# Intelligent Alarms Criteria and Thresholds Summary
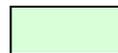
| Intelligent Alarm Type | Criteria For Alarming | Alarm Time Window | Frequency Threshold (East) | Frequency Threshold (West) | Frequency Threshold (ERCOT) |
|---|---|---|---|---|---|
| FTL Low | Interconnection Frequency Lower than FTL-Low for More Than 5-Minutes | > 5 Minutes | 59.950 | 59.932 | 59.930 |
| FTL High | Interconnection Frequency Greater than FTL-High for More Than 5-Minutes | > 5 Minutes | 60.050 | 60.070 | 60.090 |
| FAL Low | Exceeding Frequency Threshold | 1 Minute | 59.908 | 59.80 | 59.622 |
| FAL High | Exceeding Frequency Threshold | 1 Minute | 60.020 | 60.200 | 60.372 |
| FRL Low | Exceeding Frequency Threshold | 1 Minute | 59.820 | 59.500 | 59.300 |
| FRL High | Exceeding Frequency Threshold | 1 Minute | 60.180 | 60.500 | 60.700 |
| Prolong (DCS Equiv.) | If after a Short Term Alarm, Frequency Does Not Cross Schedule or Pre-Event Frequency In less Than 20 Minutes (DCS) | > 20-Minutes | Scheduled or Pre-Event Frequency | Scheduled or Pre-Event Frequency | Scheduled or Pre-Event Frequency |
| Long Term Low | Average Frequency Deviation Greater than 30mHz for More Than 60 Continuous Minutes | > 60 Minutes | -0.030 | -0.030 | -0.030 |
| Long Term High | Average Frequency Deviation Less than -30mHz for More Than 60 Min | > 60 Minutes | 0.030 | 0.030 | 0.030 |
| Short Term High | Interconnection Frequency 1-Minute Change Greater Than 0.035 Hz | 1 Minute | 0.035 | 0.035 | 0.035 |
| Short Term Low | Interconnection Frequency 1-Minute Change Lower Than -0.035 Hz | 1 Minute | -0.035 | -0.035 | -0.035 |

**Primary Control Alert**  **Secondary Control Alert**  **Tertiary Control Alert**