

Reliability and Security Dashboard

Reliability Risk Management

February 9, 2023

Quarter 3 2022 Dashboard

Indicator 1:
Reportable
Events



Indicator 2:
Protection System
Misoperations



Indicator 3:
Transmission
Outages



Indicator 4:
Energy Emergency
Alerts



Indicator 5:
Operation
Outside BAAL



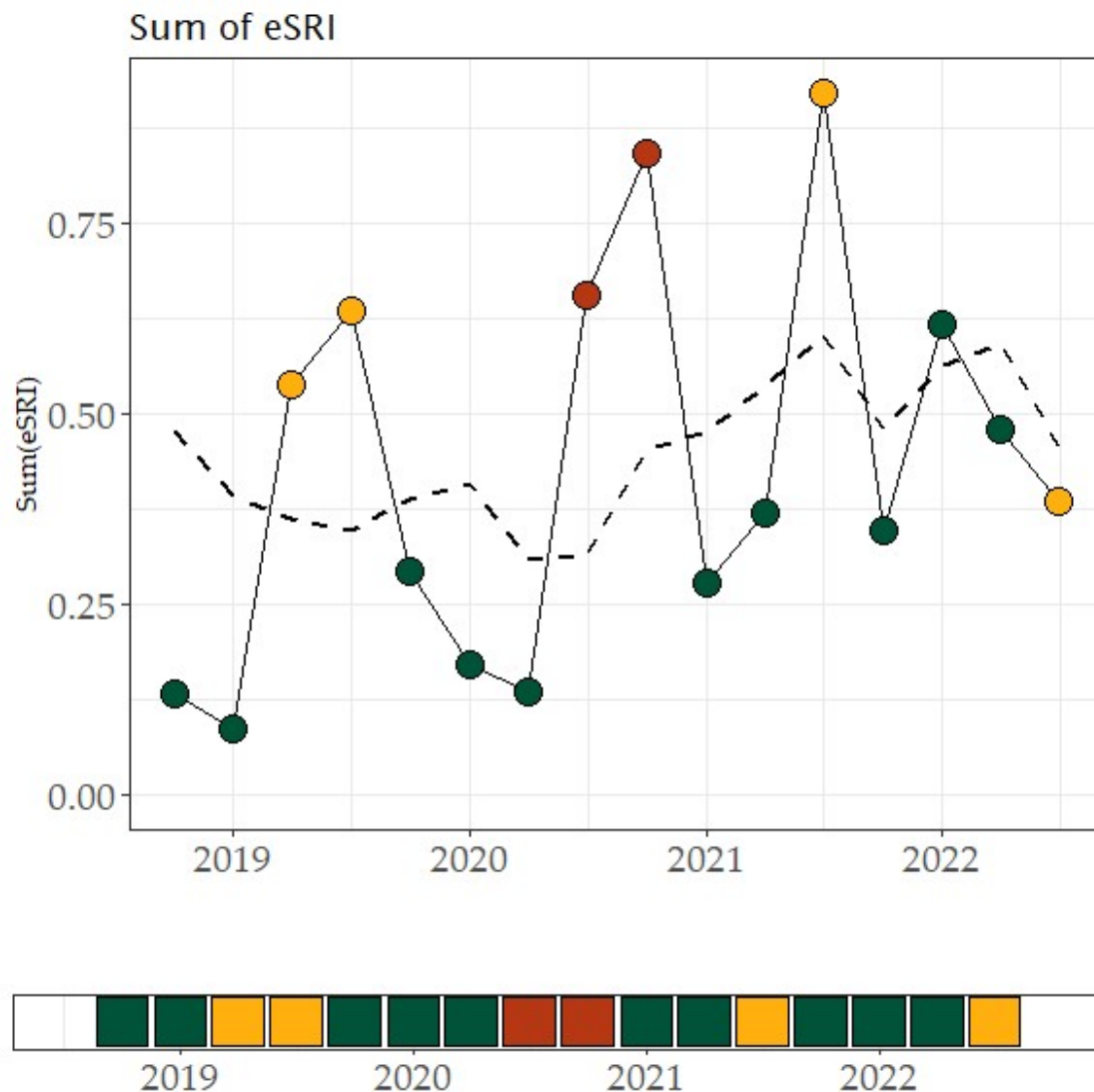
Indicator 6:
System
Frequency



Indicator 7:
Standards
Compliance



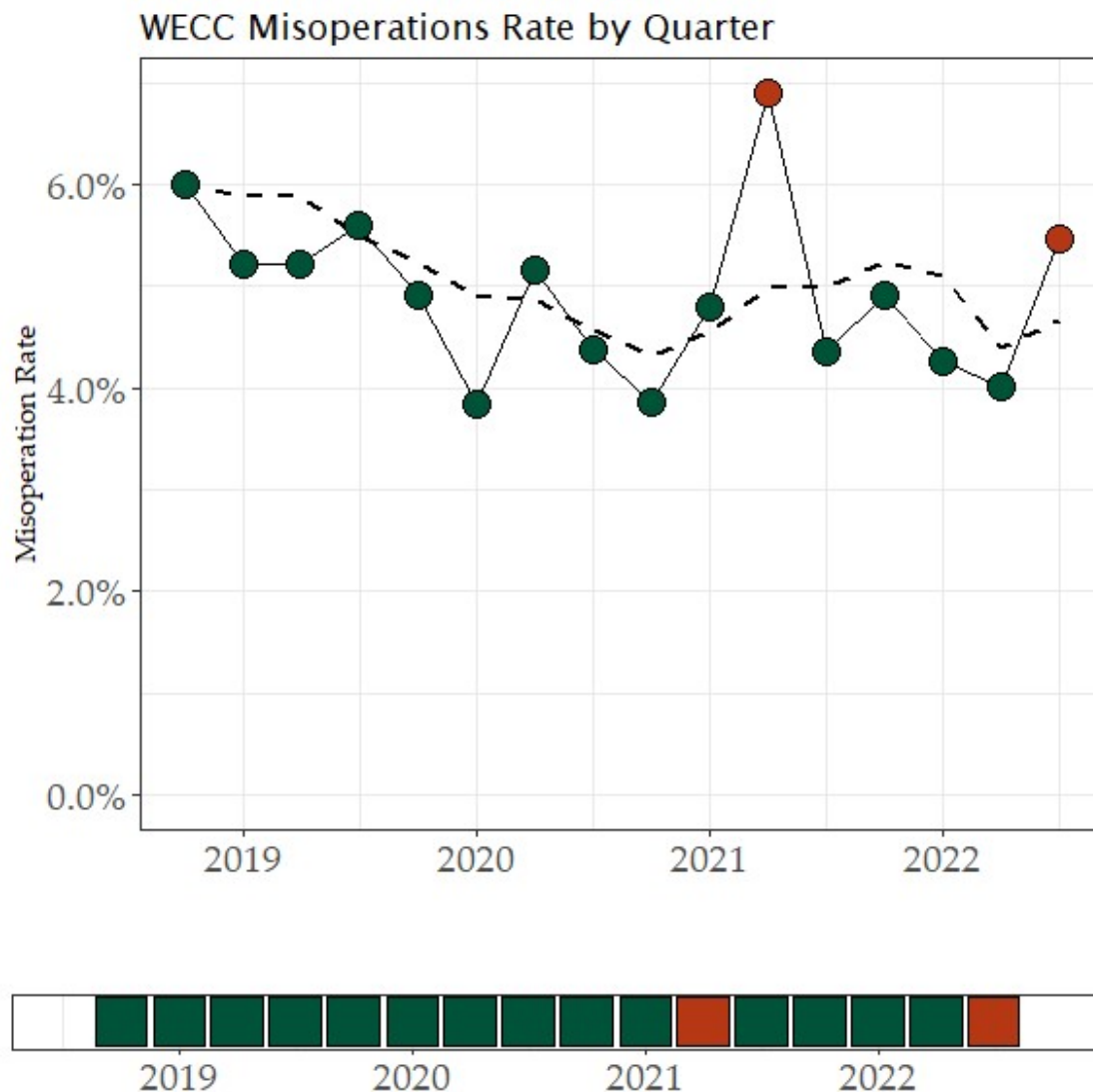
Indicator 1



Quarterly Evaluation

There were eight brief reports submitted for events in Q3. All were Category 1a events, except for a 2a event. For the Category 1a events, three had generation impacts and two resulted in customer load loss. The Category 2a is the first Category-2-level event within the Western Interconnection in 2022. The 2a event occurred when both the primary and alternate interpersonal communications became unavailable in a control center for over 30 minutes. While this is a situation we don't want to see, its effect on the stability of the BES is less than the other Category-2-level criterion. Even though the sum(eSRI) was not particularly high over the entire quarter, the existence of even a single Category 2 event is an automatic yellow.

