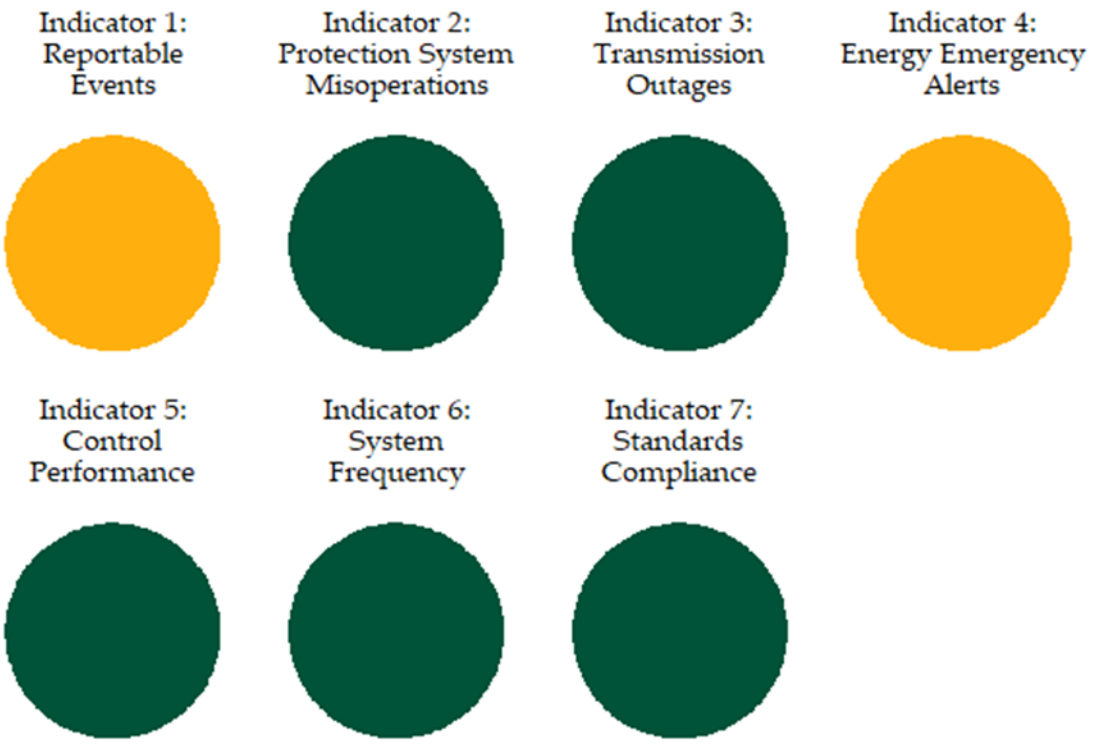
Reliability and Security Dashboard

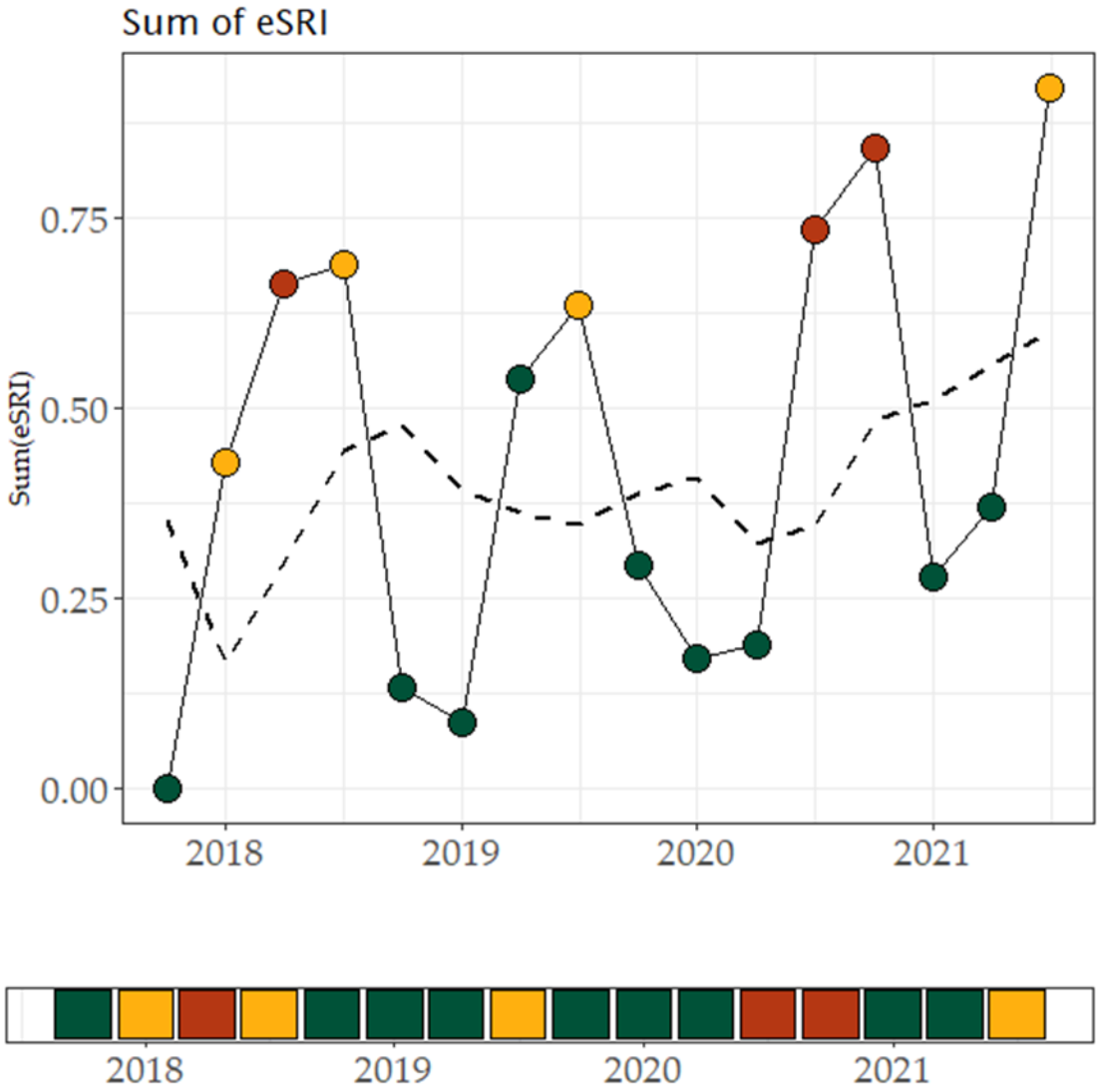
Reliability Risk Management

February 23, 2022

Quarter 3 2021 Dashboard



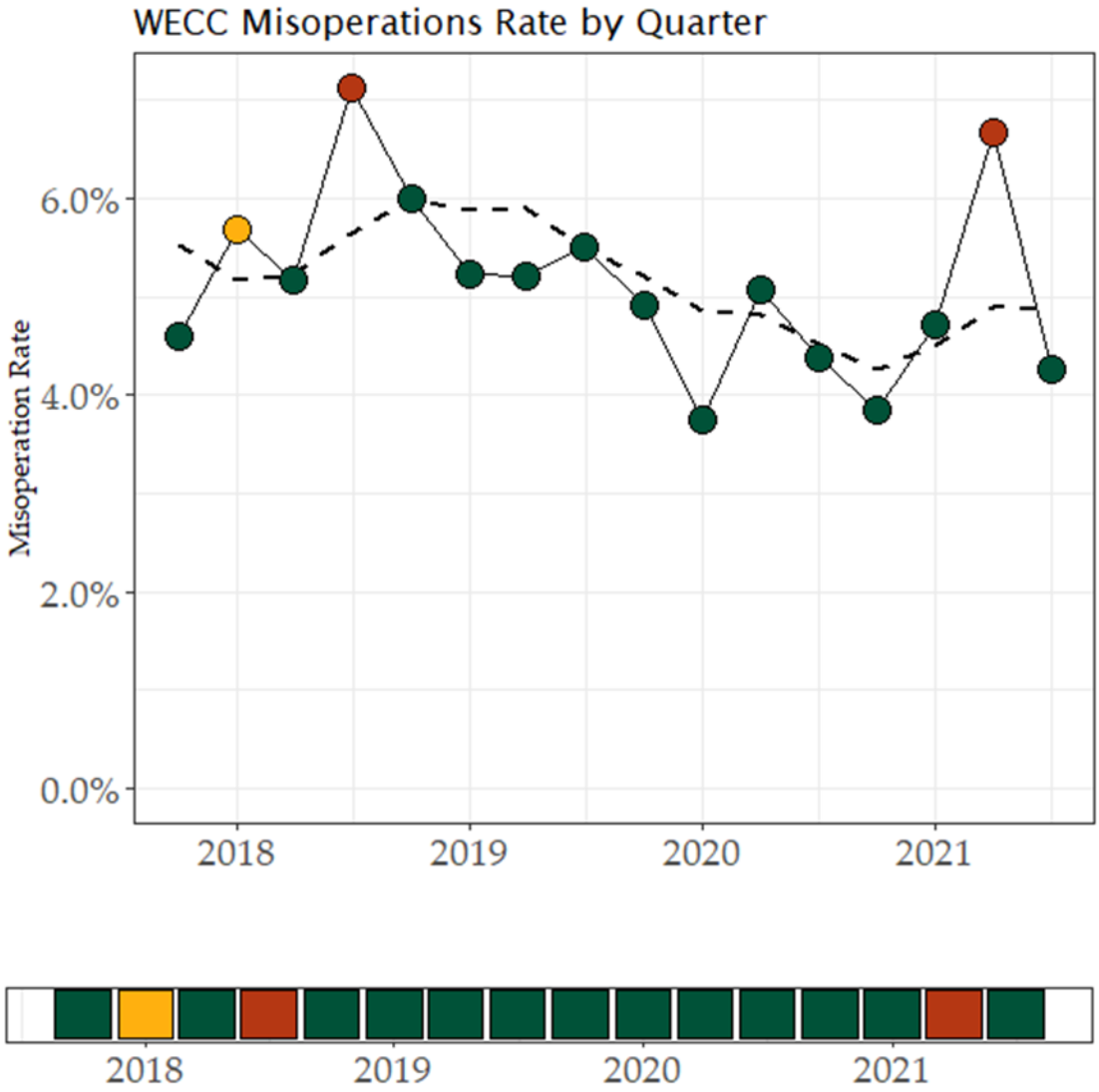
Indicator 1



Quarterly Evaluation

There were no Category 2 or higher events in the third quarter of 2021, but the eSRI total was unusually greater than the average of the four quarters up to and including that quarter. Consequently, the status of this indicator is "yellow". The eSRI total was based on eleven different events in that quarter, three of which were related to momentary cessation of inverter resources and another two involved the tripping of 500 kV lines due to failed or misoperated equipment. WECC and NERC are currently developing a Disturbance Report for the multiple solar PV disturbances in CAISO that occurred between June and August of 2021.

