

**SPP TLR 5 Investigation Report  
Flowgate 5203  
(Hugo Power Plant – Valliant 138kV for loss of Pittsburg – Valliant 345kV)  
(HPPVALPITVAL)  
TLR Level 5: October 20, 2010  
Report Issued: January 21, 2011**

**1. Description of purpose/cause of hold/curtailment.**

This report is submitted in accordance with the NERC Transmission Loading Relief Investigation Procedure for the Level 5 TLR event that occurred on Flowgate 5203 on October 20, 2010. Flowgate 5203 is an SPP flowgate. The Level 5 TLR was in effect from 13:35 until 15:00 CST on October 20, 2010. North – South loading in the region caused the projected post-contingent flows on the Hugo Power Plant – Valliant 138kV line to exceed the SOL. The monitored element on this flowgate has a dynamic temperature dependent rating. TLR is issued dependent on this dynamic rating.

**2. Facility/flowgate limitations and flows at the time the TLR was initiated.**

At the time the Level 5B TLR was first issued, the Limiting Element was rated at 315 MVA. Flow on the Limiting Element was 156 MVA. Flow on the Contingent Element was 457 MVA. The LODF was approximately 28%. Post-contingent flow on the Limiting Element was approximately 283 MVA.

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

TLR levels, timing and relief requested amounts are shown in the Event History and NERC TLR Log on pages 3-5.

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

There were no unplanned outages that contributed to this TLR.

**5. Procedures implemented prior to hold/curtailment.**

There were not enough non-firm transactions impacting the flowgate by more than 5% prior to the Level 5 TLR. The TLR was escalated to a Level 5 in order to curtail firm transactions and firm market flow to relieve loading.

**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 SPP Reliability Coordinators logged information describing the actions taken at each issuance of the TLR. Times in the RC Log are CDT.

**9. Flowgate limitations as identified by security analysis processes conducted by the Reliability Authority for the day prior to the TLR event.**

The next day study process did not indicate an issue with this flowgate based upon conditions at the time of the daily peak.

**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 SPP Reliability Coordinator was monitoring their state estimator, RTCA and RTLODF applications for current flowgate loading and other potential issues during this time. eDNA data historian recorded all line flows before, during and after the Level 5 TLR event, see page 6.

**11. ATC limitations before, during, and after the TLR event.**

SPP Tariff Administration grants transmission service using an AFC process. This process evaluates each transmission request on a case by case basis. SPP Tariff Administration was not granting any transmission requests that impacted the congested flowgate by 3 % or greater at the time of the Level 5 TLR.

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

This TLR was caused by a combination of generation patterns, load, and North to South loading on the transmission system in the region. The higher loading is caused by high exports across the ERCOT East DC Tie in combination with the lack of available generation in northeastern Texas. Loading sometimes requires escalating to a Level 5 TLR in order to obtain sufficient relief to reduce overloads.

**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 are archived in the IDC. These screen shots have not been included to reduce the size of this report.

**14. Re-dispatch actions taken.**

SPP EIS Market redispatch was implemented during the entire TLR event. Non-firm Market Flow was reduced on the flowgate as reported in the TLR Event History and NERC TLR Log on pages 3-5.

## Event History

**Issuing RC:** SWPP  
**Flowgate:** 5203 - HppValPitVal  
**Event Begin:** 2010-10-20 10:07  
**Event End:** 2010-10-20 15:01  
**Event Duration:** 5 Hours

TLR Level	TLR Date	TLR Confirm Time	Run Time	Requested Relief	Remaining Relief	Relief Provided	Total Cuts	
							Tags	MW
<a href="#">TLR Level 3B</a>	10/20/2010 10:20	10/20/2010 10:07	10/20/2010 10:06:49	50.0	20.4	29.6	4	212
<a href="#">TLR Level 3A</a>	10/20/2010 12:00	10/20/2010 11:29	10/20/2010 11:28:55	20.0	0.0	20.0	3	158
<a href="#">TLR Level 3A</a>	10/20/2010 13:00	10/20/2010 12:28	10/20/2010 12:27:46	30.0	7.1	22.9	3	208
<a href="#">TLR Level 5B</a>	10/20/2010 13:35	10/20/2010 13:25	10/20/2010 13:22:54	5.0	0.0	5.6	11	18
<a href="#">TLR Level 3A</a>	10/20/2010 15:00	10/20/2010 14:26	10/20/2010 14:26:31	0.0	0.0	0.0	0	0
<a href="#">TLR Level 0</a>	10/20/2010 15:15	10/20/2010 15:01	10/20/2010 15:00:51	0.0	0.0	0.0	0	0

## Event Summary

FILE SAVED AS: SWPP\_5203\_20101020\_1020.htm

Incident: SWPP\_5203\_20101020\_1020 Date: 10/20/2010 Reliability Coordinator: SWPP

