

1. INTRODUCTION

The objective of this report is to provide a summary of historical load-generation resource adequacy and control performance for the three NERC interconnections known as the Eastern, Western and ERCOT. For each interconnection the report presents:

- Section 2.1 high-level summary including the number of days within September that each interconnection was operating in the three reliability states¹ (Normal, Alert, and Emergency) equivalent to the three alerts defined and in trial by NERC Reliability Coordinators.
- Section 2.2 high-level summary including load-generation resource adequacy and control performance represented by CPS1-2, BAAL and DCS reliability metrics compared to recommended limits and considering each interconnection as only one Balancing Authority.
- Sections 2.3 high-level summary including the interconnections reliability performance during alert state.
- Section 3 reliability performance while operating in normal state represented by the monthly circular and statistical process control (SPC) charts showing in the circular plot load-generation adequacy represented by key reliability performance metrics all aligned by day, and in the SPC charts frequency deviation RMS (Epsilon). Interconnections Line-plot and boxplots showing Epsilon performance for each September day and median and variability for each of the last 13 months.
- Section 4 reliability performance while operating in alert state represented by the monthly summaries of load-generation adequacy and I-Alarms broadcasted during September: FTL, FAL, FRL, 1 Minute Delta Frequency, Long Term and Time Error Corrections (TEC).

2. SUMMARY SECTION

2.1 Interconnections Reliability State Condition

Eastern interconnection operated 30 Days in Normal State. Western interconnection operated 30 Days in Normal State. ERCOT interconnection operated 30 Days in Normal State.

Interconnections days of Operation in Each Reliability State				
Interconnection	NORMAL	ALERT	EMERGENCY ²	Observation
Eastern	30	0	0	30 Days in Normal State
Western	30	0	0	30 Days in Normal State
ERCOT	30	0	0	30 Days in Normal State

2.2 Interconnections Normal State Performance

The Eastern interconnection violated its CPS2 performance metrics thresholds. The Western interconnection violated its CPS2 performance metrics thresholds. The ERCOT interconnection violated its - performance metrics thresholds.

Interconnections Monthly Performance Metrics - Actual vs Recommended								
Interconnection	CPS2 - % Monthly		CPS1 - % Monthly		BAAL Exceeds in Month	DCS Minutes to Return to Normal		Observations
	Rec Min	Actual	Rec Min	Actual	Actual	Std. Max	Actual	
Eastern	90	74	100	143	0	15	-	CPS2Violate Threshold
Western	90	51	100	143	0	15	-	CPS2Violate Threshold
ERCOT	90	99	100	166	0	15	-	-

2.3 Interconnections Alert State Performance

Eastern interconnection operated in Normal state. Western interconnection operated in Normal state. ERCOT interconnection operated in Normal state.

Interconnections Alert State Performance Metrics							
Interconnection	Frequency Trigger Limit Minutes		Frequency Alert Limit Minutes		Frequency Relay Limit Minutes		Observations
	Rec Max	Actual Highest	Rec Max	Actual Highest	Std. Max	Actual	
Eastern	30	0	1	0	1	0	Normal
Western	30	0	1	0	1	0	Normal
ERCOT	30	0	1	0	1	0	Normal

3. LOAD-GENERATION ADEQUACY AND CONTROL PERFORMANCE FOR EACH INTERCONNECTION WHILE OPERATING UNDER NORMAL STATE

3.1 Eastern Interconnection

The circular plot shows deviation of control performance metrics from the threshold for the last month. CPS 2 performance was below the 90% threshold for 30 days with the lowest value of 59%. CPS 1 performance was below the 100% threshold for 1 days. Epsilon performance did not exceed 18mHz threshold all month. The BAAL performance metric was not exceeded all month.

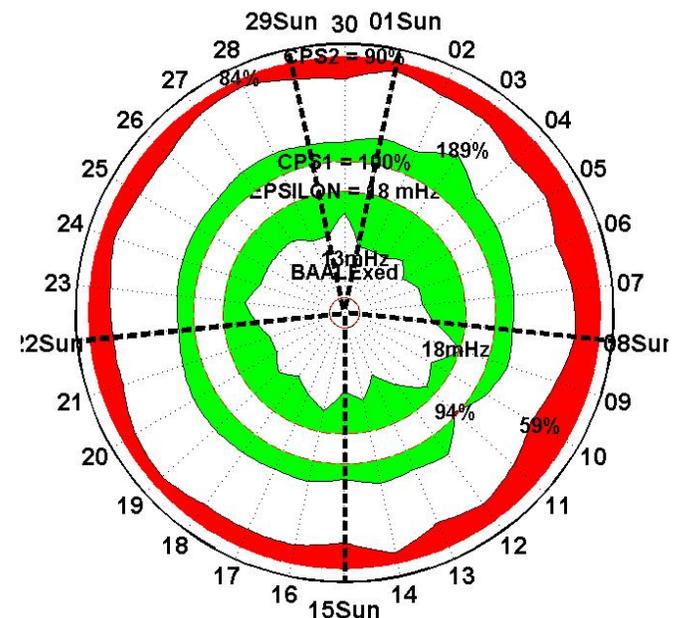


Fig 1 - Eastern Load-Generation Adequacy Performance Metrics

The first statistical process control (SPC) chart shows the frequency

deviation mean. The upper control limit for mean was reached or exceeded on days S8. The lower control limit for mean was reached or exceeded on days S1. The second statistical process control (SPC) chart shows the frequency deviation variability. The upper control limit for variability was reached or exceeded on days S8, 11.

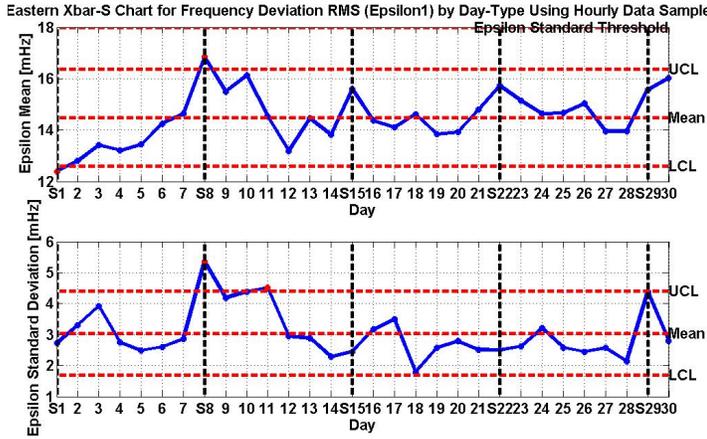


Fig 2 - Eastern Frequency Deviation RMS (Epsilon) Performance

Figure-3 shows Frequency Deviation RMS (Epsilon) mean and variability for the last 13 months for the Eastern Interconnection.

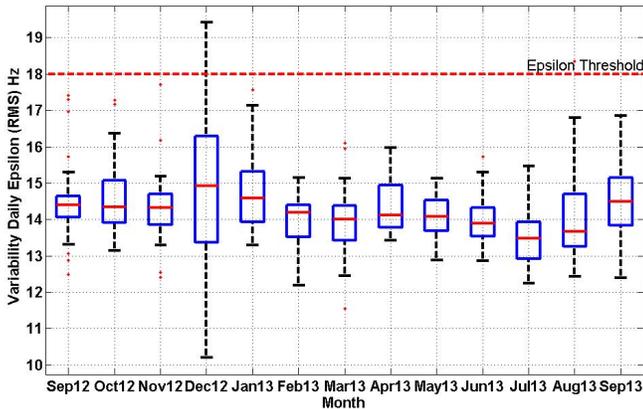


Fig 3 - Eastern Monthly Trend of Frequency Deviation RMS (Epsilon)

3.2 Western Interconnection

The circular plot shows deviation of control performance metrics from the threshold for the last month. CPS 2 performance was below the 90% threshold for 29 days with the lowest value of 37%. CPS 1 performance was not below the 100% threshold all month. Epsilon performance was below the 22.8mHz threshold for 2 days with the highest value of 24mHz. The BAAL performance metric was not exceeded all month.

