>30 / 0</b>	<b>560</b>	<b>39.2</b>	<b>560</b>	<b>39.2</b>	<b>0</b>	<b>0.0</b>	LAGN	9.0	9.0								<b>Total</b>	<b>150.0</b>	<b>150.0</b>	
Jun 17 17:28	TLR 5A	NEXT	7-F	29 / 0	569	39.9	569	39.9	0	0.0	EES	141.0	141.0	NONE			329	893	908	N/A				
			<b>Total</b>	<b>29 / 0</b>	<b>569</b>	<b>39.9</b>	<b>569</b>	<b>39.9</b>	<b>0</b>	<b>0.0</b>	LAGN	9.0	9.0								<b>Total</b>	<b>150.0</b>	<b>150.0</b>	
Jun 17 18:28	TLR 5A	NEXT	7-F	28 / 0	556	39.0	556	39.0	0	0.0	EES	133.0	133.0	NONE			303	645	757	N/A				
			<b>Total</b>	<b>28 / 0</b>	<b>556</b>	<b>39.0</b>	<b>556</b>	<b>39.0</b>	<b>0</b>	<b>0.0</b>	LAGN	8.0	8.0								<b>Total</b>	<b>141.0</b>	<b>141.0</b>	
Jun 17 19:28	TLR 5A	NEXT	7-F	26 / 0	419	29.1	419	29.1	0	0.0	EES	104.0	104.0	NONE			275	582	679	N/A				
			<b>Total</b>	<b>26 / 0</b>	<b>419</b>	<b>29.1</b>	<b>419</b>	<b>29.1</b>	<b>0</b>	<b>0.0</b>	LAGN	6.0	6.0								<b>Total</b>	<b>110.0</b>	<b>110.0</b>	
Jun 17 20:27	TLR 5A	NEXT	7-F	26 / 0	285	20.1	285	20.1	0	0.0	EES	74.0	74.0	NONE			257	542	631	N/A				
			<b>Total</b>	<b>26 / 0</b>	<b>285</b>	<b>20.1</b>	<b>285</b>	<b>20.1</b>	<b>0</b>	<b>0.0</b>	LAGN	4.0	4.0								<b>Total</b>	<b>78.0</b>	<b>79.0</b>	
Jun 17 21:26	TLR 1	CURRENT			NONE																			
Jun 17 22:22	TLR 0	CURRENT			NONE																			

### 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	271	4094	4094	0
<b>Total</b>	<b>271</b>	<b>4094</b>	<b>4094</b>	<b>0</b>

### TLR NNL Totals

CA	NNL Relief	
	IDC MW	RC Ackn MW
EES	953.0	953.0
LAGN	58.0	59.0
<b>Total</b>	<b>1011.0</b>	<b>1012.0</b>

Date	Time	Category	'Detail'
06/17/11	1128	ICP/LAP Assessment	Assessed FG as ICP PC 104%, EES SOC notified
06/17/11	1211	TLR - Redispatch Question	No know redispatch options as well as no conditional firm schedules
06/17/11	1211	TLR - 5b Initial	Issued a TLR 5B PC 115% AFCs suspended till 1800, NNL EES 63.4, LAGN 3.6, REF#443215

06/17/11	1212	Internal Non-Firm	There is a non firm internal tag#0012137 but does not start till 2200, no curtailments have been made at this time
06/17/11	1224	TA Notification	Suspended AFCs till 1800
06/17/11	1329	TLR - Redispatch Question	no known redispatch option as well as no conditional firm schedules
06/17/11	1329	Internal Non-Firm	tag#0012140 is nonfirm internal but doesn't start till 2200 so no curtailments have been done at this time.
06/17/11	1329	TA Notification	AFCs suspended till 1800
06/17/11	1329	TLR - 5a Initial	Issued a TLR 5A PC 111% AFCs suspended till 1800, NNL EES 64.2, LAGN 3.7, REF#443215
06/17/11	1436	TLR - 5a Reissue	Reissued TLR. PC 111%. NNL: EES 92, LAGN 5.3
06/17/11	1436	No Internal NonFirm Tags	
06/17/11	1529	TLR - 5a Reissue	Reissue TLR. PC 107%. NNL: EES 140.7, LAGN 8.9
06/17/11	1529	No Internal NonFirm Tags	
06/17/11	1630	TLR - 5a Reissue	Reissue TLR PC 100%. NNL: EES 140.5, LAGN 8.9
06/17/11	1630	No Internal NonFirm Tags	
06/17/11	1728	TLR - 5a Reissue	Reissue TLR. PC 97%. NNL: EES 140.5, LAGN 8.8
06/17/11	1728	No Internal NonFirm Tags	
06/17/11	1828	No Internal NonFirm Tags	
06/17/11	1828	TLR - 5a Reissue	Reissued TLR PC 90%. NNL: EES 132.9, LAGN 8.2
06/17/11	1928	No Internal NonFirm Tags	
06/17/11	1928	TLR - 5a Reissue	Reissue TLR PC 81%. NNL: EES 103.7, LAGN 6.3
06/17/11	2027	No Internal NonFirm Tags	
06/17/11	2027	TLR - 5a Reissue	Reissue TLR. PC 79%. NNL: EES74.2, LAGN 4.5
06/17/11	2126	TA Notification	Notified TA to restore AFC's at 2200
06/17/11	2126	TLR - 1	PC 73%
06/17/11	2222	TLR - 0	Issued TLR 0, PC 66%. Closed OASIS Ref# 443215
06/17/11	2235	TA Notification	TLR was in level 1, AFC restored 2200