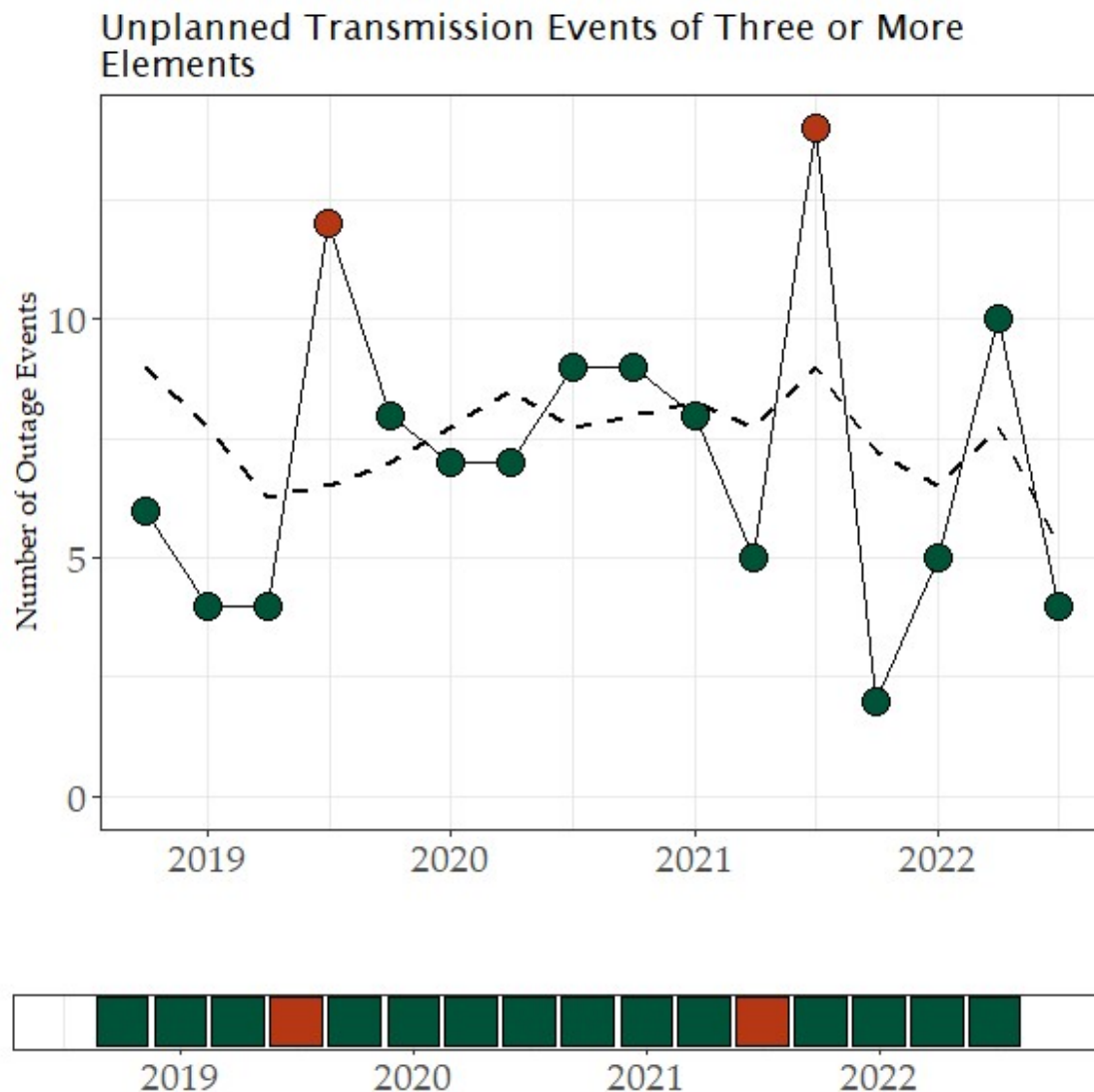
Indicator 2



Quarterly Evaluation

Quarter 3 had the highest number of misoperations reported in the past three years with a typical number of operations seen for that same time frame. Due to the way the misoperations rate is calculated, this results in a higher rate than recent quarters. Looking into the data, a noticeable increase in the misoperation categories of relay failures/malfunctions and unknown cause/unexplainable misoperations was reported in Q3. These are both categories the Relay Work Group has identified as areas where improvements may be achievable and has dedicated efforts to help reduce misoperations. Even with this quarter's uptick, the rate still looks very good, and efforts to improve the rate are ongoing.