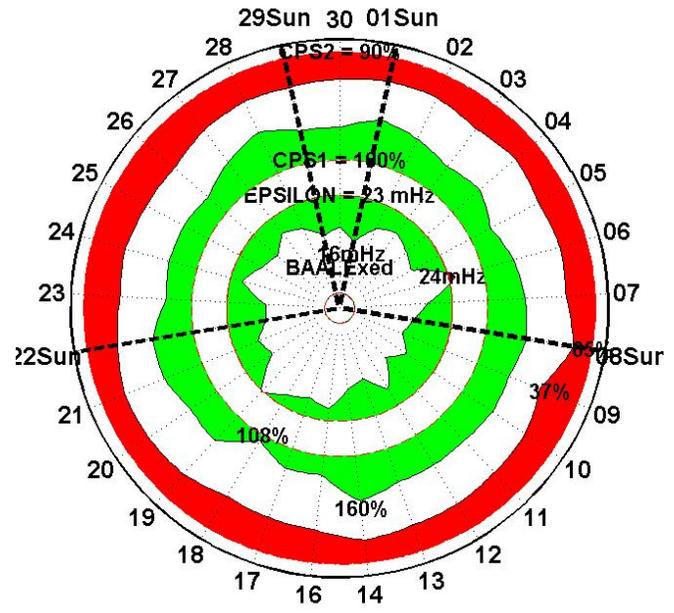


Fig 4 - Western Load-Generation Adequacy Performance Metrics

The first statistical process control (SPC) chart shows the frequency deviation mean. The second statistical process control (SPC) chart shows the frequency deviation variability.

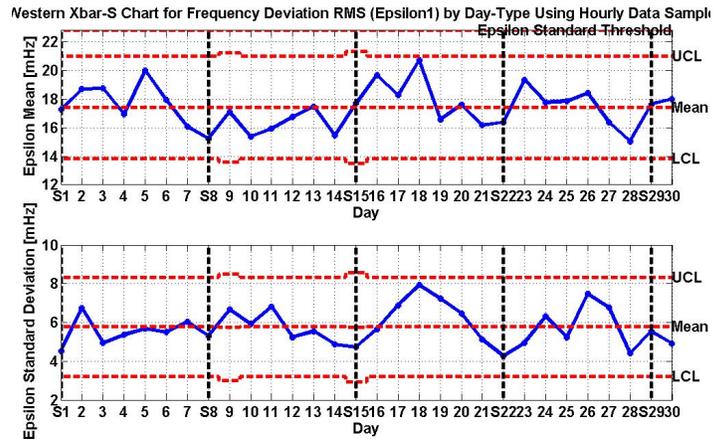


Fig 5 - Western Frequency Deviation RMS (Epsilon) Performance

Figure-6 shows Frequency Deviation RMS (Epsilon) mean and variability for the last 13 months for the Eastern Interconnection.

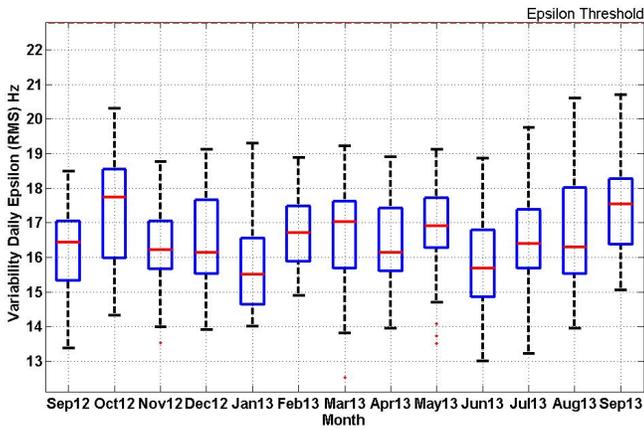


Fig 6 - Western Trend of Frequency Deviation RMS (Epsilon)

3.3 ERCOT Interconnection

The circular plot shows deviation of control performance metrics from the threshold for the last month. CPS 2 performance did not exceed 90% threshold all month. CPS 1 performance was not below the 100% threshold all month. Epsilon performance did not exceed 30mHz threshold all month. The BAAL performance metric was not exceeded all month.

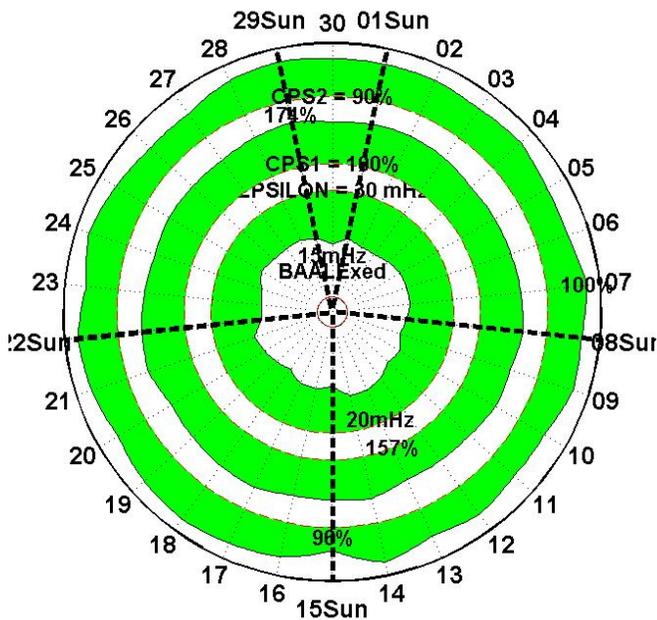


Fig 7 - ERCOT Load-Generation Adequacy Performance Metrics

The first statistical process control (SPC) chart shows the frequency deviation mean. The upper control limit for mean was reached or exceeded on days 12, 13. The lower control limit for mean was reached or exceeded on days S29. The second statistical process control (SPC) chart shows the frequency deviation variability. The upper control limit for variability was reached or exceeded on days 3.

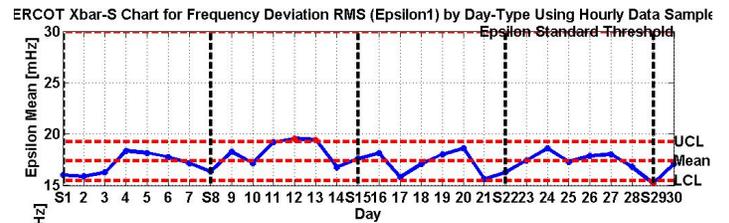


Fig 8 - ERCOT Frequency Deviation RMS (Epsilon) Performance

Figure-9 shows Frequency Deviation RMS (Epsilon) mean and variability for the last 13 months for the Eastern Interconnection.

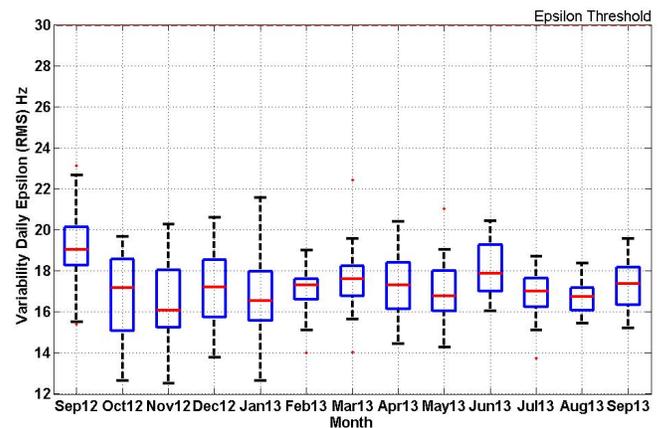


Fig 9 - ERCOT Trend of Frequency Deviation RMS (Epsilon)

4. LOAD-GENERATION ADEQUACY AND CONTROL I-ALARMS COUNTS AND DURATION SUMMARIES FOR EACH INTERCONNECTION WHILE OPERATING IN ALERT STATE

4.1 Interconnections Monthly Trend of Maximum FTL Duration in Minutes Its NetACE Exceeded the Recommended BAAL

The Eastern maximum duration was 6-minutes during Jan 2013. The Western maximum duration was 13-minutes during Jul 2013. The ERCOT maximum duration was 9-minutes during May 2013.

