

ICTE TLR 5 Investigation Report
Flowgate 1927
(St Gabriel-AAC Corp 230 kV for the loss of Willow Glen - Waterford 500 kV)
TLR Level 5: April 18, 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 1927 on April 18, 2011. Flowgate 1927 is an Entergy flowgate. The TLR 5 was in effect from 12:30 PM until 7:31 PM on April 18, 2011. Projected post-contingent flows on the St Gabriel-AAC Corp 230 kV line for the loss of the Willow Glen - Waterford 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 685 MVA. Flow on the Limiting Element was 502 MVA. Flow on the Contingent Element was 805 MVA. The LODF was approximately 23%. Post-contingent flow on the Limiting Element was approximately 686 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 were no unplanned outages on the ICTE system associated with this flowgate.
- There were high loads on the system due to low temperatures.
- There was 0 mw of non-firm service impacting the flowgate day of since the RC was in a TLR 5 event.

There was a planned generation outage that impacted the TLR 5 event. Units in the Entergy BA (including internal IPPs and QFs) south of the constraint have an average increment Generator Shift Factor (GSF) of +18%. Units north of the constraint have an average decrement Generator Shift Factor (GSF) of -8%. Load and generation patterns along with the generation outage contributed to the constraint.

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.

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 see an issue with this flowgate, however it was below 100% 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.

		Firm AFC available on SGAAC_WGWAT (MW)																								
AFC Initialization Summary Report Timestamp		02/18 HB0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	2/19 HB0
Prior to Day Ahead	4/16/11 18:39	220	207	181	182	187	206	192	-29	-42	-34	-1	65	109	135	168	216	328	331	294	287	323	287	195	147	169
Day Ahead	4/17/11 10:58	218	205	179	181	185	204	190	-32	-45	-38	-4	61	105	130	164	211	324	328	291	284	320	284	193	145	167
Prior to Day Ahead	4/17/11 18:39																									172
Day Ahead	4/18/11 10:53																									160
		Sum of impact of firm reservations and rcalc baseflow on SGAAC_WGWAT (MW)																								
AFC Initialization Summary Report Timestamp		02/18 HB0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	2/19 HB0
Prior to Day Ahead	4/16/11 18:39	465	478	504	503	498	479	493	714	727	719	686	620	576	550	517	469	357	354	391	398	362	398	490	538	516
Day Ahead	4/17/11 10:58	467	480	506	504	500	481	495	717	730	723	689	624	580	555	521	474	361	357	394	401	365	401	492	540	518
Prior to Day Ahead	4/17/11 18:39																									513
Day Ahead	4/18/11 10:53																									525
Difference for Prior to Day Ahead		-2	-2	-2	-1	-2	-2	-2	-3	-3	-4	-3	-4	-4	-5	-4	-5	-4	-3	-3	-3	-3	-3	-2	-2	-2
Difference for Day Ahead																										-12
TFC of SGAAC_WGWAT		685																								
AFC Initialization Summary Report Timestamp		Average Firm AFC available on SGAAC_WGWAT (MW)																								
Prior to Day Ahead	4/16/2011 18:39, 4/17/2011 18:39	173																								
Day Ahead	4/17/2011 10:58, 4/18/2011 10:53	170																								
Difference		-3																								
AFC Initialization Summary Report Timestamp		Ave. of impact of firm reservations and rcalc baseflow on SGAAC_WGWAT (MW)																								
Prior to Day Ahead	4/16/2011 18:39, 4/17/2011 18:39	512																								
Day Ahead	4/17/2011 10:58, 4/18/2011 10:53	515																								
Difference		3																								