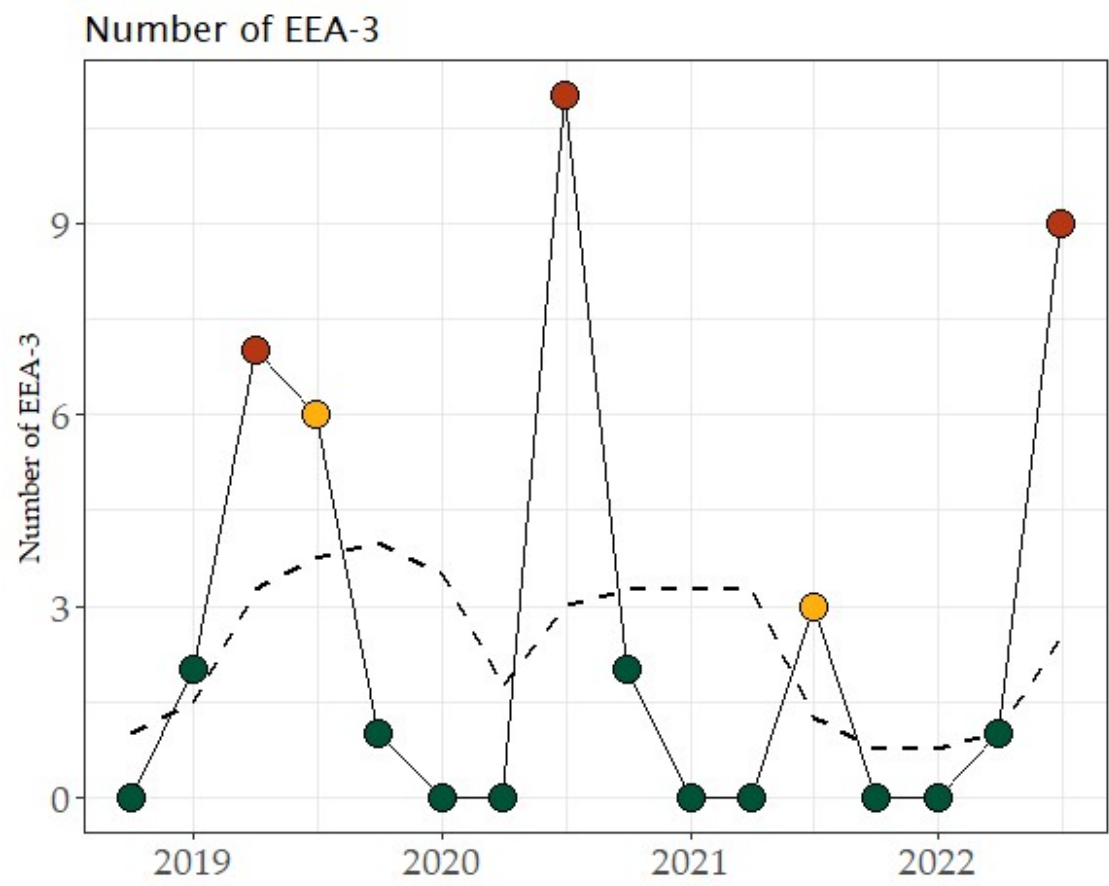
Indicator 3



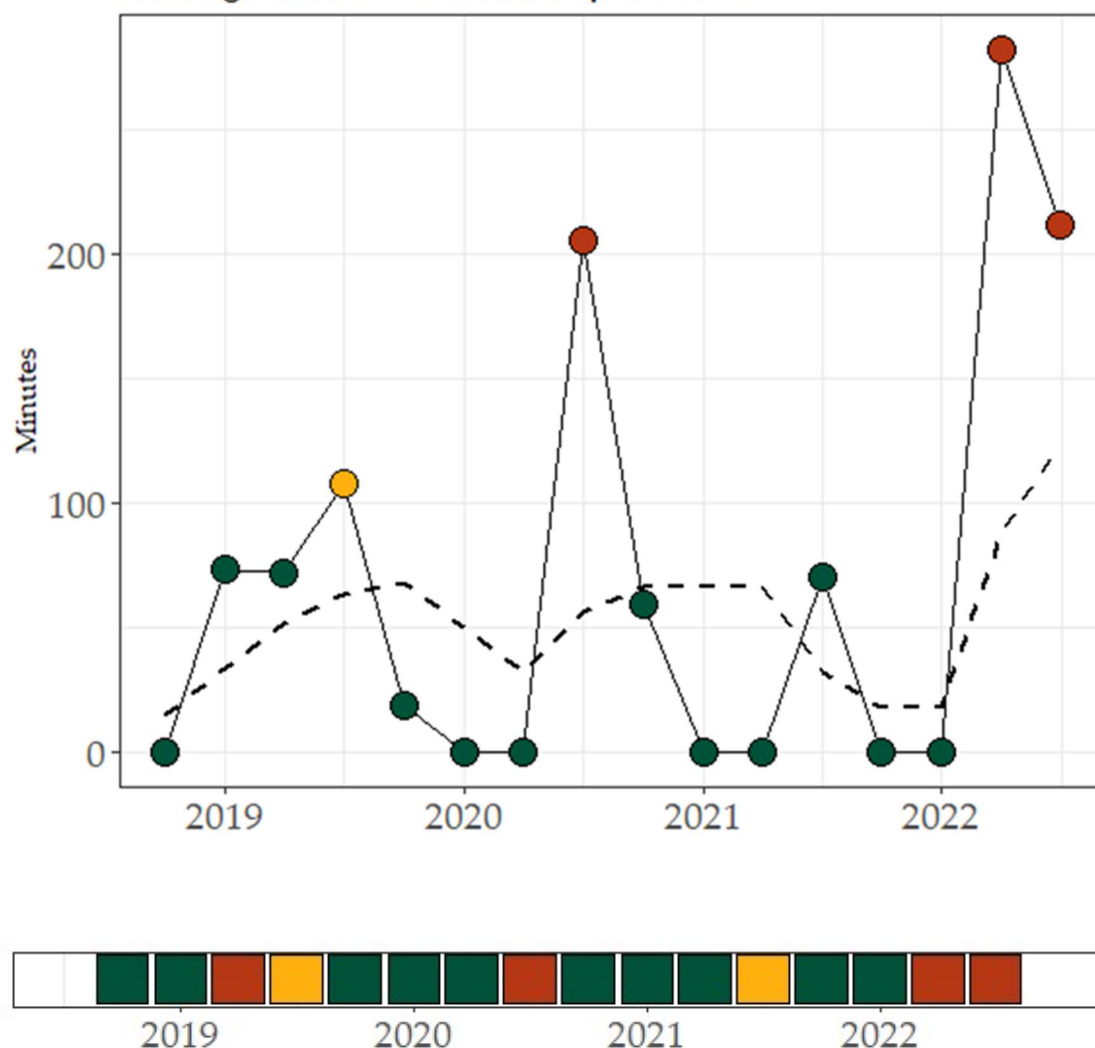
Quarterly Evaluation

There were four unplanned transmission events involving three or more elements reported in Q3 of 2022. However, due to an unexpected issue with a planned update to the Transmission Availability Data System (TADS), TADS Q3 reporting, which was originally due November 15, 2022, has been extended to match Q4 reporting and the overall end-of-year reporting deadline of February 15, 2023. Therefore, reporting of Q3 unplanned transmission events may not be accurate and complete until early 2023. With the events that have been reported, Q3 is considered “green” for this indicator, as the quarter is below the rolling average.