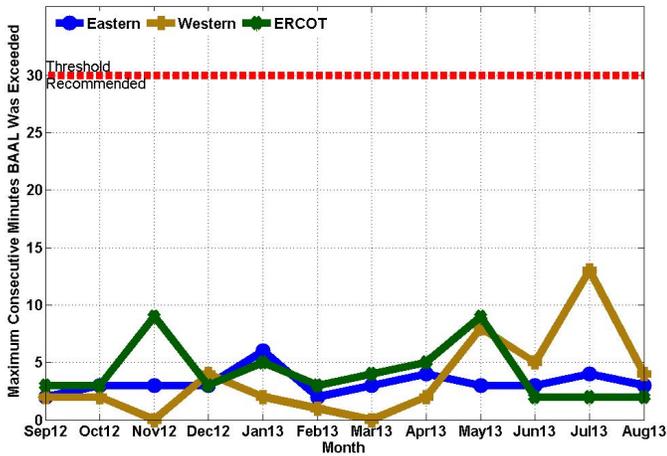


Fig 10 - Interconnections Maximum Consecutive Minutes NetACE Exceeded Recommended BAAL During FTL Alerts

The alarm summary table below shows for September the number of times each interconnection had FTL, FAL, and FLR alarms, together with the highest or lowest frequency reached with the corresponding continuous duration in minutes.

Interconnections Load-Generation Resources Adequacy and Control FTL, FAL, FRL Alarm Summary							
Interconnection and Alarm Type	Frequency Trigger Limit (FTL) 5-Minute Intelligent Alarms			Frequency Alarm Limit (FAL) 1-Minute Intelligent Alarms		Frequency Relay Limit (FRL) 1-Minute Intelligent Alarms	
	Date/Time	Lowest Highest Freq.	Duration Min.	Date/Time	Lowest Highest Freq.	Date/Time	Lowest Highest Freq.
Eastern	No Alarms	-	-	No Alarms	-	No Alarms	-
Western	No Alarms	-	-	No Alarms	-	No Alarms	-
ERCOT	No Alarms	-	-	No Alarms	-	No Alarms	-

4.2. Eastern Interconnection

Figure-11 shows the total number of times during each of the last 13 months the interconnection NetACE exceeded its recommended BAAL threshold for 1-minute or longer. The total counts is split in NetACE exceeds due to under and over generation.

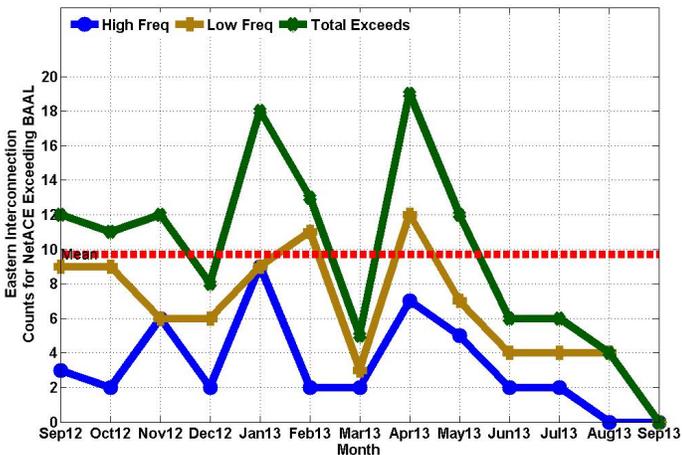


Fig 11 - Eastern Counts for NetACE Exceeding Recommended BAAL For 1-Minute or Longer

Figure-12 shows the last 13 months trend for the number of FTL low frequency events with duration of 1, 2, and 3 minutes. Figure-

13 shows the last 13 months trend for the number of FTL low frequency events with durations of 4, 5, 6, and 7 minutes.

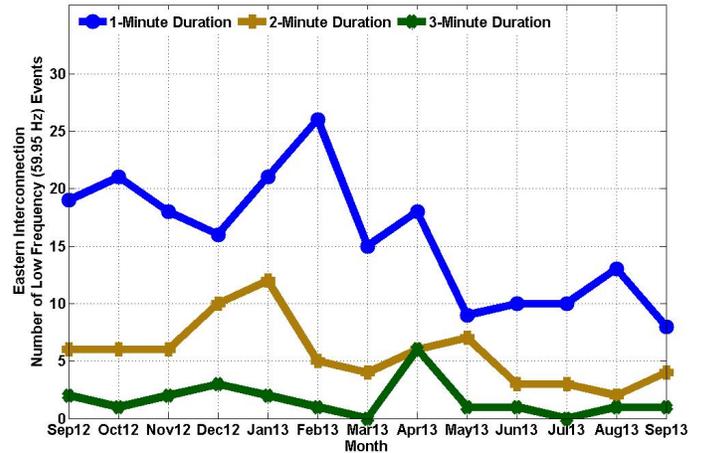


Fig 12 - Eastern FTL Low Frequency Events of 1, 2, 3 Minute Duration

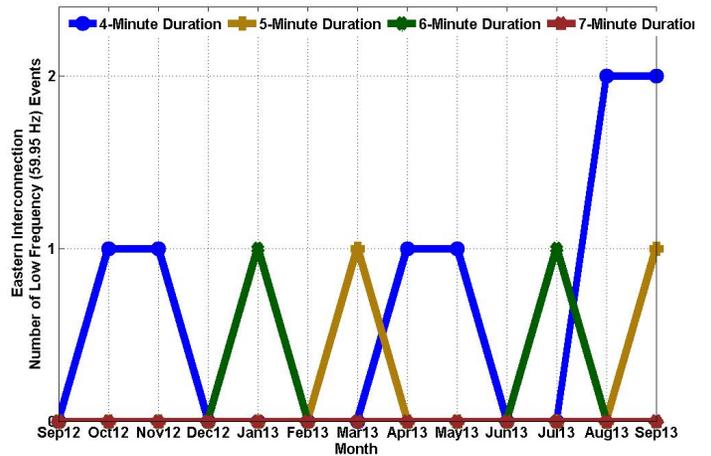


Fig 13 - Eastern FTL Low Frequency Events of 4, 5, 6, 7 Minute Duration

4.2. Western Interconnection

Figure-14 shows the total number of times during each of the last 13 months the interconnection NetACE exceeded its recommended BAAL threshold for 1-minute or longer. The total counts is split in NetACE exceeds due to under and over generation.