		AFC available on SGAAC_WGWAT (MW)																										
AFC Initialization Summary Report Timestamp (CDT)		02/18 HBO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	02/19 HBO		
Prior to Day Ahead	4/16/11 18:39	220	207	181	182	187	206	192	-29	-42	-34	-1	65	109	135	168	216	328	331	294	287	323	287	195	147	169		Firm
Day Ahead	4/17/11 10:58	218	205	179	181	185	204	190	-32	-45	-38	-4	61	105	130	164	211	324	328	291	284	320	284	193	145	167		Firm
Prior to Day Ahead	4/17/11 18:39																									172		Firm
Operating Horizon	4/18/11 0:21	685	439	439	439	301	301	281	87	20	33	68	113	155	178	212	249	349	360	333	321	356	312	286	272		Non-Firm	
Operating Horizon	4/18/11 3:21				217	429	434	434	434	434	434	434	434	434	434	434	434	434	434	434	434	434	434	434	434	434		Non-Firm
Operating Horizon	4/18/11 3:41				217	429	434	434	434	434	434	434	434	434	434	434	434	434	434	434	434	434	434	434	434	434		Non-Firm
Operating Horizon	4/18/11 4:18					212	435	438	438	438	438	438	438	438	438	438	438	438	438	438	438	438	438	438	438	438		Non-Firm
Operating Horizon	4/18/11 5:18						198	437	368	368	368	368	368	368	368	368	368	368	368	368	368	368	368	368	368	368		Non-Firm
Operating Horizon	4/18/11 8:18									170	317	342	104	146	146	146	146	146	146	325	325	325	302	278	278		Non-Firm	
Operating Horizon	4/18/11 9:16										222	338	362	153	153	153	153	153	153	153	153	153	153	153	153		Non-Firm	
Day Ahead	4/18/11 10:53																									160		Firm
Operating Horizon	4/18/11 11:04												455	451	239	223	214	312	308	302	301	333	340	256	270		Non-Firm	
Operating Horizon	4/18/11 11:16												311	445	436	222	213	312	308	302	299	331	338	254	268		Non-Firm	
Operating Horizon	4/18/11 12:34												0	0	0	0	0	0	0	299	296	329	336	256	268	320	Non-Firm	
Operating Horizon	4/18/11 13:30												0	0	0	0	0	0	0	374	372	415	417	363	304	320	Non-Firm	
Operating Horizon	4/18/11 14:28												0	0	0	0	0	0	0	317	315	349	354	269	268	318	Non-Firm	
Operating Horizon	4/18/11 15:28												0	0	0	0	0	0	0	291	288	322	345	270	269	317	Non-Firm	
Operating Horizon	4/18/11 16:43																	0	0	282	289	322	346	265	269	305	Non-Firm	
Operating Horizon	4/18/11 17:28																		0	282	329	323	346	266	270	306	Non-Firm	
Operating Horizon	4/18/11 19:01																				0	0	0	0	0	308	Non-Firm	
Operating Horizon	4/18/11 19:24																				0	0	0	0	0	263	Non-Firm	
Operating Horizon	4/18/11 20:23																					0	0	0	0	310	Non-Firm	
Operating Horizon	4/18/11 21:24																						196	359	380	309	Non-Firm	
Operating Horizon	4/18/11 22:23																							196	383	428	Non-Firm	
Operating Horizon	4/18/11 23:22																								196	419	Non-Firm	
Operating Horizon	4/19/11 0:22																									685	Non-Firm	

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

This TLR was caused by a combination of generation patterns, load, and system flows along with a generator outage. 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 314 MW of NNL. LAGN had 34 MW of NNL.