Indicator 4



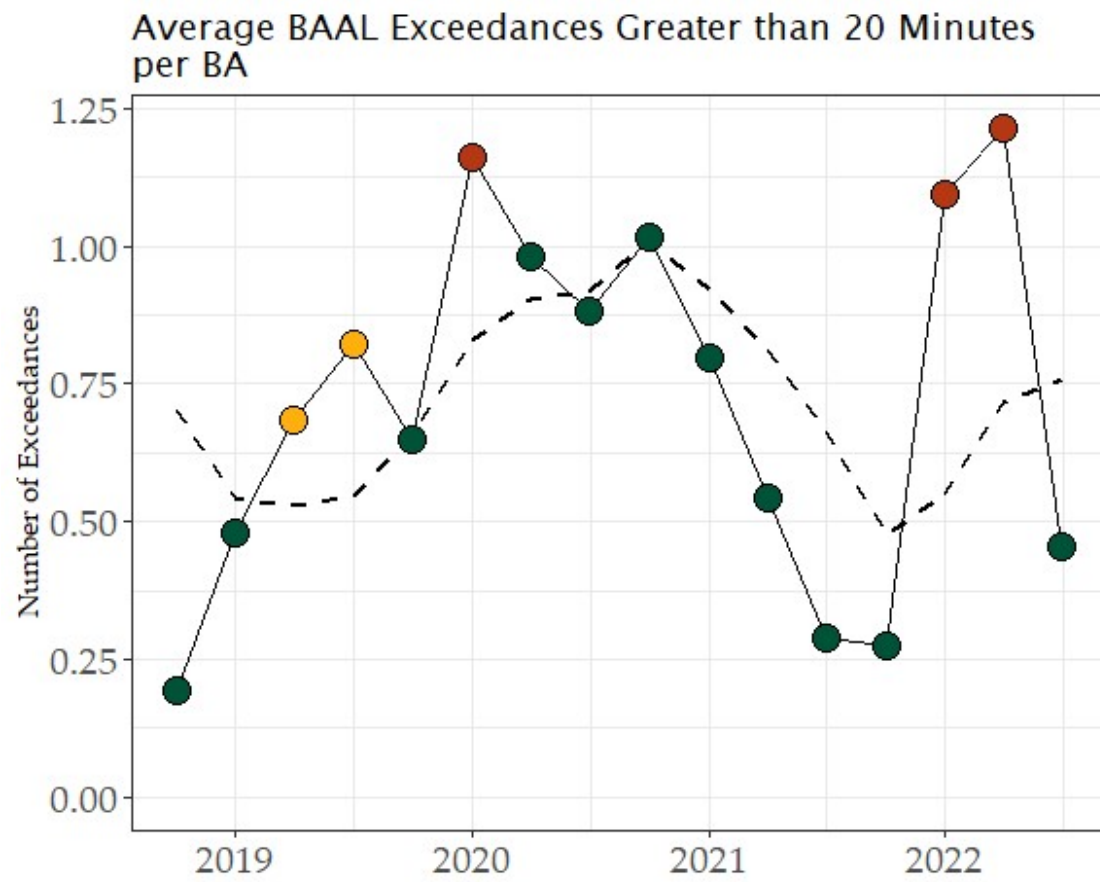
Average Minutes Duration per EEA-3

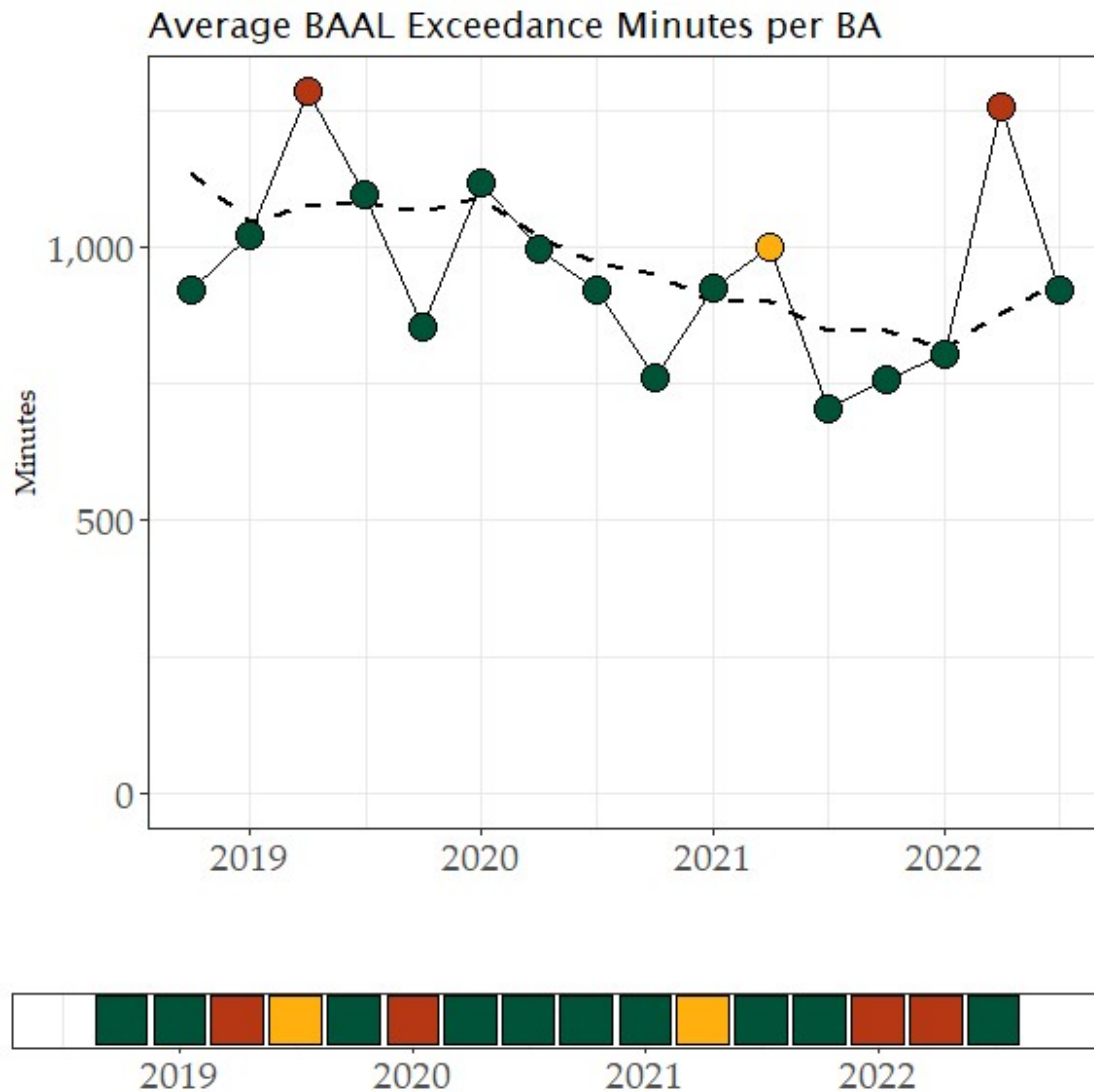


Quarterly Evaluation

The second quarter of 2022 had one EEA-3 event in which a large loss of online gas generation led a BA to shed 410 MW of firm load. This single event lasted for 282 minutes, resulting in a “red” classification for Q2. The third quarter of 2022 had nine EEA-3 with an average duration of 212 minutes, resulting in a “red” classification for Q3, as well. This was mainly due to the extreme heat wave event that lasted for 11 days in September. The Western Interconnection experienced a new high load demand, causing requests for energy conservation, use of demand-side management programs, and shortages of real-time generation that required Balancing Authorities to request assistance from others. Balancing Authorities were able to operate throughout the event without shedding any firm load.