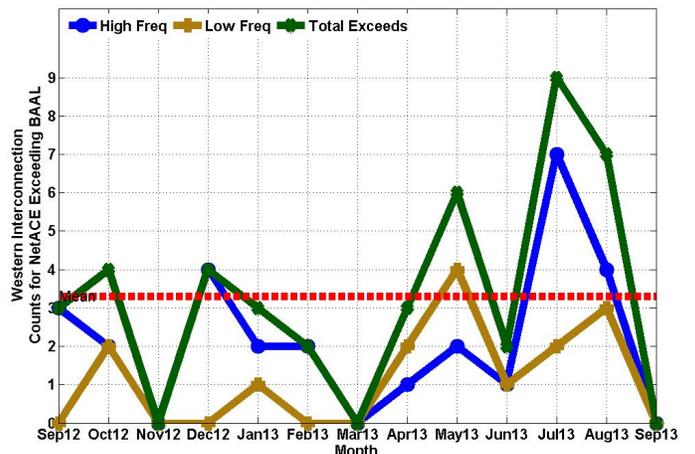


Fig 14 - Western Counts for NetACE Exceeding Recommended BAAL For 1-Minute or Longer

Figure-15 shows the last 13 months trend for the number of FTL low frequency events with duration of 1, 2, and 3 minutes. Figure-16 shows the last 13 months trend for the number of FTL low frequency events with durations of 4, 5, 6, and 7 minutes .

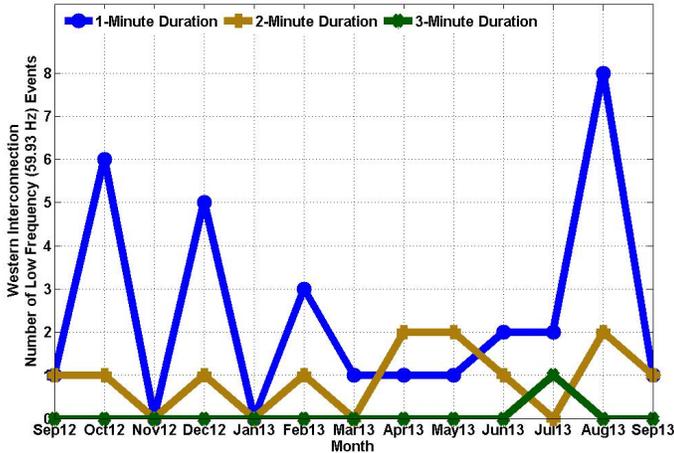


Fig 15 - Western FTL Low Frequency Events of 1, 2, 3, Minute Duration

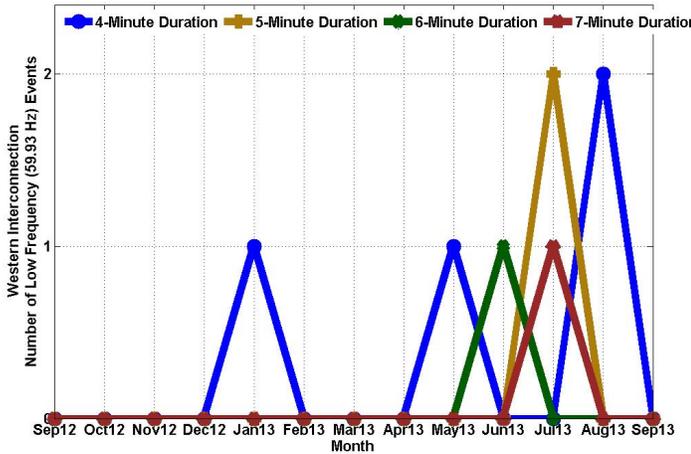


Fig 16 - Western FTL Low Frequency Events of 4, 5, 6, 7 Minute Duration

4.2.ERCOT Interconnection

Figure-17 shows the total number of times during each of the last 13 months the interconnection NetACE exceeded its recommended BAAL threshold for 1-minute or longer. The total counts is split in NetACE exceeds due to under and over generation.

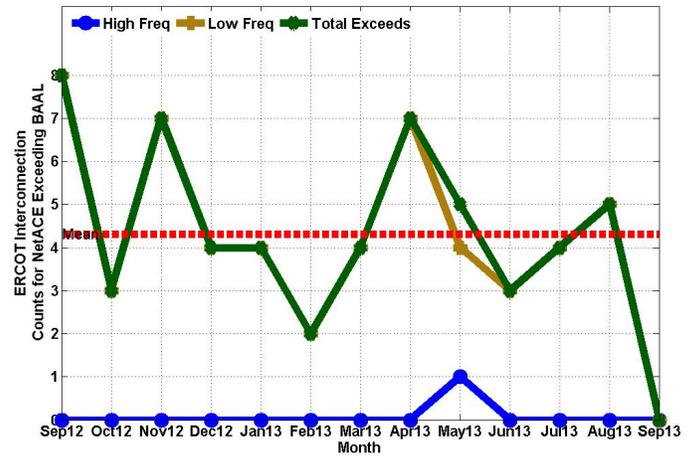


Fig 17 - ERCOT Counts for NetACE Exceeding Recommended BAAL For 1-Minute or Longer

Figure-18 shows the last 13 months trend for the number of FTL low frequency events with duration of 1, 2, and 3 minutes. Figure-19 shows the last 13-month trend for the number of FTL low frequency events with durations of 4, 5, 6, and 7 minutes

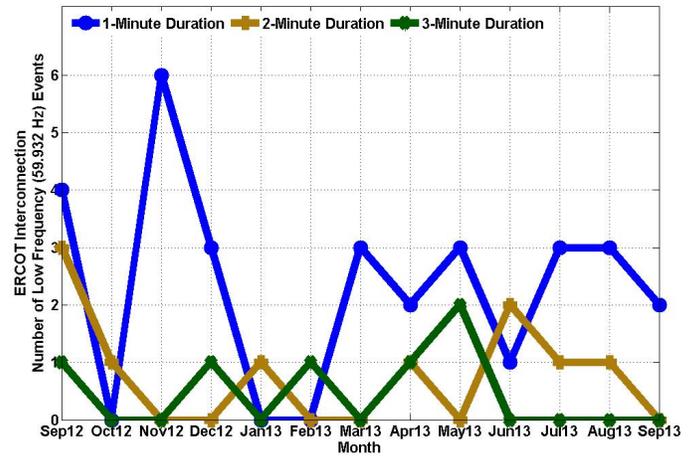


Fig 18 - ERCOT FTL Low Frequency Events of 1, 2, 3, Minute Duration

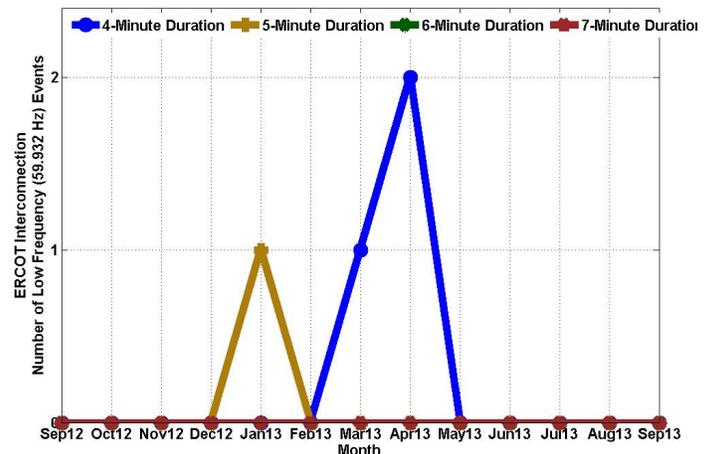


Fig 19 - ERCOT FTL Low Frequency Events of 4, 5, 6, 7 Minute Duration

4.3 Interconnections Monthly 1-Minute Delta Frequency High/Low

I-Alarms Summary and Trends

The following alarm summary table shows for year-to-date the number of times each interconnection operated under Low, High, and Long Term alarms together with the highest or lowest frequency reached by each interconnection during the alarm condition.