Initial Conditions: Loading

Flowgate: 5203 - HppValPitVal

Rating: 315

LODF: 27.95%

TLR Direction: Normal

Effective StartTime: 10/20/2010 10:20

Effective EndTime: 10/20/2010 15:15

TLR Duration: 4 Hours and 55 Minutes

## TLR Actions

Confirm Time	Level	Effective Hour	Priority	Schedule								NNL Relief			Market Relief				Flow		Cont. 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.			
					MW	Relief	MW	Relief	MW	Relief												
Oct 20 10:07	TLR 3B	CURRENT	2-NH 6-NN <b>Total</b>	1 / 0 3 / 0 <b>4 / 0</b>	4 208 <b>212</b>	0.3 11.4 <b>11.6</b>	4 208 <b>212</b>	0.3 11.4 <b>11.6</b>	0 0 <b>0</b>	0.0 0.0 <b>0.0</b>	NONE	ED-2 ED-6 FIRM-7 <b>Total</b>	SWPP SWPP SWPP	0.0 16.0 14.0 <b>30.0</b>	0.0 16.0 14.0 <b>30.0</b>	212	321	390	N/A			
		NEXT	6-NN <b>Total</b>	3 / 0 <b>3 / 0</b>	208 <b>212</b>	11.7 <b>11.7</b>	208 <b>208</b>	11.7 <b>11.7</b>	0 0 <b>0</b>	0.0 0.0 <b>0.0</b>	NONE	ED-2 ED-6 FIRM-7 <b>Total</b>	SWPP SWPP SWPP	0.0 15.0 8.0 <b>23.0</b>	0.0 15.0 8.0 <b>23.0</b>							
Oct 20 11:29	TLR 3A	NEXT	6-NN <b>Total</b>	3 / 0 <b>3 / 0</b>	158 <b>158</b>	9.0 <b>9.0</b>	158 <b>158</b>	9.0 <b>9.0</b>	0 0 <b>0</b>	0.0 0.0 <b>0.0</b>	NONE	ED-2 ED-6 FIRM-7 <b>Total</b>	SWPP SWPP SWPP	0.0 11.0 0.0 <b>11.0</b>	0.0 11.0 0.0 <b>11.0</b>	188	293	377	N/A			
Oct 20 12:28	TLR 3A	NEXT	6-NN <b>Total</b>	3 / 0 <b>3 / 0</b>	208 <b>208</b>	11.9 <b>11.9</b>	208 <b>208</b>	11.9 <b>11.9</b>	0 0 <b>0</b>	0.0 0.0 <b>0.0</b>	NONE	ED-2 ED-6 FIRM-7 <b>Total</b>	SWPP SWPP SWPP	0.0 11.0 0.0 <b>11.0</b>	0.0 11.0 0.0 <b>11.0</b>	165	286	433	N/A			
Oct 20 13:25	TLR 5B	CURRENT	7-F <b>Total</b>	11 / 0 <b>11 / 0</b>	18 <b>18</b>	1.7 <b>1.7</b>	18 <b>18</b>	1.7 <b>1.7</b>	0 0 <b>0</b>	0.0 0.0 <b>0.0</b>	NONE	ED-2 ED-6 FIRM-7 <b>Total</b>	SWPP SWPP SWPP	0.0 11.0 62.9 <b>73.9</b>	0.0 11.0 62.9 <b>73.9</b>	156	283	457	N/A			
		NEXT	2-NH 6-NN 7-F <b>Total</b>	1 / 0 2 / 0 15 / 0 <b>18 / 0</b>	12 92 78 <b>182</b>	0.7 5.1 5.4 <b>11.2</b>	12 92 78 <b>182</b>	0.7 5.1 5.4 <b>11.2</b>	0 0 0 <b>0</b>	0.0 0.0 0.0 <b>0.0</b>	NONE	NONE										
Oct 20 14:26	TLR 3A	NEXT	NONE								NONE	ED-2 ED-6 FIRM-7 <b>Total</b>	SWPP SWPP SWPP	0.0 0.0 0.0 <b>0.0</b>	0.0 0.0 0.0 <b>0.0</b>	164	327	584	N/A			

Oct 20 15:01	TLR 0	CURRENT	NONE	NONE	NONE	154	297	514	N/A
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### 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	2	16	16	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	14	874	874	0
7	26	98	98	0
<b>Total</b>	<b>42</b>	<b>986</b>	<b>986</b>	<b>0</b>

### TLR Market Flow Totals

Market	Type	Market Relief	
		IDC MW	RC Ackn MW
SWPP	ED-2	0.0	0.0
	ED-6	49.0	49.0
	FIRM-7	76.9	76.9
Total for SWPP		125.9	125.9
<b>Total</b>		<b>125.9</b>	<b>125.9</b>

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