

ICTE TLR 5 Investigation Report
Flowgate 1972
(Webre-Willow Glen 500 kV for the loss of Big Cajun-Fancy 500 kV)
TLR Level 5: March 28, 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 1972 on March 28, 2011. Flowgate 1972 is an Entergy flowgate. The TLR 5 was in effect from 9:31 AM until 10:26 AM on March 4, 2011. Projected post-contingent flows on the Webre-Willow Glen 500 kV line for the loss of the Big Cajun-Fancy 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 1039 MVA. Flow on the Limiting Element was 581 MVA. Flow on the Contingent Element was 883 MVA. The LODF was approximately 85%. Post-contingent flow on the Limiting Element was approximately 1039 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 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 was a planned outage on the Willow Glen 500/128 AT1. Once the transformer was removed from service the line rating was decreased from 1732mva to 1039mva due to the ring bus reconfiguration. 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 -38%, while units south have an average GSF of 23%. 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 i 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.

A directive was initiated to place the Willow Glen AT1 500/138 back in service. This was due to a rating change on the Webre-Willow Glen line when the ring bus at Willow Glen was opened for the Willow Glen AT1 outage. Once the element was removed it was stated that a 2 hour window would be needed to return the element to service. Due to high loading a TLR was called to help mitigate loading on the constrained facility until the Willow Glen AT1 could be returned to service.

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.

		Firm AFC available on WEBWVG_CJFAN (MW)										
AFC Initialization Summary Report Timestamp		03/28 HBO	1	2	3	4	5	6	7	8	9	10
Prior to Day Ahead	3/26/11 18:49	1239	1353	1354	1359	1358	1234	1246	1222	1232	1236	1235
Day Ahead	3/27/11 11:04	1238	1358	1360	1363	1361	1242	1246	1228	1238	1242	1241

		Sum of impact of firm reservations and rcalc baseflow on WEBWVG_CJFAN (MW)										
AFC Initialization Summary Report Timestamp		03/28 HBO	1	2	3	4	5	6	7	8	9	10
Prior to Day Ahead	3/26/11 18:49	493	379	378	373	374	498	486	510	500	496	497
Day Ahead	3/27/11 11:04	494	374	372	369	371	490	486	504	494	490	491
Difference for Prior to Day Ahead		-1	5	6	4	3	8	0	6	6	6	6

TFC of WEBWVG_CJFAN
1732

AFC Initialization Summary Report Timestamp		Average Firm AFC available on WEBWVG_CJFAN (MW)
Prior to Day Ahead	3/26/11 18:49	1279
Day Ahead	3/27/11 11:04	1283
Difference		4

AFC Initialization Summary Report Timestamp		Ave. of impact of firm reservations and rcalc baseflow on WEBWVG_CJFAN (MW)
Prior to Day Ahead	3/26/11 18:49	453
Day Ahead	3/27/11 11:04	449
Difference		-4

		AFC available on WEBWVG_CJFAN (MW)										
AFC Initialization Summary Report Timestamp (CDT)		03/28 HBO	1	2	3	4	5	6	7	8	9	10
Prior to Day Ahead	3/26/11 18:49	1239	1353	1354	1359	1358	1234	1246	1222	1232	1236	1235
Day Ahead	3/27/11 11:04	1238	1358	1360	1363	1361	1242	1246	1228	1238	1242	1241
Operating Horizon	3/28/11 0:24	1042	1170	1173	1120	1130	1168	1080	1094	1143	1129	1128
Operating Horizon	3/28/11 2:50			1283	1174	1178	1145	1069	1086	1130	1117	1115
Operating Horizon	3/28/11 3:22				1283	1219	1271	1082	1105	1149	1136	1134
Operating Horizon	3/28/11 3:41					1219	1219	1082	1105	1149	1136	1134
Operating Horizon	3/28/11 4:22						1283	1183	1166	1095	1117	1104
Operating Horizon	3/28/11 5:21							1285	964	967	1064	1049
Operating Horizon	3/28/11 7:29									1634	1128	1090
Operating Horizon	3/28/11 8:19										1304	1114
Operating Horizon	3/28/11 9:22											1304

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 57 MW of NNL.
 CLEC had 10 MW of NNL.
 LAGN had 60 MW of NNL.
 SME had 1.0 MW of NNL.

Event History								
Issuing RC:		ICTE						
Flowgate:		1972 - Webre-Willow Glen 500kv ftlo Big Cajun-Fancy 500kv						
Event Begin:		2011-03-28 10:00						
Event End:		2011-03-28 10:45						
Event Duration:		0 Hour						
TLR Level	TLR Date	TLR Confirm Time	Run Time	Requested Relief	Remaining Relief	Relief Provided	Total Cuts	
							Tags	MW
TLR Level 5A	03/28/2011 10:00	03/28/2011 09:36	03/28/2011 09:31:02	284.0	0.0	289.5	35	479
TLR Level 0	03/28/2011 10:45	03/28/2011 10:27	03/28/2011 10:26:42	0.0	0.0	0.0	0	0