Interconnections Resource Adequacy and Control Long Term and Short Term Alarms Summary						
Interconnection and Alarm Type	1 Minute Delta Frequency Low		1 Minute Delta Frequency High		Long Term 60-Minutes Frequency Intelligent Alarms	
	Count	Lowest Freq.	Count	Highest Freq.	Count	Absolute Average Freq. Deviation
Eastern SEP 13	37	59.945	28	60.038	1	0.03
Eastern AUG 13	18	59.933	9	60.043	1	0.03
Eastern JUL 13	14	59.958	11	60.037	0	-
Eastern JUN 13	18	59.931	14	60.043	0	-
Eastern MAY 13	36	59.92	32	60.04	0	-
Eastern APR 13	87	59.916	51	60.046	0	-
Eastern MAR 13	61	59.946	38	60.047	0	-
Eastern FEB 13	52	59.941	44	60.034	0	-
Eastern JAN 13	44	59.944	33	60.034	0	-
Western SEP 13	18	59.946	22	60.061	1	0.04
Western AUG 13	22	59.897	12	60.043	0	-
Western JUL 13	18	59.904	3	60.052	0	-
Western JUN 13	13	59.887	6	60.048	0	-
Western MAY 13	7	59.917	2	60.009	0	-
Western APR 13	18	59.904	10	60.041	0	-
Western MAR 13	21	59.928	16	60.049	0	-
Western FEB 13	16	59.937	16	60.039	0	-
Western JAN 13	8	59.936	7	60.038	0	-
ERCOT SEP 13	1	59.884	0	59.884	0	-
ERCOT AUG 13	3	59.9	0	-	0	-
ERCOT JUL 13	1	59.901	0	-	0	-
ERCOT JUN 13	0	-	0	-	0	-
ERCOT MAY 13	0	-	0	-	0	-
ERCOT APR 13	1	59.9	1	59.917	0	-
ERCOT MAR 13	2	59.903	0	-	2	0.031
ERCOT FEB 13	0	-	0	-	0	-
ERCOT JAN 13	0	-	0	-	1	0.031

Figure 20 shows for the three interconnections the last 13 months trend of the number of 1 minute delta-f <= -35 mHz for Eastern and Western and delta-f <= -70 mHz for ERCOT alarms.

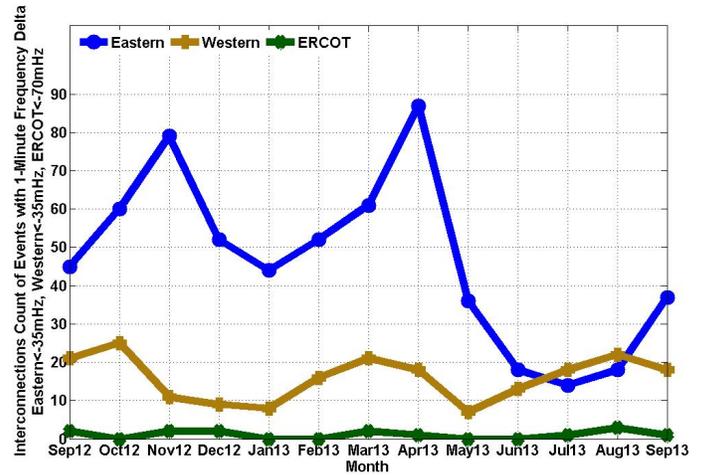


Fig 20 - Interconnections Counts Trend for Event Whose 1 Minute Delta Frequency is LT Thresholds

Figure 21 shows for the three interconnections the last 13 months trend of the number of 1 minute delta-f >= +35 mHz for Eastern and Western and delta-f >= 70 mHz for ERCOT alarms.

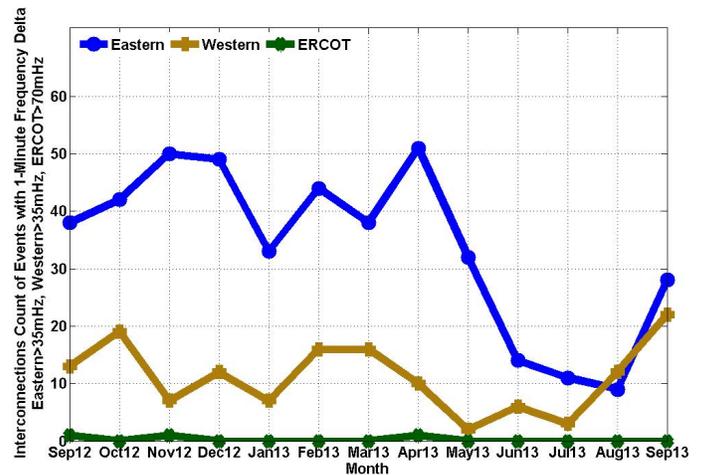


Fig 21 - Interconnections Counts Trend for Event Whose 1 Minute Delta Frequency is GT Thresholds

4.3. Eastern 1-Minute Delta Frequency Low Alarm Counts Time-Distributed Per Month and Per Hour-Type

Figure 22 below shows for the last 13 months the number of 1 minute delta-f <= -35 mHz for Eastern and Western and delta-f <= -70 mHz for ERCOT alarms with total number of alarms for each month and each hour-type.

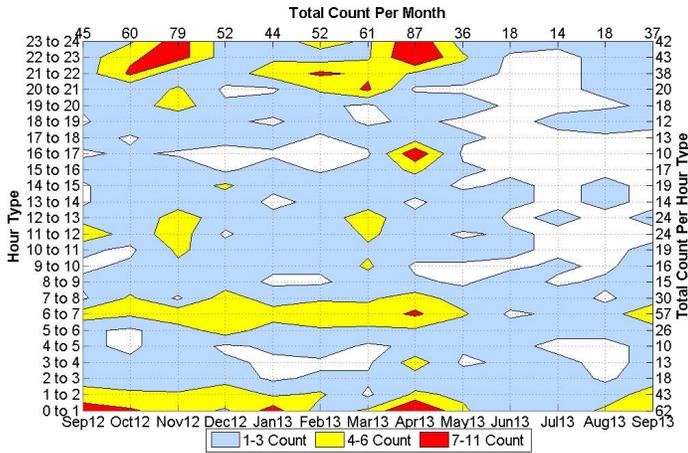


Fig 22 - Eastern Count For 1 Minute Delta Frequency is LT Threshold Per Month Per Hour Type

4.3. Eastern 1-Minute Delta Frequency High Alarm Counts Time-Distributed Per Month and Per Hour-Type

Figure 23 shows for the last 13 months the number of 1 minute delta-f >= +35 mHz for Eastern and Western and delta-f >= 70 mHz for ERCOT alarms with total number of alarms for each month and each hour-type.

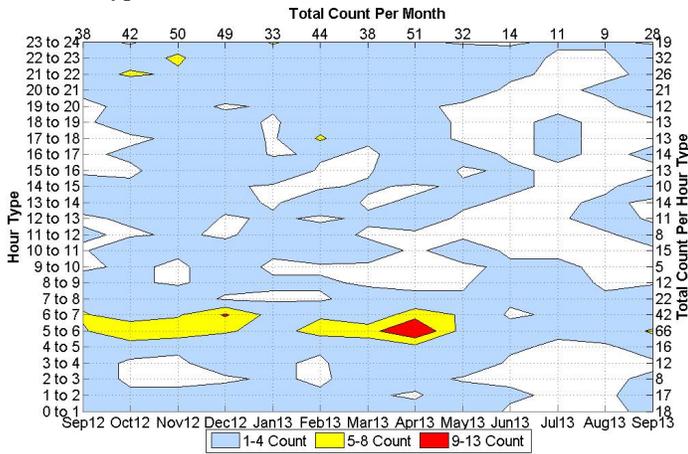


Fig 23 - Eastern Count For 1 Minute Delta Frequency is GT Threshold Per Month Per Hour Type

4.3. Eastern 1-Minute Delta Frequency Low Alarms 1-Minute Delta Frequency Median and Variability

Figure 24 shows for the last 13 months the 1-Minute Delta Frequency variability for all 1-Minute Delta Frequency Low alarms for each month.