Event History									
Issuing RC:		ICTE							
Flowgate:		1927 - St. Gabriel-AAC Corp 230 kV for the loss of Willow Glen-Waterford 500 kV							
Event Begin:		2011-04-18 13:00							
Event End:		2011-04-19 00:55							
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	04/18/2011 13:00	04/18/2011 12:17	04/18/2011 12:13:09	68.0	0.0	69.4	31	254	
TLR Level 5B	04/18/2011 12:40	04/18/2011 12:30	04/18/2011 12:27:53	75.0	0.0	76.5	32	283	
TLR Level 5A	04/18/2011 14:00	04/18/2011 13:32	04/18/2011 13:30:32	22.0	0.0	70.2	32	274	
TLR Level 5A	04/18/2011 15:00	04/18/2011 14:31	04/18/2011 14:29:17	2.0	0.0	45.1	9	39	
TLR Level 5A	04/18/2011 16:00	04/18/2011 15:27	04/18/2011 15:25:55	5.0	0.0	46.7	17	75	
TLR Level 5A	04/18/2011 17:00	04/18/2011 16:32	04/18/2011 16:30:59	2.0	0.0	42.7	9	24	
TLR Level 5A	04/18/2011 18:00	04/18/2011 17:36	04/18/2011 17:34:11	2.0	0.0	41.9	9	24	
TLR Level 5A	04/18/2011 19:00	04/18/2011 18:34	04/18/2011 18:27:50	2.0	0.0	41.2	9	24	
TLR Level 5A	04/18/2011 20:00	04/18/2011 19:31	04/18/2011 19:29:01	0.0	0.0	23.5	9	14	
TLR Level 1	04/18/2011 21:00	04/18/2011 20:28	04/18/2011 20:28:40	0.0	0.0	0.0	0	0	
TLR Level 0	04/19/2011 00:55	04/19/2011 00:45	04/19/2011 00:45:36	0.0	0.0	0.0	0	0	

Event Summary

FILE SAVED AS: ICTE_1927_20110418_1200.htm

Incident: ICTE_1927_20110418_1200	Date: 04/18/2011	Reliability Coordinator: ICTE
Initial Conditions: N/A		
Flowgate: 1927 - St. Gabriel-AAC Corp 230 kV fo...	Rating: 685	LODF: 25.37%
TLR Direction: Normal		
Effective StartTime: 04/18/2011 13:00	Effective EndTime: 04/19/2011 00:55	TLR Duration: 11 Hours and 55 Minutes

TLR Actions

Confirm Time	Level	Effective Hour	Priority	Schedule						NNL 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.
Apr 18 12:17	TLR 5A PRELIM	NEXT	7-F	31 / 0	254	26.7	0	0.0	0	0.0	EES	39.0	0.0	NONE			502	708	805	N/A
			Total	31 / 0	254	26.7	0	0.0	0	0.0	EES	39.0	0.0							
Apr 18 12:30	TLR 5B	CURRENT	7-F	32 / 0	283	30.0	283	30.0	0	0.0	EES	42.0	42.0	NONE			502	708	805	N/A
			Total	32 / 0	283	30.0	283	30.0	0	0.0	EES	42.0	42.0							
		NEXT	1-NS	1 / 0	8	0.4	8	0.4	0	0.0	NONE			NONE						
			7-F	30 / 0	303	31.0	303	31.0	0	0.0										
			Total	31 / 0	283	31.4	309	31.4	0	0.0										
Apr 18 13:32	TLR 5A	NEXT	1-NS	1 / 0	5	0.3	5	0.3	0	0.0	EES	38.0	38.0	NONE			476	666	711	N/A
			7-F	31 / 1	269	27.2	269	27.2	8	1.4	EES	4.0	4.0							
			Total	32 / 1	274	27.5	274	27.5	8	1.4	EES	42.0	42.0							
Apr 18 14:31	TLR 5A	NEXT	7-F	9 / 0	39	4.0	39	4.0	0	0.0	EES	37.0	37.0	NONE			485	676	756	N/A
			Total	9 / 0	39	4.0	39	4.0	0	0.0	EES	4.0	4.0							
Apr 18 15:27	TLR 5A	NEXT	7-F	17 / 0	75	6.6	75	6.6	0	0.0	EES	36.0	36.0	NONE			495	690	795	N/A
			Total	17 / 0	75	6.6	75	6.6	0	0.0	EES	4.0	4.0							
Apr 18 16:32	TLR 5A	NEXT	7-F	9 / 0	24	3.2	24	3.2	0	0.0	EES	35.0	35.0	NONE			476	667	746	N/A
			Total	9 / 0	24	3.2	24	3.2	0	0.0	EES	4.0	4.0							
Apr 18 17:35	TLR 5A	NEXT	7-F	9 / 0	24	3.2	24	3.2	0	0.0	EES	34.0	34.0	NONE			476	663	702	N/A
			Total	9 / 0	24	3.2	24	3.2	0	0.0	EES	4.0	4.0							
Apr 18 18:34	TLR 5A	NEXT	7-F	9 / 0	24	3.2	24	3.2	0	0.0	EES	34.0	34.0	NONE			459	617	626	N/A
			Total	9 / 0	24	3.2	24	3.2	0	0.0	EES	4.0	4.0							
Apr 18 19:31	TLR 5A	NEXT	7-F	9 / 0	14	2.0	14	2.0	0	0.0	EES	19.0	19.0	NONE			429	567	546	N/A
			Total	9 / 0	14	2.0	14	2.0	0	0.0	EES	2.0	2.0							
Apr 18 20:28	TLR 1	CURRENT									NONE			NONE			448	606	626	N/A
Apr 19 00:45	TLR 0	CURRENT									NONE			NONE			483	669	734	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	2	11		11
2	0	0		0
3	0	0		0
4	0	0		0
5	0	0		0
6	0	0		0
7	188	1309	1055	8
Total	188	1320	1066	8

