

# Utilization of NERC-FMA for Events Frequency Response Calculation and Analysis

**Frequency Response Events Editor**

Interconnection Selection: Eastern, Western, ERCOT, Quebec

Frequency/ACE Range: Frequency Range (Hz To Hz), Net ACE Total Range (MW To MW)

Source Name: ALL, **VOLU-FQ**, CALY-FQ, FARR-FQ

Time Frame Selection: Start Date/Time (Wed, Aug 01, 2007 12:00:00 AM), End Date/Time (Fri, Aug 24, 2007 11:59:00 PM)

Get Events

Frequency Points: T - 5, to, T + 60

2007/08/24 03:50:14 VOLU-FQ  
 2007/08/23 16:30:54 VOLU-FQ  
 2007/08/22 12:06:59 VOLU-FQ  
 2007/08/15 23:27:00 VOLU-FQ  
 2007/08/10 01:58:17 VOLU-FQ  
 2007/08/10 00:57:41 VOLU-FQ  
 2007/08/06 13:11:24 VOLU-FQ  
**2007/08/04 17:44:17 VOLU-FQ**  
 2007/08/03 12:39:29 VOLU-FQ

A

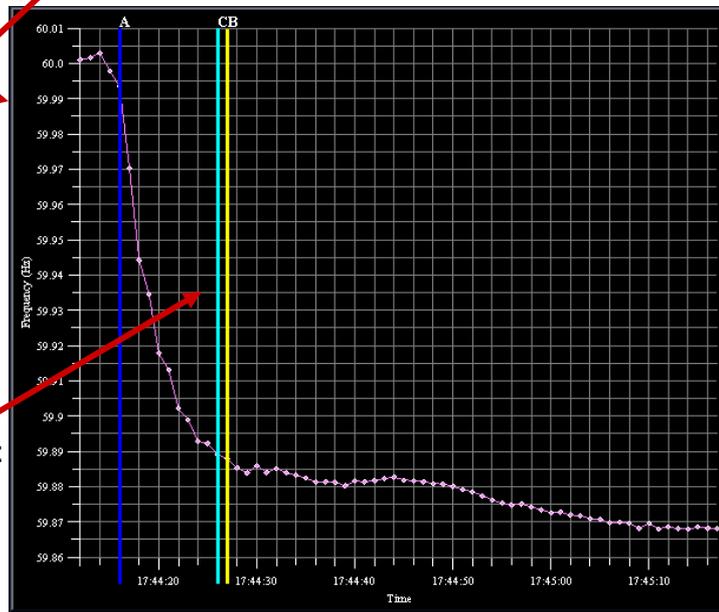
Events Phasor Data Collection

August Events Collected From Archive

August 4th 17:44 Event Selected

B

Interactive Events Analysis



Lines to Adjust Location of Points A, B and C

**FREQUENCY RESPONSE CALCULATION**

PMU Location: VOLU-FQ

Actual Net Interchange Immediately Before Disturbance (Point A) \*: -25 MW

Actual Net Interchange Immediately After Disturbance (Point B) \*: 4318 MW

Change in Net Interchange: 4343 MW

Generation (-) lost Causing the Disturbance \*: 7629 MW

Interconnection Response: -3286 MW

Change in Interconnection Frequency from Point A to Point B: -0.113 Hz

**Frequency Response: 2908 MW / 0.1 Hz**

Event Status \*:  Valid

**OTHER INFORMATION**

Frequency Bias Values: -6756 MW / 0.1 Hz

Frequency at Point A: 59.994 Hz

Frequency at Point B: 59.888 Hz

Frequency at Point C: 59.889 Hz

Avg. Frequency at Point A: 60.001 Hz

C

Events Frequency Response Results

2908 MW/0.1Hz VS NERC-RS Estimate of 3000