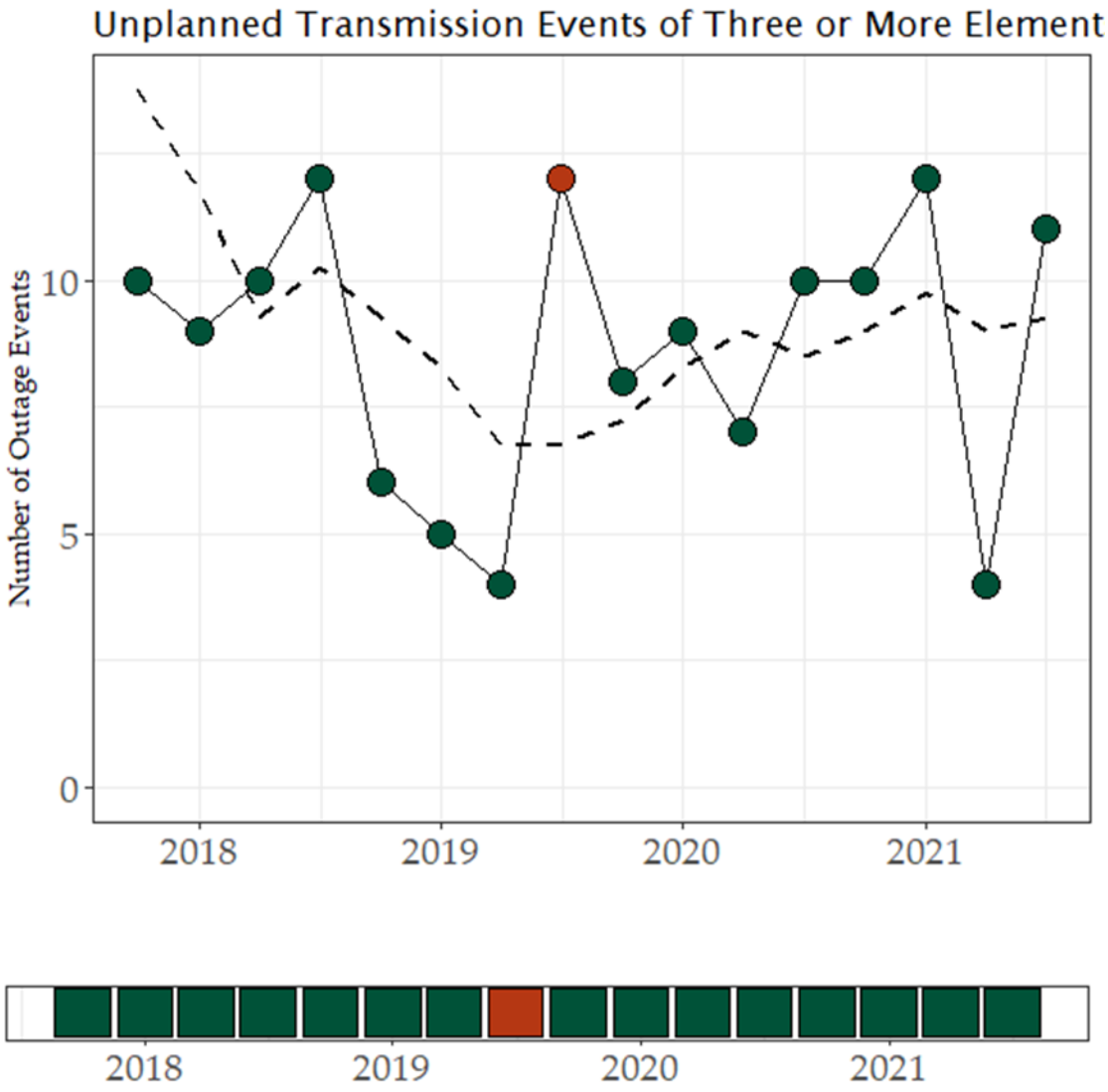
Indicator 2



Quarterly Evaluation

The misoperation rate in the third quarter of 2021 returned a low value that is typical of most of the last three years. Consequently, this indicator is “green.” Note that the misoperation rate in WECC has been consistently lower than the NERC 5-year average since 2017. Trends indicate that misoperations currently do not pose a high risk to system reliability.