TLR NNL Totals

CA	NNL Relief	
	IDC MW	RC Ackn MW
EES	314.0	314.0
LAGN	34.0	34.0
Total	348.0	348.0

Date	Time	Category	Issue
04/18/11	0801	ICP/LAP Assessment	assessed as LAP PC 91%.
04/18/11	1157	ICP/LAP Assessment	reassessed as ICP PC 111%.
04/18/11	1217	TLR - 5b Initial	issued TLR 5a PC 108%. Notified EES. NNL EES 38.7, LAGN NNL 4.1. REF. 412565.

			Talked to EES shift supervisor and asked "are there any known redispatch options that are available to the transmission customer that will mitigate the loading on the constrained facility"? He replied that there were none available.
04/18/11	1217	TLR - Redispatch Question	
04/18/11	1217	No Internal NonFirm Tags	
04/18/11	1230	TA Notification	Talked to ED ICT Tariff to 0 out AFC's for 6 hours from 1200 through 1800.
04/18/11	1332	TLR - 5a Reissue	reissued TLR 5a PC 92% EES NNL 38.3, LAGN 4.3.
04/18/11	1332	No Internal NonFirm Tags	
04/18/11	1431	TLR - 5a Reissue	reissued TLR 5a PC 95%. NNL EES 36.7, LAGN 4.3
04/18/11	1431	No Internal NonFirm Tags	
04/18/11	1527	TLR - 5a Reissue	reissued TLR 5a PC 97%. NNL EES 35.8, LAGN 4.3
04/18/11	1527	No Internal NonFirm Tags	
04/18/11	1630	TLR - 5a Reissue	reissued TLR 5a PC 86%. No NNL.
04/18/11	1632	TLR - 5a Reissue	reissued TLR 5a PC 93% NNL EES 35.1, LAGN 4.3
04/18/11	1632	No Internal NonFirm Tags	
04/18/11	1734	TLR - 5a Reissue	reissued TLR 5a PC 91% NNL EES 34.4, LAGN 4.3, AFCs suspension extended till 24:00
04/18/11	1734	No Internal NonFirm Tags	
04/18/11	1740	TA Notification	AFCs suspension extended till 24:00
04/18/11	1834	TLR - 5a Reissue	reissued TLR 5a PC 86% NNL EES 33.6, LAGN 4.4, AFCs suspension extended till 24:00
04/18/11	1835	No Internal NonFirm Tags	
04/18/11	1931	TLR - 5b Reissue	reissued TLR 5a PC 83% NNL EES 19.1, LAGN 2.4, AFCs suspension extended till 24:00
04/18/11	1932	No Internal NonFirm Tags	
04/18/11	2028	TLR - 1	Issued TLR 1 PC 89%, AFC's reinstated REF # 412565
04/18/11	2032	TA Notification	Issued TLR 1 on FG 1927 AFC's request to be reinstated
04/19/11	0045	TLR - 0	Ended TLR PC 98% REF#412565