

MISO ICTE Reliability: TLR 5 Event Analysis Report



Event Date: 4/4/2013

Flowgate ID/Name: FG 6509 Nelson AT 1 500/230kV flo Hartburg-Cypress 500kV

Metrics Tables: TLR Date 4/4/2013 07:30
Return to Zero 4/4/2013 16:00
Duration 8 hours 30 minutes
Hours in TLR 5 7 hours 30 minutes
Highest Level 5B
MW Cut 439
Firm 439
Non-Firm 0

NNL:

EES	320	LEPA	
AECI		ONT	
AMIL		PJM	
CLEC	7	SMEE	
CSWS		SOCO	
EDE		SPA	
LAFa		TVA	
LAGN	18	WSCS	

Flowgate information at the time of the TLR 5 issuance:

Line Rating: 560 LODF: 0.8681 PC MVA: 716 Contingent Element: 644 Monitored Element: 157

Root Cause:

This event was caused by increasing flows north to south heading into the WOTAB load pocket. Contributing to the heavier load across the Nelson transformer AT1 was an increase in generation output that has lower sensitivities outside of the constrained area and reduced generation in the WOTAB and Western load pockets.

Planned or Unplanned Generation Outage(s): (none, if blank)

Type:
Unplanned Nelson Unit 4 tripped on 3/29/2013
Planned Sabine Unit 4 on 3/2/2013

Planned or Unplanned Transmission Outage(s): (none, if blank)

Type:
Planned Grimes – Crocket 345kV line on 4/1/13
Planned Helbig – McLewis 230kV line on 4/1/13

Tags Excluded from the TLR (The following tags were excluded for Reliability)

SWPP KCPL_CCG000094BRZ2_BRAZ

Internal Non-Firm Tags that were curtailed: No Internal Non-Firm tags were curtailed

Non-Firm AFC's suspended: from 08:00 EST on 4/4/2013 to 16:00 EST on 4/4/2013

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AFC Limitations before, during and after the TLR Event:

		Firm AFC available on TEMP24 (MW)						
AFC Initialization Summary Report Time Stamp (EST)		4/1 HB 13	14	15	16	17	18	19
Prior to Day Ahead	3/30/2013 18:26	93	87	83	78	84	96	90
Day Ahead	3/31/2013 10:25	123	118	114	109	114	126	120
		Sum of impact of firm reservations and rfcalc baseflow on TEMP24 (MW)						
AFC Initialization Summary Report Time Stamp (EST)		4/1 HB 13	14	15	16	17	18	19
Prior to Day Ahead	3/30/2013 18:26	377	383	387	392	386	374	380
Day Ahead	3/31/2013 10:25	347	352	356	361	356	344	350
TFC of TEMP24		470						
AFC Initialization Summary Report Time Stamp (EST)		Average Firm AFC available on TEMP24 (MW)						
Prior to Day Ahead	3/30/2013 18:26	87						
Day Ahead	3/31/2013 10:25	118						
		30						
AFC Initialization Summary Report Time Stamp (EST)		Average Sum of impact of firm reservations and rfcalc baseflow on TEMP24 (MW)						
Prior to Day Ahead	3/30/2013 18:26	383						
Day Ahead	3/31/2013 10:25	352						
		-30						

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	AFC Initialization Summary Report Timestamp (EST)	AFC available on TEMP24 (MW)								
		4/1								
		HB 13	14	15	16	17	18	19		
Prior to Day Ahead	3/30/2013 18:26	93	87	83	78	84	96	90		Firm
Day Ahead	3/31/2013 10:25	123	118	114	109	114	126	120		Firm
Operating Horizon	4/1/2013 0:16	23	23	23	23	23	4	4		Non-Firm
Operating Horizon	4/1/2013 1:19	206	206	206	206	206	206	206		Non-Firm
Operating Horizon	4/1/2013 2:21	54	44	44	43	35	35	35		Non-Firm
Operating Horizon	4/1/2013 3:17	81	81	81	81	81	43	43		Non-Firm
Operating Horizon	4/1/2013 3:41	81	81	81	81	81	43	43		Non-Firm
Operating Horizon	4/1/2013 4:18	47	37	37	36	28	28	28		Non-Firm
Operating Horizon	4/1/2013 5:16	62	52	52	52	45	46	46		Non-Firm
Operating Horizon	4/1/2013 6:30	51	41	41	40	32	32	32		Non-Firm
Operating Horizon	4/1/2013 7:14	55	40	39	35	29	32	31		Non-Firm
Operating Horizon	4/1/2013 8:01	55	40	39	35	29	32	31		Non-Firm
Operating Horizon	4/1/2013 8:22	106	96	96	95	87	87	87		Non-Firm
Operating Horizon	4/1/2013 9:13	145	137	137	136	131	131	128		Non-Firm
Operating Horizon	4/1/2013 10:35	106	93	91	94	89	90	87		Non-Firm
Operating Horizon	4/1/2013 11:14	124	118	117	125	121	121	118		Non-Firm
Operating Horizon	4/1/2013 12:29	112	102	105	113	109	110	106		Non-Firm
Operating Horizon	4/1/2013 13:20	0	0	0	0	0	0	127		Non-Firm
Operating Horizon	4/1/2013 14:21		0	0	0	0	0	129		Non-Firm
Operating Horizon	4/1/2013 15:19			0	0	0	0	95		Non-Firm
Operating Horizon	4/1/2013 16:19				0	0	0	124		Non-Firm
Operating Horizon	4/1/2013 17:19					0	0	87		Non-Firm
Operating Horizon	4/1/2013 18:26						0	96		Non-Firm
Operating Horizon	4/1/2013 19:18							339		Non-Firm
Indicates TLR Avoidance (Non-sale of Non-Firm)										