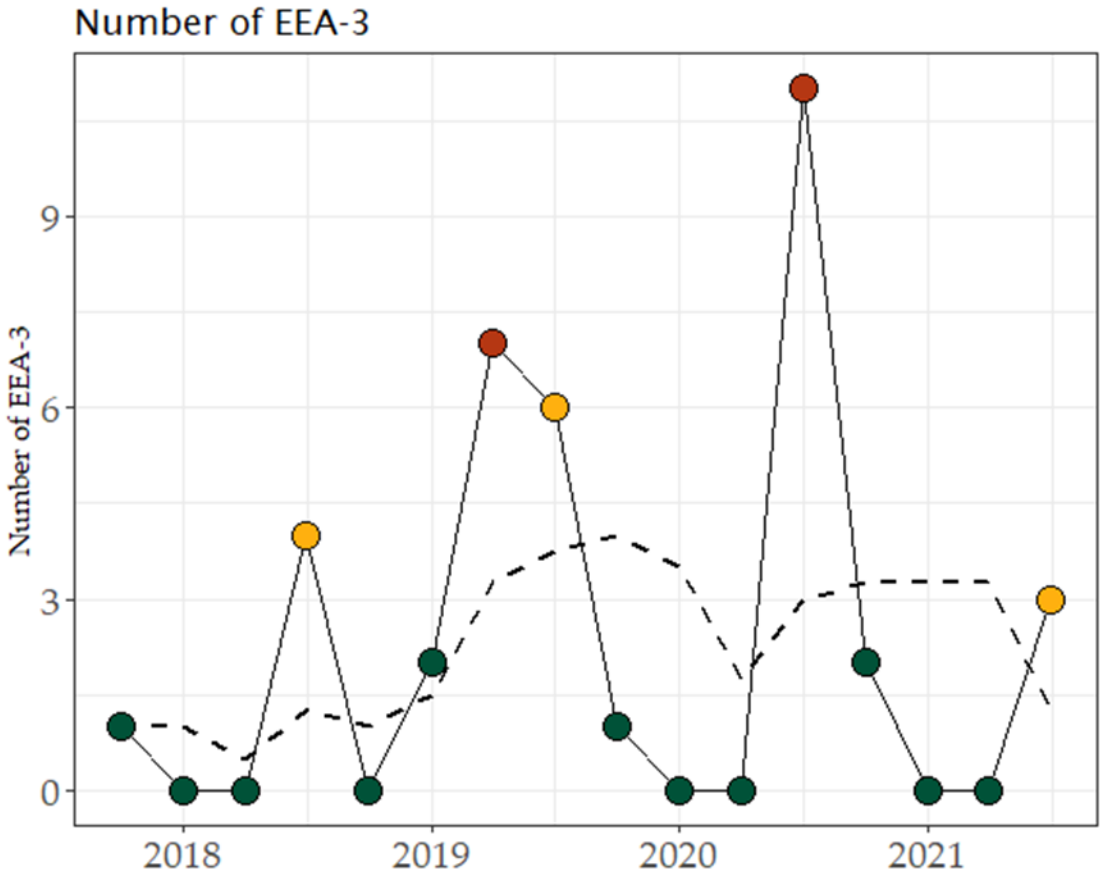
Indicator 3

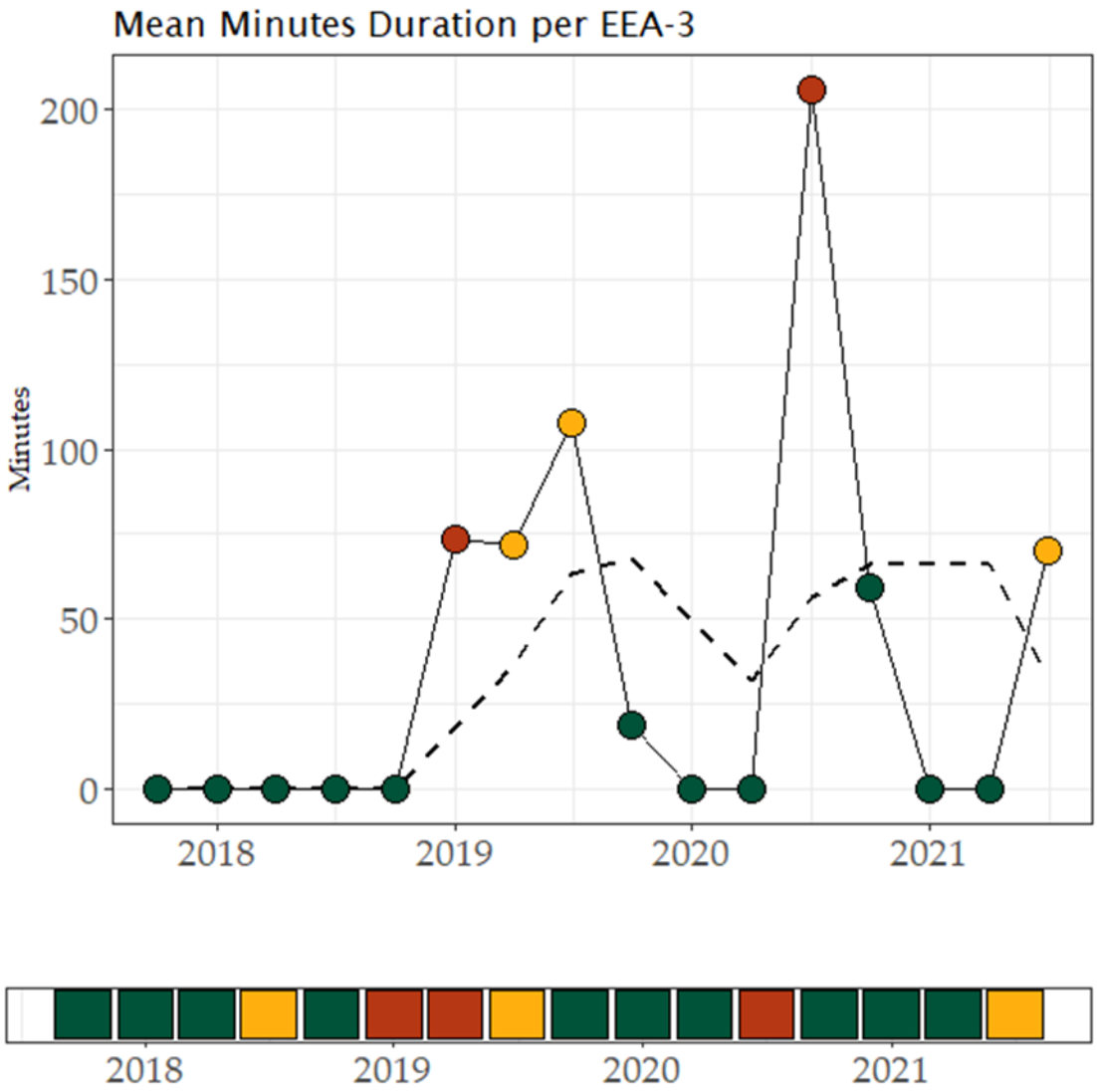


Quarterly Evaluation

Although the number of unplanned transmission events of three or more elements was slightly above the rolling average in Q3 of 2021, the number was not high enough to trigger concern. Consequently, Q3 is considered "green" for this indicator. The current number of unplanned transmission outages involving three or more elements does not currently pose a high risk to system reliability.