Event Summary		
FILE SAVED AS: ICTE_1972_20110328_0900.htm		
Incident: ICTE_1972_20110328_0900	Date: 03/28/2011	Reliability Coordinator: ICTE
Initial Conditions: N/A		
Flowgate: 1972 - Webre-Willow Glen 500kv ftlo B...	Rating: 1039	LODF: 84.75%
TLR Direction: Normal		
Effective StartTime: 03/28/2011 10:00	Effective EndTime: 03/28/2011 10:45	TLR Duration: 45 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	RC Cut Acknowledge MW	Hold MW	Relief MW	CA	IDC MW	RC Ackn MW	Type	Mkt	IDC MW	RC Ackn MW	Current	Post Cont.	Cont. Flow			
Mar 28 09:36	TLR 5A	NEXT	1-NS	0 / 1	0	0.0	0	0.0	5	2.9	CLEC	10.0	10.0	ED-2	SWPP	0.0	0.0	581	1329	883	N/A
			2-NH	2 / 0	110	19.1	110	19.1	0	0.0	EES	57.0	57.0	ED-5	SWPP	61.7	61.7				
			6-NN	3 / 0	254	25.7	254	25.7	0	0.0	LAGN	60.0	60.0	FIRM-T	SWPP	0.0	0.0				
			7-F	30 / 3	115	55.2	115	55.2	38	20.3	SME	1.0	1.0	FIRM-CREDIT	SWPP	0.0	0.0				
			Total	35 / 4	479	101.0	479	101.0	41	23.2	Total	128.0	128.0	Total		61.7	61.7				
Mar 28 10:27	TLR 0	CURRENT				NONE												533	1199	798	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	5
2	2	110	110	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	3	254	254	0
7	30	115	115	38
Total	35	479	479	41

TLR>NNL Totals

CA	NNL Relief	
	IDC MW	RC Ackn MW
CLEC	10.0	10.0
EES	57.0	57.0
LAGN	60.0	60.0
SME	1.0	1.0
Total	128.0	128.0

TLR Market Flow Totals

Market	Type	Market Relief	
		IDC MW	RC Ackn MW
SWPP	ED-2	0.0	0.0
	ED-6	61.7	61.7
	FIRM-7	0.0	0.0
Total for SWPP		61.7	61.7
Total		61.7	61.7

Date	Time	Category	Issue
03/28/11	0853	ICP/LAP Assessment	Assessed as ICP PC 130%.
03/28/11	0906	Outage	Called to request Jeremy at EES SOC to put Outage for Willow Glenn AT 1 500/138kv XMFR - TOARS 77831 back in service.
03/28/11	0910	Outage	Called Jeremy EES SOC to find out how long it would take to put Willow Glenn AT 1 500/138kv XMFR back in service. Jeremy stated that he had given the TOC a directive to put line back in service. I stated, that I did not give him a directive but requested the outage to be cancelled and XFMR back in service.
03/28/11	0912	Outage	Jeremy EES SOC called to inform that EES was not going to redispatch for the Willow Glenn AT 1 500/138kv XMFR which is a P3 outage.
03/28/11	0915	Outage	Called Jeremy EES SOC to ask if reconfiguring the Willow Glenn bus by opening disconnect breaker 13003 on the bus and close breaker 13005 which would close the ring bus and still enable the TOC to perform their outage work. Jeremy stated that he had already asked about this and the TOC stated no at this time. Also, Jerney informed me that the TOC had informed him that the Willow Glen 500 XFMR would not be returned to service for at least 2 hours after issuing directive to RTS. Since EES SOC will not redispatch studying TLR 5 option to curtail schedules and re-dispatch generation.
03/28/11	0926	Directive - Initiated	Close Willow Glenn AT 1 500/138kv XMFR - TOARS number 77831 back into service as soon as possible.
03/28/11	0929	TLR - Redispatch Question	Called Kelly to ask redispatch question, she responded that there is no redispatch option at this time. 3 way communication.
03/28/11	0936	Internal Non-Firm	No internal non-firm schedules to curtail.
03/28/11	0936	TA Notification	Called David on ICT Tariff desk to suspend non-firmt AFC's on FG 1972.

03/28/11	0936	TLR - 5a Initial	Issued TLR 5A PC 130%. Called Jeremy EES and ICT Tariff David to 0 out AFC for 6 hours. David called to inform us that they did not have the FG as 1972 and that they had the same FG as 15867. REF. 400330. EES NNL 56.6. SMEPA NNL 0.5, CLECO NNL 10.0, LAGN NNL 59.7.
03/28/11	0943	NNL	Called Shawn at CLECO to inform of NNL amount for CLECO of 10.0 and faxed GSF's for him to calc. generation dispatch.
03/28/11	0950	NNL	Shawn from CLECO called to inform that CLECO will provide NNL by increasing TECHE 48mws and decrease Acadia generation 48mws.
03/28/11	0952	NNL	Called Pat to inform of NNL for LAGN for 59.7. LAGN will provide their NNL by moving Big Cajun 2 unit 3 down by 25mws and moved Cottonwood #3 unit down by 115mws.
03/28/11	1027	TLR - 0	Issued TLR 0 PC 69%. Notified Jeremy EES SOC and all other parties involved. Notified ICT Tariff David to return AFC's back to normal. REF# 400330 ended. Spoke to Kelly EES SOC (supervisor) to ensure the Willow Glenn AT 1 500/138kv XMFR was returned to service and was going to remain in service. Decided to issue TLR 0.
03/28/11	1027	TA Notification	Called David on ICT Tariff Desk to inform that TLR 0 was issued on FG 1972, to restore non-firm AFC's.