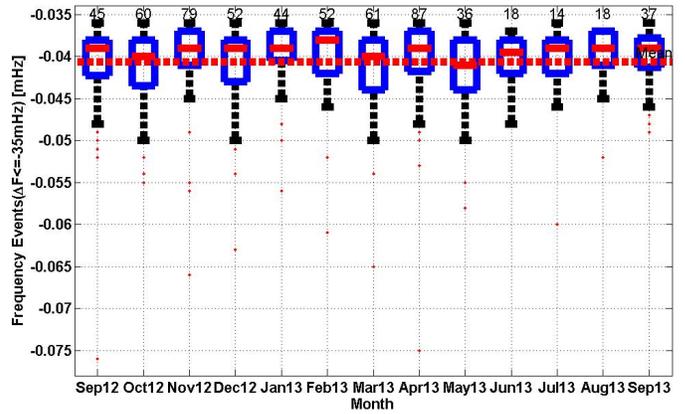


Fig 24 - Eastern Monthly 1-Minute Delta Frequency Variability for Low 1-Minute Delta Frequency Alarms

4.3. Eastern 1-Minute Delta Frequency High Alarms 1-Minute Delta Frequency Median-Variability

Figure 25 below shows for the last 13 months the 1-Minute Delta Frequency variability for all 1-Minute Delta Frequency High alarms of each month.

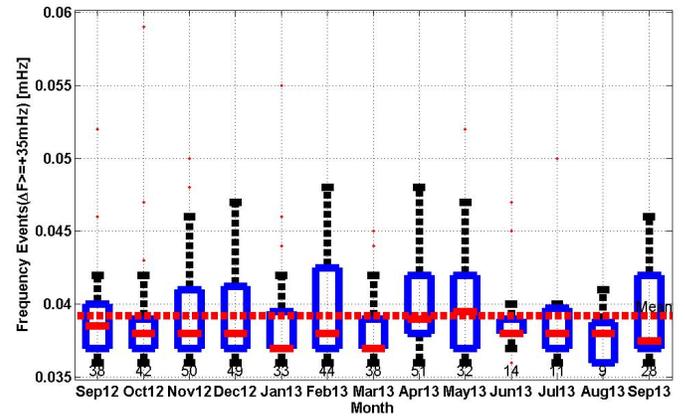


Fig 25 - Eastern Monthly 1-Minute Delta Frequency Variability for High 1-Minute Delta Frequency Alarms

4.3. Western 1-Minute Delta Frequency Low Alarm Counts Time-Distributed Per Month and Per Hour-Type

Figure 26 below shows for the last 13 months the number of 1 minute delta-f <= -35 mHz for Eastern and Western and delta-f <= -70 mHz for ERCOT alarms with total number of alarms for each month and each hour-type.

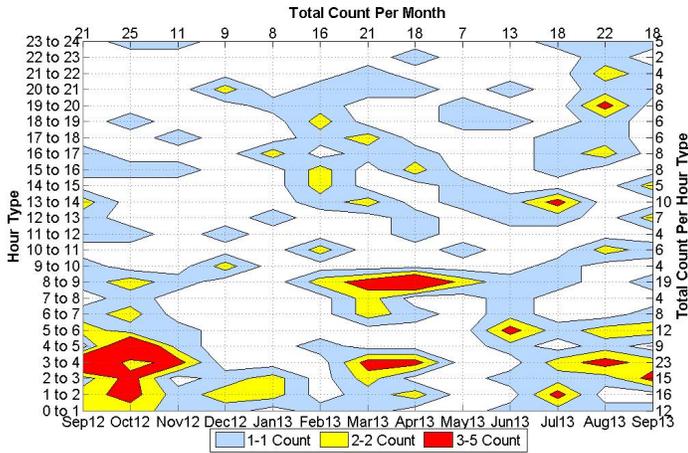


Fig 26 - Western Count For 1 Minute Delta Frequency is LT Threshold Per Month Per Hour Type

4.3. Western 1-Minute Delta Frequency High Alarm Counts Time-Distributed Per Month and Per Hour-Type

Figure 27 shows for the last 13 months the number of 1 minute delta-f >= +35 mHz for Eastern and Western and delta-f >= 70 mHz for ERCOT alarms with total number of alarms for each month and each hour-type.

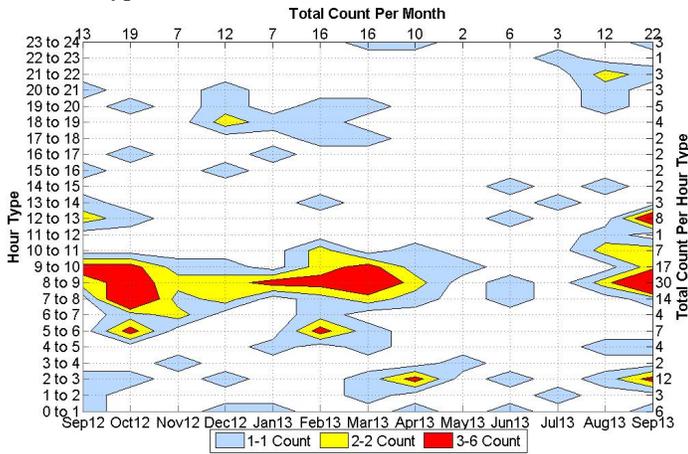


Fig 27 - Count For 1 Minute Delta Frequency is GT Threshold Per Month Per Hour Type

4.3. Western 1-Minute Delta Frequency Low Alarms 1-Minute Delta Frequency Median-Variability

Figure 28 shows for the last 12 months the 1 Minute Delta Frequency variability for all 1-Minute Delta Frequency Low alarms for each month.

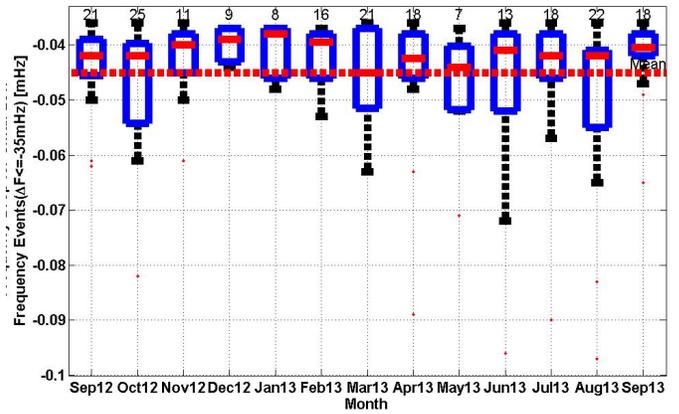


Fig 28 - Western Monthly 1-Minute Delta Frequency Variability for Low 1-Minute Delta Frequency Alarms

4.3. Western 1-Minute Delta Frequency High Alarms 1-Minute Delta Frequency Median-Variability

Figure 29 below shows for the last 13 months the frequency variability for all short-term frequency alarms of each month.

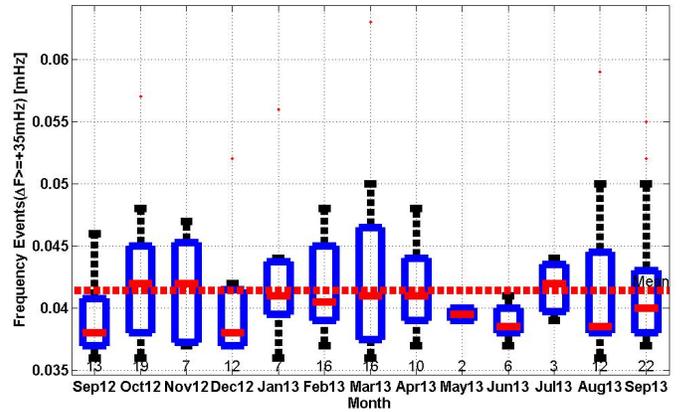


Fig 29 - Western Monthly 1-Minute Delta Frequency Variability for High 1-Minute Delta Frequency Alarms

4.3. ERCOT 1-Minute Delta Frequency Alarm Counts Time-Distributed Per Month and Per Hour-Type

Figure 30 shows for the last 13 months the number of 1 minute delta-f <= -35 mHz for Eastern and Western and delta-f <= -70 mHz for ERCOT alarms with total number of alarms for each month and each hour-type.