Indicator 4

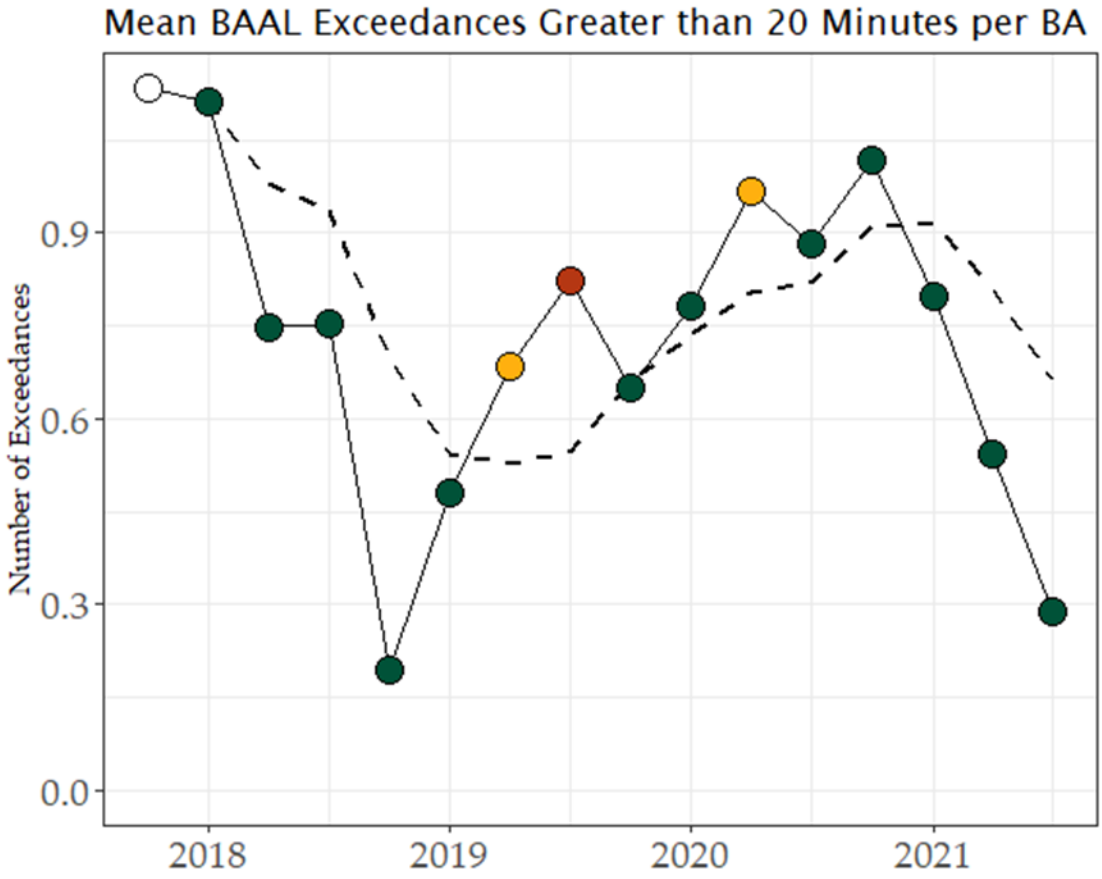


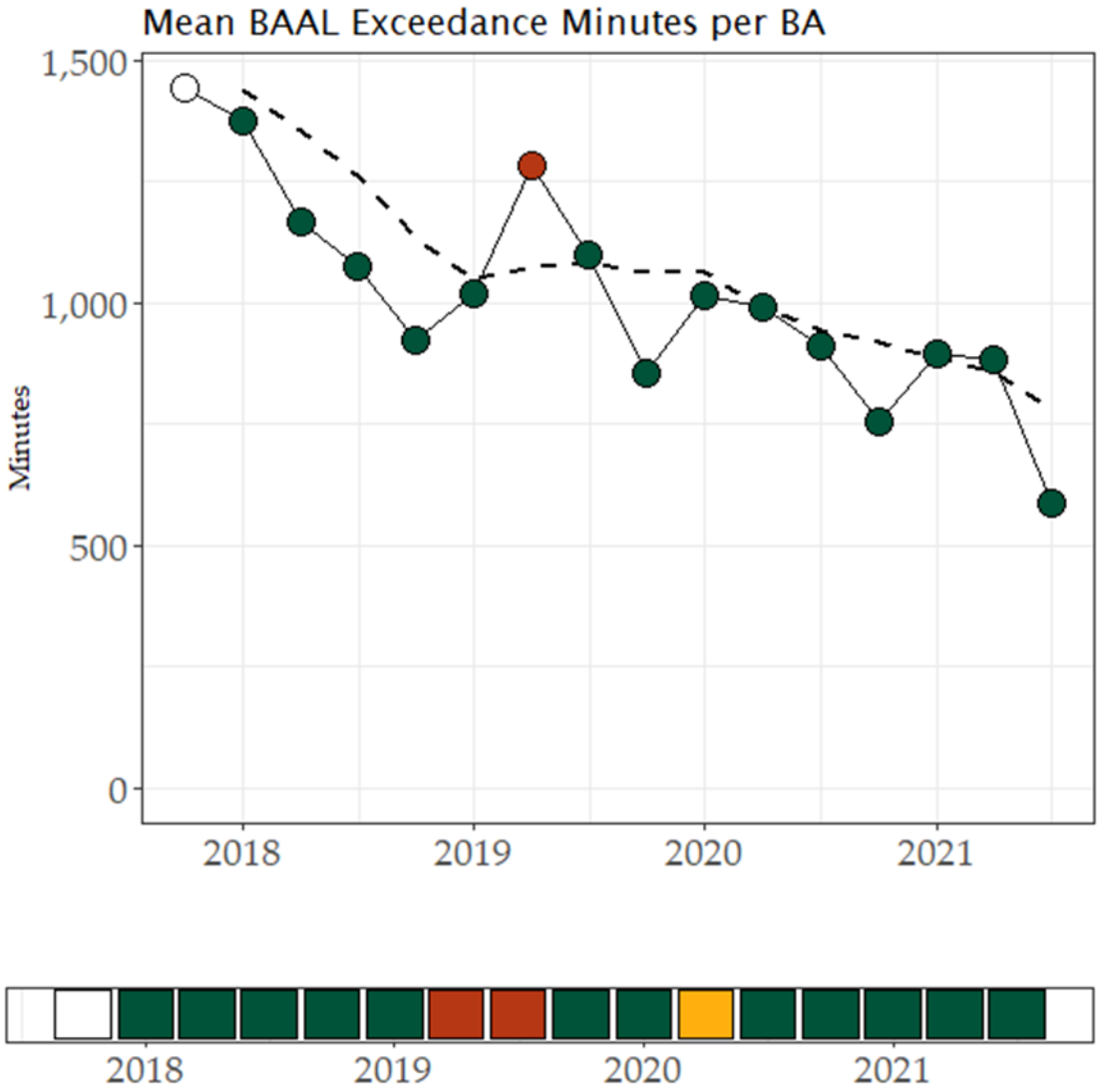


Quarterly Evaluation

After two quarters without any EEA-3 events, Q3 had three. The indicator is classified "yellow," not because of the number of alerts alone, but also because of the average duration of the series of alerts associated with each EEA-3, (70 minutes). All three EEA-3 events for the quarter were a direct result of the