Event History:

TLR Event History																	
6509 - Nelson AT1 500/230 (ftlo) Hartburg 500kv - Cypress																	
	Status	TLR	Effective Time	Confirmation Time	Run Time	Flow Change Requested	Requested Relief	Remaining Relief	Relief Provided	Total Cuts			RC Ack Cuts			MF	NNL
										Tags	MW	Relief	Tags	MW	Relief		
CH	SUPERSEDED	5B	04/04/2013 07:30	04/04/2013 07:11	04/04/2013 07:10	-120.0	120.0	0.0	123	28	93	21	28	93	21	0	102
NH	SUPERSEDED	5A	04/04/2013 09:00	04/04/2013 08:39	04/04/2013 08:36	+10.0	27.0	0.0	131	25	105	20	25	105	20	0	112
NH	SUPERSEDED	5A	04/04/2013 10:00	04/04/2013 09:33	04/04/2013 09:32	+30.0	0.0	0.0	93	24	76	14	24	76	14	0	79
NH	SUPERSEDED	5A	04/04/2013 11:00	04/04/2013 10:30	04/04/2013 10:25	+100.0	0.0	0.0	50	22	50	9	22	50	9	0	40
NH	SUPERSEDED	5A	04/04/2013 12:00	04/04/2013 11:30	04/04/2013 11:25	+95.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0
NH	SUPERSEDED	5A	04/04/2013 13:00	04/04/2013 12:33	04/04/2013 12:25	+35.0	13.0	0.0	15	14	21	4	14	21	4	0	11
NH	SUPERSEDED	5A	04/04/2013 14:00	04/04/2013 13:27	04/04/2013 13:26	+10.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0
NH	SUPERSEDED	1	04/04/2013 15:00	04/04/2013 14:27	04/04/2013 14:27	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0
NH	TERMINATED	0	04/04/2013 16:00	04/04/2013 15:32	04/04/2013 15:31	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0

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Event Summary:

Event Summary

FILE SAVED AS: MISO_6509_20130404_0630.htm

Incident:	MISO_6509_20130404_0630	Date:	04/04/2013 (EST)	Reliability Coordinator:	MISO
Initial Conditions:	N/A				
Flowgate:	6509 - Nelson AT1 500/230 (ftlo) Hart...	Rating:	0	LODF:	86.81%
TLR Direction:	Normal				
Effective StartTime:	04/04/2013 07:30 (EST)	Effective EndTime:	04/04/2013 16:00 (EST)	TLR Duration:	8 Hours and 30 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 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		
Apr 04 07:11 (EST)	TLR 5B	CURRENT	7-F	28 / 0	93	21.0	93	21.0	0	0.0	CLEC	2.0	2.0	NONE	NONE	157	716	644	N/A		
			Total	28 / 0	93	21.0	93	21.0	0	0.0	EES	95.0	95.0							EES	5.0
Apr 04 08:39 (EST)	TLR 5A	NEXT	7-F	27 / 3	94	21.1	94	21.1	21	15.0	NONE	NONE	NONE	NONE	98	555	527	N/A			
			Total	27 / 3	94	21.1	94	21.1	21	15.0									EES	104.0	104.0
Apr 04 09:33 (EST)	TLR 5A	NEXT	7-F	24 / 0	78	14.0	78	14.0	0	0.0	CLEC	2.0	2.0	NONE	NONE	0	0	0	N/A		
			Total	24 / 0	76	14.0	76	14.0	0	0.0	EES	73.0	73.0							EES	4.0
Apr 04 10:30 (EST)	TLR 5A	NEXT	7-F	22 / 0	50	9.3	50	9.3	0	0.0	CLEC	1.0	1.0	NONE	NONE	0	0	0	N/A		
			Total	22 / 0	50	9.3	50	9.3	0	0.0	EES	37.0	38.0							EES	2.0
Apr 04 11:30 (EST)	TLR 5A	NEXT		NONE						NONE			NONE				0	0	0	N/A	
Apr 04 12:33 (EST)	TLR 5A	NEXT	7-F	14 / 1	21	3.9	21	3.9	4	2.9	EES	10.0	10.0	NONE	NONE	0	0	0	N/A		
			Total	14 / 1	21	3.9	21	3.9	4	2.9	LAGN	1.0	1.0							Total	11.0
Apr 04 13:27 (EST)	TLR 5A	NEXT	7-F	0 / 1	0	0.0	0	0.0	20	3.8	NONE			NONE				0	0	0	N/A
			Total	0 / 1	0	0.0	0	0.0	20	3.8											
Apr 04 14:27 (EST)	TLR 1	CURRENT		NONE						NONE			NONE				0	0	0	N/A	
Apr 04 15:32 (EST)	TLR 0	CURRENT		NONE						NONE			NONE				0	0	0	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	0	0	0	0
7	140	439	439	45
Total	140	439	439	45

TLR NNL Totals

NNL Relief		
CA	IDC MW	RC Ackn MW
CLEC	7.0	7.0
EES	319.0	320.0
LAGN	18.0	18.0
Total	344.0	345.0