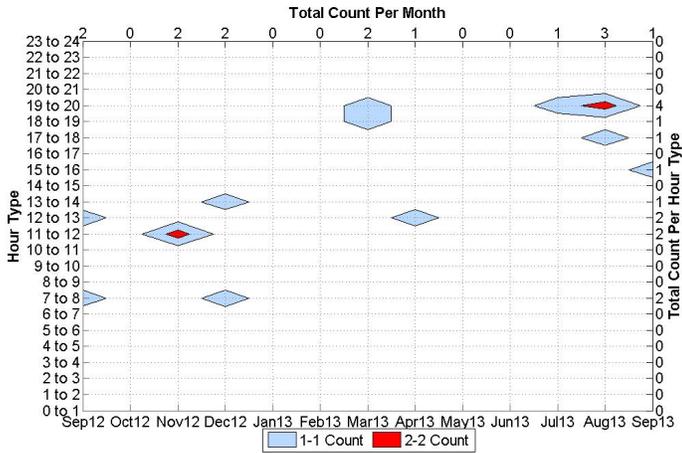
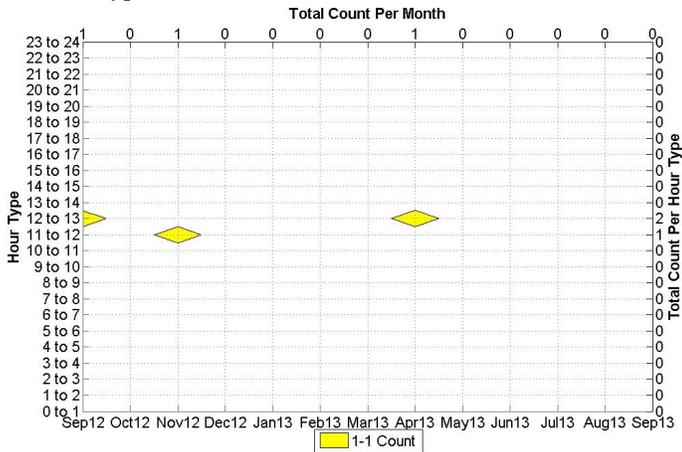


Fig 30 - ERCOT Count For 1 Minute Delta Frequency is LT Threshold Per Month Per Hour Type

4.2.ERCOT 1-Minute Delta Frequency High Alarm Counts Time-Distributed Per Month Per Hour-Type

Figure 31 shows for the last 13 months the number of 1 minute delta-f >= +35 mHz for Eastern and Western and delta-f >= 70 mHz for ERCOT alarms with total number of alarms for each month and each hour-type.



INTERCONNECTIONS MONTHLY RELIABILITY REPORT

WESTERN	18-AUG	16:32:00	18-AUG	22:31:00	60.02	6	7.2
WESTERN	17-AUG	23:01:00	18-AUG	06:32:00	59.98	7	8.4
WESTERN	16-AUG	12:32:00	16-AUG	19:01:00	60.02	7	8.4
WESTERN	15-AUG	11:32:00	15-AUG	19:31:00	60.02	8	9.6
WESTERN	12-AUG	23:33:00	13-AUG	06:02:00	59.98	7	8.4
WESTERN	12-AUG	06:32:00	12-AUG	15:31:00	60.02	9	10.8
WESTERN	9-AUG	13:09:00	9-AUG	18:31:00	60.02	5	6.0
WESTERN	8-AUG	23:31:00	9-AUG	05:02:00	59.98	6	7.2
WESTERN	4-AUG	17:02:00	4-AUG	22:31:00	60.02	5	6.0
WESTERN	3-AUG	14:02:00	3-AUG	18:31:00	60.02	4	4.8
WESTERN	2-AUG	11:37:00	2-AUG	17:31:00	60.02	6	7.2
WESTERN	1-AUG	02:01:00	1-AUG	07:02:00	59.98	5	6.0
WESTERN	30-JUL	12:02:00	30-JUL	17:01:00	60.02	5	6.0
WESTERN	30-JUL	01:01:00	30-JUL	06:32:00	59.98	5	6.0
WESTERN	29-JUL	12:02:00	29-JUL	18:31:00	60.02	6	7.2
WESTERN	29-JUL	00:01:00	29-JUL	03:32:00	59.98	3	3.6
WESTERN	28-JUL	12:02:00	28-JUL	16:01:00	60.02	4	4.8
WESTERN	26-JUL	13:32:00	26-JUL	19:01:00	60.02	6	7.2
WESTERN	25-JUL	19:02:00	25-JUL	23:01:00	60.02	4	4.8
WESTERN	23-JUL	02:01:00	23-JUL	06:32:00	59.98	4	4.8
WESTERN	22-JUL	11:02:00	22-JUL	17:31:00	60.02	6	7.2
WESTERN	21-JUL	10:45:00	21-JUL	11:32:00	59.98	1	1.2
WESTERN	21-JUL	07:40:00	21-JUL	10:43:00	59.98	3	3.6
WESTERN	20-JUL	10:16:00	20-JUL	18:01:00	60.02	8	9.6
WESTERN	18-JUL	19:32:00	19-JUL	00:31:00	60.02	5	6.0
WESTERN	17-JUL	00:31:00	17-JUL	06:32:00	59.98	6	7.2
WESTERN	16-JUL	16:32:00	16-JUL	19:31:00	60.02	3	3.6
WESTERN	14-JUL	20:32:00	15-JUL	01:01:00	60.02	5	6.0
WESTERN	12-JUL	13:32:00	12-JUL	17:31:00	60.02	4	4.8
WESTERN	11-JUL	11:01:00	11-JUL	17:34:00	59.98	6	7.2
WESTERN	4-JUL	22:31:00	5-JUL	05:02:00	59.98	7	8.4
WESTERN	3-JUL	23:31:00	4-JUL	09:32:00	59.98	10	12.0
WESTERN	2-JUL	22:31:00	3-JUL	05:32:00	59.98	7	8.4
WESTERN	2-JUL	00:01:00	2-JUL	06:02:00	59.98	6	7.2
WESTERN	30-JUN	22:02:00	1-JUL	03:01:00	60.02	5	6.0
WESTERN	29-JUN	10:32:00	29-JUN	13:31:00	60.02	3	3.6
WESTERN	27-JUN	14:32:00	27-JUN	22:01:00	60.02	8	9.6
WESTERN	26-JUN	12:23:00	26-JUN	17:01:00	60.02	5	6.0
WESTERN	24-JUN	03:31:00	24-JUN	07:32:00	59.98	4	4.8
WESTERN	23-JUN	13:32:00	23-JUN	20:01:00	60.02	7	8.4
WESTERN	17-JUN	14:32:00	17-JUN	19:01:00	60.02	5	6.0
WESTERN	10-JUN	11:32:00	10-JUN	15:31:00	60.02	4	4.8
WESTERN	7-JUN	13:02:00	7-JUN	19:31:00	60.02	6	7.2
WESTERN	5-JUN	02:31:00	5-JUN	06:32:00	59.98	4	4.8
WESTERN	4-JUN	00:01:00	4-JUN	08:22:00	59.98	8	9.6
WESTERN	1-JUN	02:01:00	1-JUN	08:02:00	59.98	6	7.2
WESTERN	29-MAY	18:31:00	30-MAY	00:02:00	59.98	6	7.2
WESTERN	23-MAY	18:21:00	24-MAY	03:03:00	59.98	9	10.8
WESTERN	21-MAY	23:31:00	22-MAY	04:32:00	59.98	5	6.0
WESTERN	21-MAY	02:31:00	21-MAY	10:02:00	59.98	8	9.6
WESTERN	20-MAY	14:32:00	20-MAY	22:01:00	60.02	8	9.6
WESTERN	17-MAY	19:01:00	18-MAY	02:02:00	59.98	7	8.4
WESTERN	15-MAY	21:01:00	16-MAY	04:32:00	59.98	7	8.4
WESTERN	15-MAY	00:01:00	15-MAY	07:02:00	59.98	7	8.4
WESTERN	14-MAY	02:31:00	14-MAY	05:35:00	59.98	3	3.6
WESTERN	12-MAY	16:32:00	12-MAY	23:01:00	60.02	7	8.4
WESTERN	12-MAY	06:01:00	12-MAY	11:02:00	59.98	5	6.0
WESTERN	11-MAY	14:02:00	11-MAY	23:01:00	60.02	9	10.8
WESTERN	10-MAY	22:31:00	11-MAY	06:32:00	59.98	8	9.6
WESTERN	10-MAY	12:02:00	10-MAY	17:31:00	60.02	5	6.0
WESTERN	9-MAY	01:01:00	9-MAY	05:32:00	59.98	4	4.8
WESTERN	6-MAY	22:01:00	7-MAY	06:32:00	59.98	8	9.6
WESTERN	6-MAY	02:02:00	6-MAY	06:03:00	59.98	4	4.8