Bootleg Fire which relayed three major 500 KV lines, creating a Potential Open Loop for WECC and a reduction to Total Transfer Capability values for the Pacific DC Intertie. Fortunately, the affected BAs were all able to operate through the event without shedding firm load.

Indicator 5

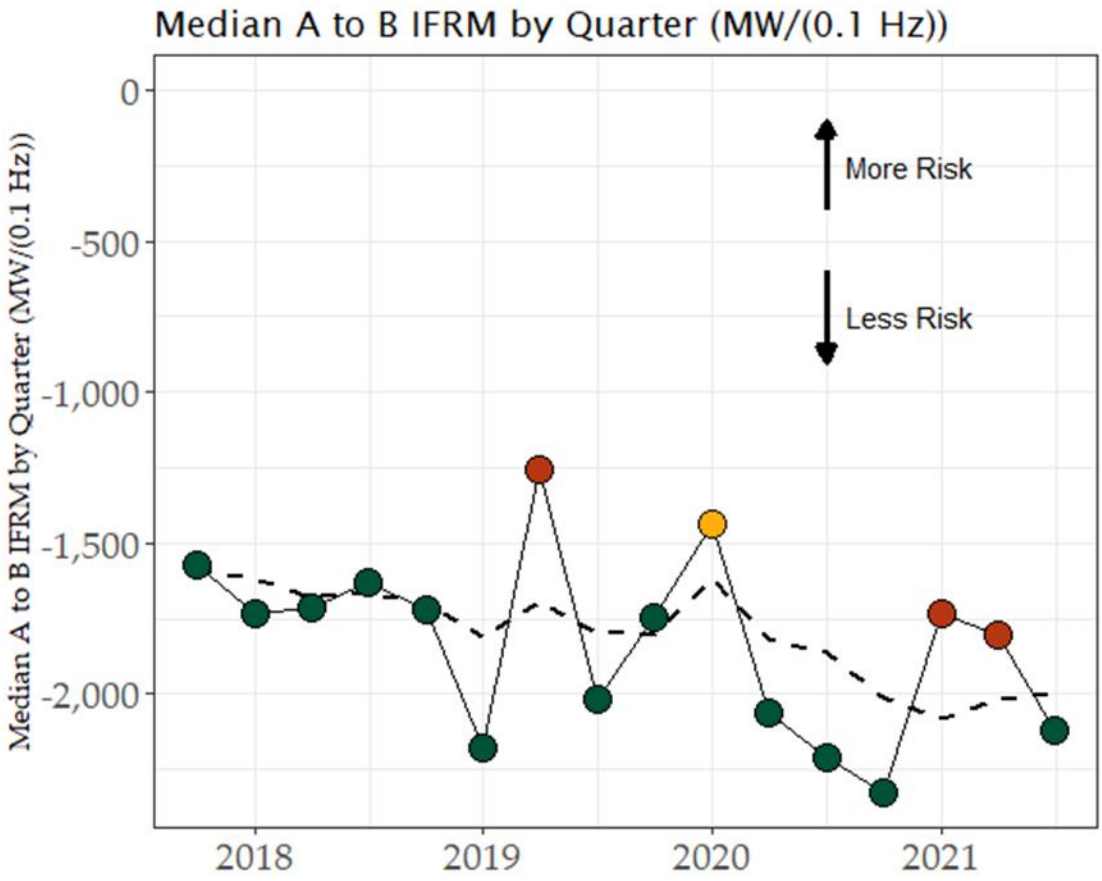

Mean BAAL Exceedances Greater than 20 Minutes per BA
Number of Exceedances
0.0
0.3
0.6
0.9
2018
2019
2020
2021