WESTERN	4-MAY	07:32:00	4-MAY	12:03:00	59.98	5	6.0
WESTERN	2-MAY	23:02:00	3-MAY	06:03:00	59.98	7	8.4
WESTERN	1-MAY	14:32:00	1-MAY	21:02:00	59.98	7	8.4
WESTERN	28-APR	18:33:00	28-APR	23:02:00	60.02	5	6.0
WESTERN	27-APR	04:06:00	27-APR	09:03:00	59.98	5	6.0
WESTERN	26-APR	08:33:00	26-APR	16:32:00	60.02	8	9.6
WESTERN	25-APR	16:32:00	26-APR	02:33:00	59.98	10	12.0
WESTERN	24-APR	20:32:00	25-APR	07:33:00	59.98	11	13.2
WESTERN	21-APR	15:33:00	21-APR	23:32:00	60.02	8	9.6
WESTERN	19-APR	23:02:00	20-APR	05:33:00	59.98	6	7.2
WESTERN	18-APR	04:03:00	18-APR	17:02:00	60.02	13	15.6
WESTERN	17-APR	10:48:00	17-APR	13:02:00	60.02	3	3.6
WESTERN	17-APR	06:02:00	17-APR	10:47:00	60.02	4	4.8
WESTERN	14-APR	15:31:00	14-APR	20:33:00	59.98	5	6.0
WESTERN	13-APR	13:31:00	13-APR	18:32:00	59.98	5	6.0
WESTERN	11-APR	19:01:00	12-APR	02:32:00	59.98	7	8.4
WESTERN	9-APR	15:02:00	9-APR	20:33:00	59.98	5	6.0
WESTERN	6-APR	07:02:00	6-APR	16:33:00	59.98	9	10.8
WESTERN	4-APR	22:32:00	5-APR	07:33:00	59.98	9	10.8
WESTERN	4-APR	00:02:00	4-APR	07:03:00	59.98	7	8.4
WESTERN	31-MAR	23:31:00	1-APR	05:32:00	59.98	6	7.2
WESTERN	28-MAR	08:03:00	28-MAR	16:32:00	60.02	8	9.6
WESTERN	26-MAR	21:03:00	27-MAR	00:32:00	60.02	3	3.6
WESTERN	24-MAR	16:32:00	24-MAR	21:03:00	59.98	5	6.0
WESTERN	23-MAR	22:33:00	24-MAR	03:02:00	60.02	5	6.0
WESTERN	19-MAR	04:02:00	19-MAR	12:01:00	60.02	8	9.6
WESTERN	13-MAR	23:37:00	14-MAR	05:32:00	59.98	6	7.2
WESTERN	11-MAR	17:32:00	12-MAR	00:01:00	60.02	7	8.4
WESTERN	5-MAR	19:02:00	5-MAR	23:01:00	60.02	4	4.8
WESTERN	4-MAR	19:02:00	5-MAR	00:01:00	60.02	5	6.0
WESTERN	3-MAR	19:32:00	3-MAR	23:01:00	60.02	4	4.8
WESTERN	25-FEB	20:02:00	26-FEB	00:01:00	60.02	4	4.8
WESTERN	23-FEB	19:02:00	24-FEB	01:02:00	60.02	6	7.2
WESTERN	21-FEB	19:02:00	22-FEB	00:01:00	60.02	5	6.0
WESTERN	16-FEB	11:31:00	16-FEB	16:32:00	59.98	5	6.0
WESTERN	12-FEB	05:01:00	12-FEB	09:02:00	59.98	4	4.8
WESTERN	11-FEB	13:31:00	11-FEB	17:32:00	59.98	4	4.8
WESTERN	10-FEB	15:31:00	10-FEB	19:02:00	59.98	4	4.8
WESTERN	6-FEB	13:31:00	6-FEB	18:02:00	59.98	5	6.0
WESTERN	4-FEB	19:02:00	4-FEB	22:01:00	60.02	3	3.6
WESTERN	2-FEB	11:02:00	2-FEB	15:01:00	60.02	4	4.8
WESTERN	29-JAN	04:01:00	29-JAN	08:32:00	59.98	4	4.8
WESTERN	28-JAN	05:32:00	28-JAN	12:31:00	60.02	7	8.4
WESTERN	26-JAN	10:32:00	26-JAN	22:01:00	60.02	12	14.4
WESTERN	24-JAN	23:31:00	25-JAN	04:32:00	59.98	5	6.0
WESTERN	23-JAN	23:01:00	24-JAN	05:36:00	59.98	6	7.2
WESTERN	21-JAN	01:01:00	21-JAN	05:02:00	59.98	4	4.8
WESTERN	20-JAN	07:32:00	20-JAN	12:31:00	60.02	5	6.0
WESTERN	18-JAN	14:31:00	18-JAN	20:32:00	59.98	6	7.2
WESTERN	17-JAN	01:01:00	17-JAN	05:32:00	59.98	4	4.8
WESTERN	15-JAN	02:50:00	15-JAN	07:02:00	59.98	5	6.0
WESTERN	12-JAN	11:31:00	12-JAN	18:32:00	59.98	7	8.4
WESTERN	11-JAN	07:32:00	11-JAN	12:01:00	60.02	5	6.0
WESTERN	10-JAN	18:32:00	10-JAN	22:31:00	60.02	4	4.8
WESTERN	10-JAN	00:31:00	10-JAN	05:02:00	59.98	5	6.0
WESTERN	8-JAN	20:01:00	9-JAN	03:02:00	59.98	7	8.4
WESTERN	8-JAN	00:01:00	8-JAN	06:32:00	59.98	6	7.2
WESTERN	7-JAN	08:32:00	7-JAN	14:01:00	60.02	6	7.2
WESTERN	3-JAN	13:31:00	3-JAN	18:02:00	59.98	5	6.0
WESTERN	2-JAN	09:02:00	2-JAN	13:01:00	60.02	4	4.8

-----Footnotes-----

1. NERC Reliability Coordinators Working Group, "Guideline for Operating State Alert Levels," Response to August 2003 Blackout Recommendation, May 22, 2007.
2. Please note that an emergency state results when load is dropped, and hence no performance metrics data is presented.