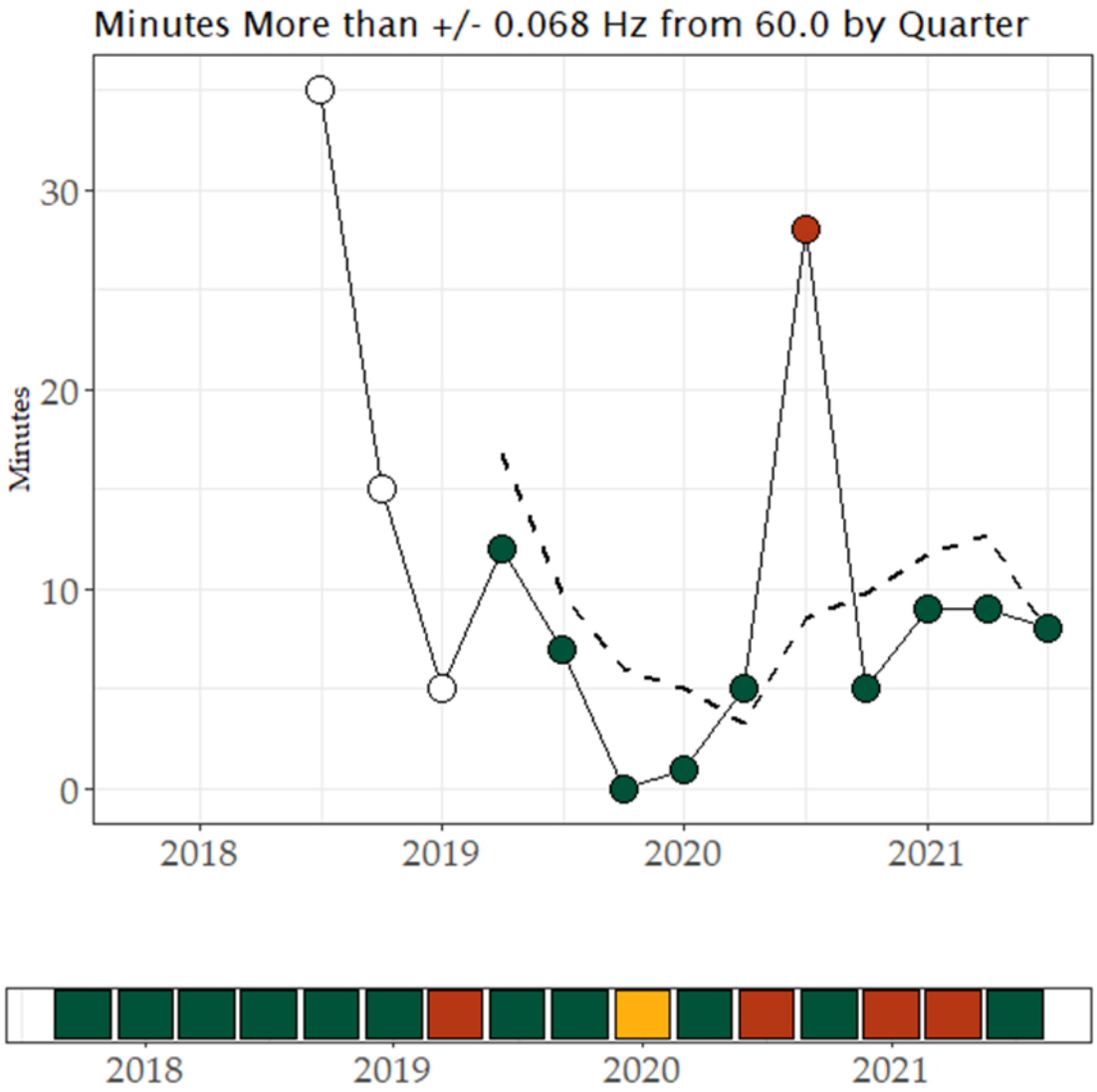


Quarterly Evaluation

The number of BAAL exceedances greater than 20 minutes, and the total duration of those exceedances are both lower than the rolling average in Q3 of 2021. Consequently, this indicator is classified as “green.” This indicates that entities are currently operating the system within frequency limits.

Indicator 6

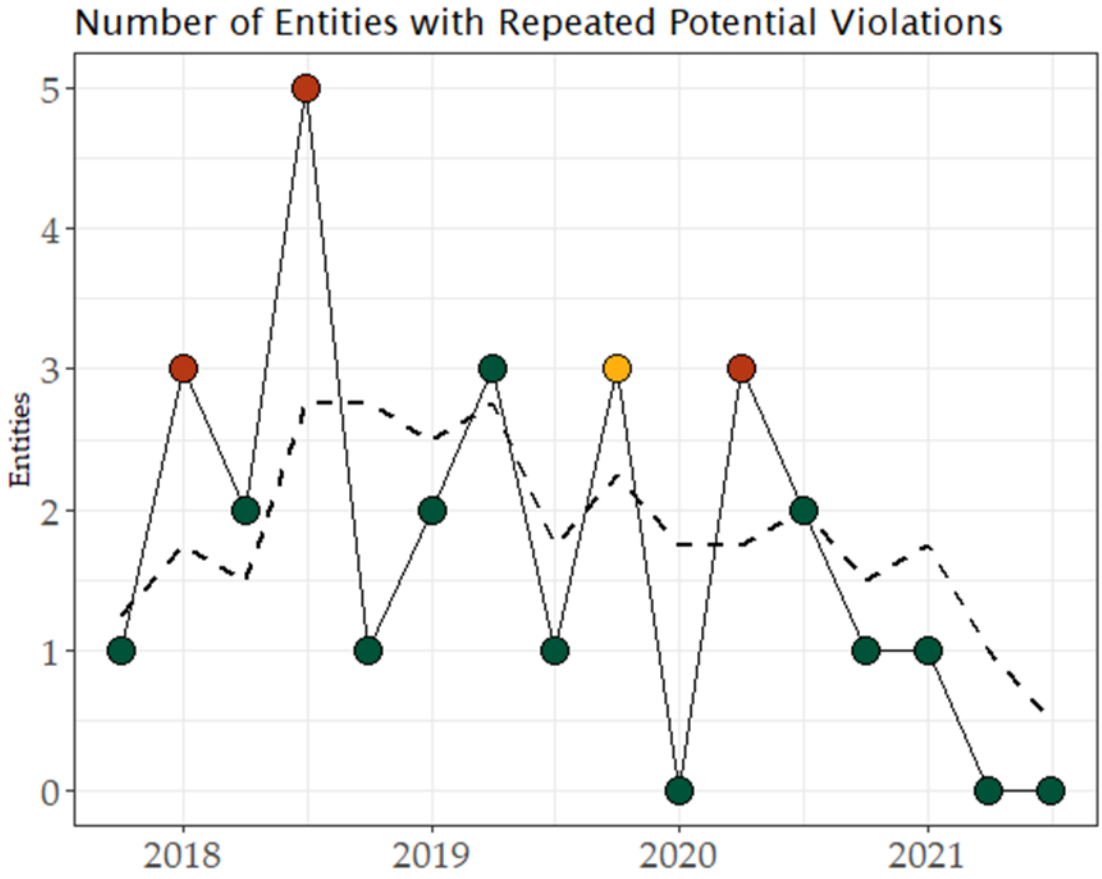

Median A to B IFRM by Quarter (MW/(0.1 Hz))
Median A to B IFRM by Quarter (MW/(0.1 Hz))
0
-500
-1,000
-1,500
-2,000
2018
2019
2020
2021
More Risk
Less Risk

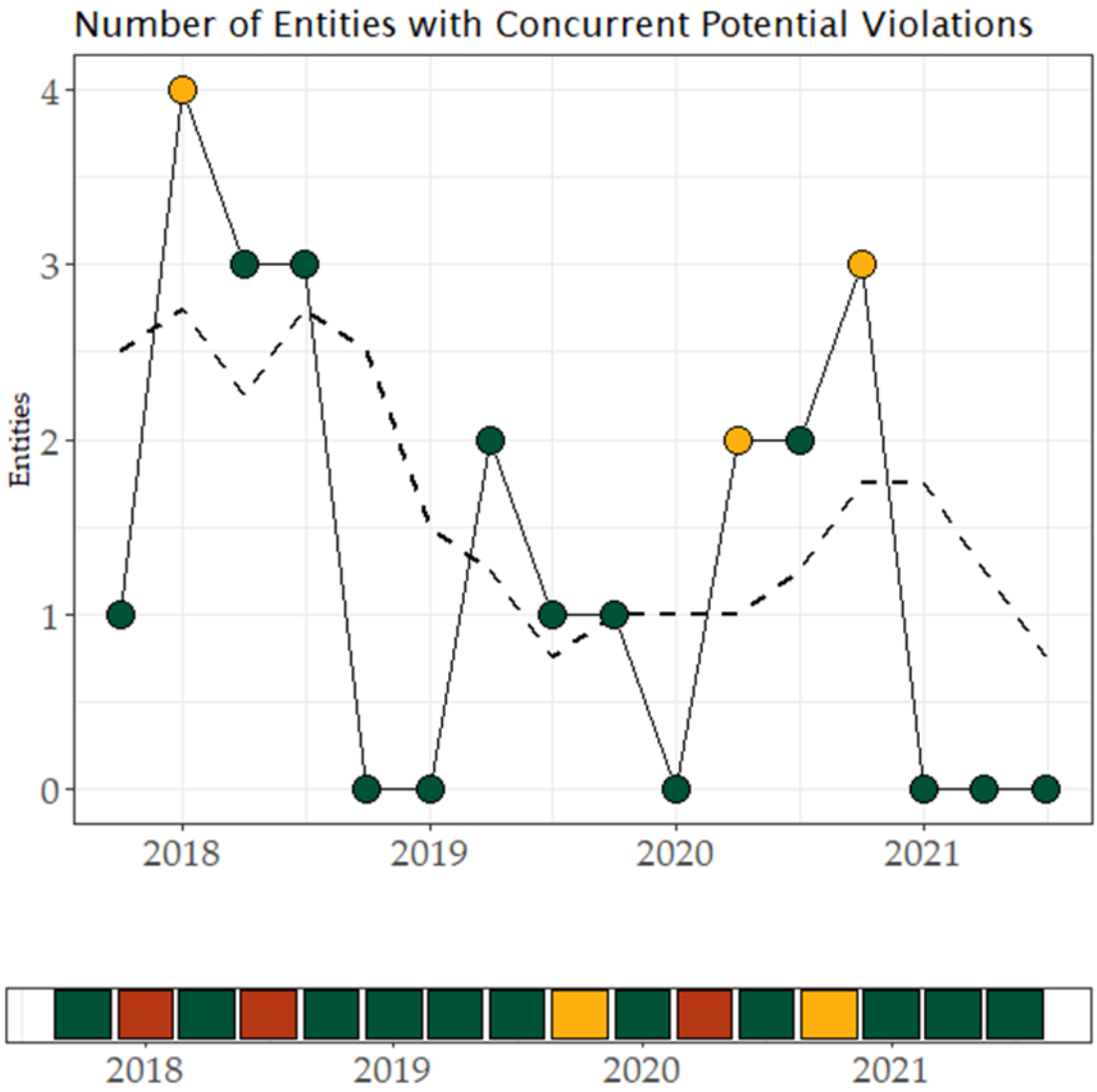


Quarterly Evaluation

The frequency response metric (median IFRM) in Q3 2021 was better than the rolling average, and the frequency performance metric (number of minutes more than +/- 0.068 Hz from 60 Hz) was approximately equal to the rolling average. Consequently, this indicator is classified as “green.” These trends indicate that the system is adequately maintaining system frequency and responding to large disturbances

Indicator 7


Number of Entities with Repeated Potential Violations
Entities
5
4
3
2
1
0
2018
2019
2020
2021



Quarterly Evaluation

The number of entities with repeated or concurrent violations was zero for Q3 of 2021. Consequently, this indicator is classified as "green." Systemic or programmatic violations currently do not pose a high reliability risk.