Indicator 5

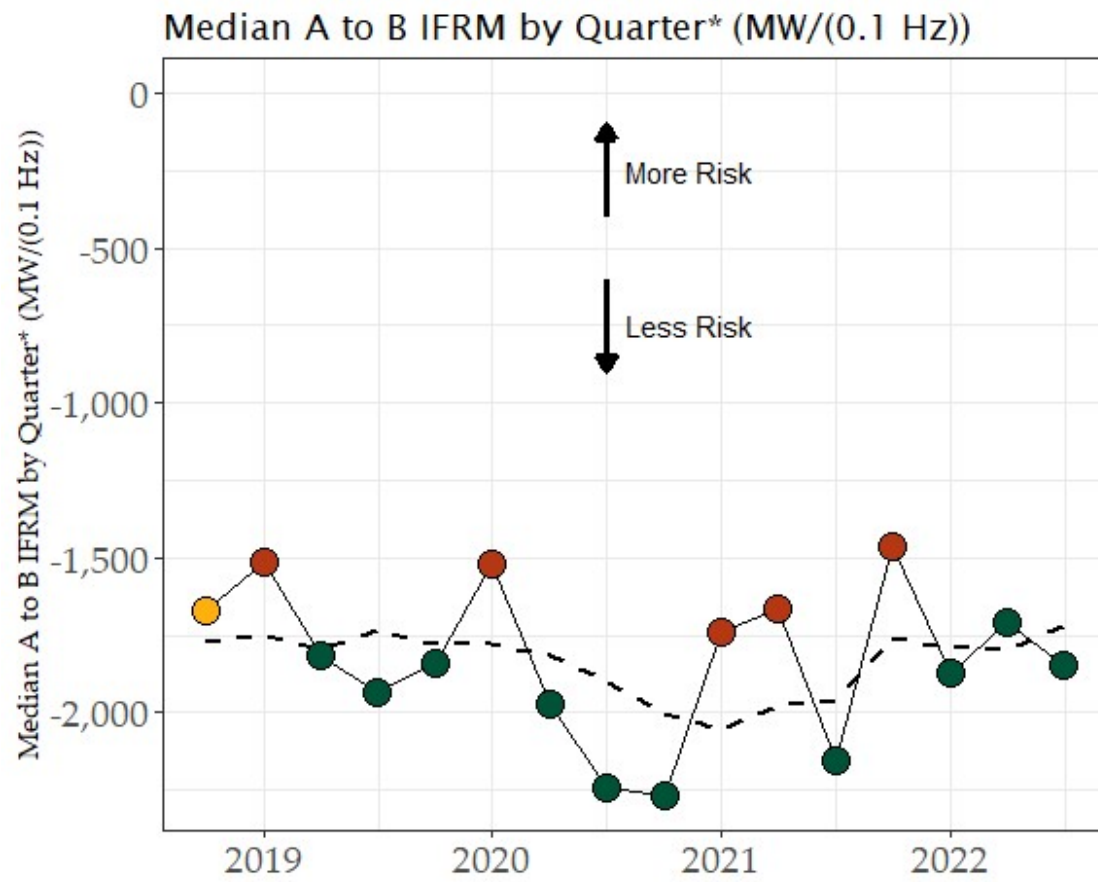


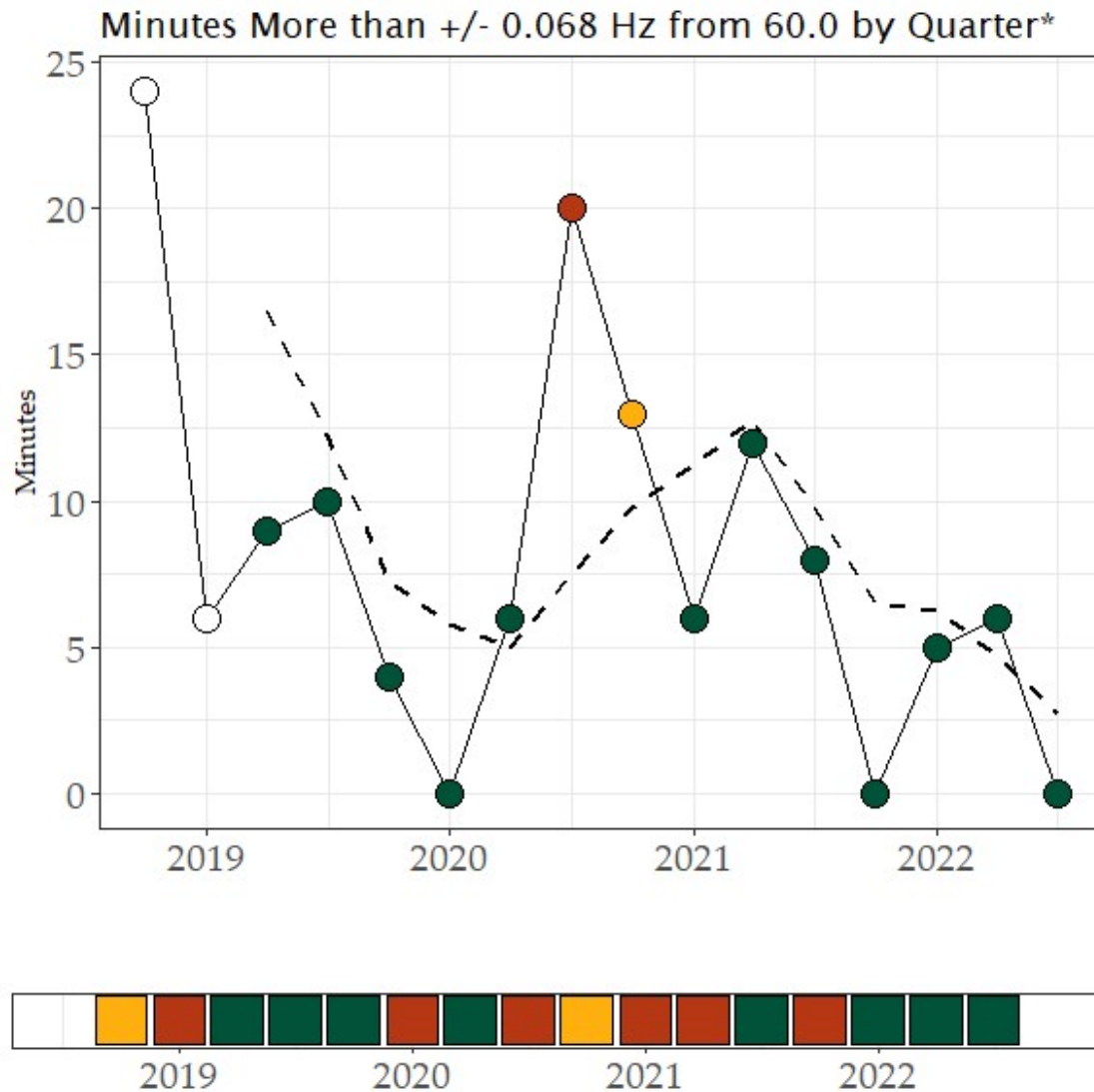


Quarterly Evaluation

The number of BAAL exceedances greater than 20 minutes, as well as the average duration of all exceedances, were at or below the running averages for those metrics. This is an indicator that Balancing Authorities are maintaining system frequency within predefined limits. Consequently, Indicator 5 is “green” for Q3 2022.

Indicator 6



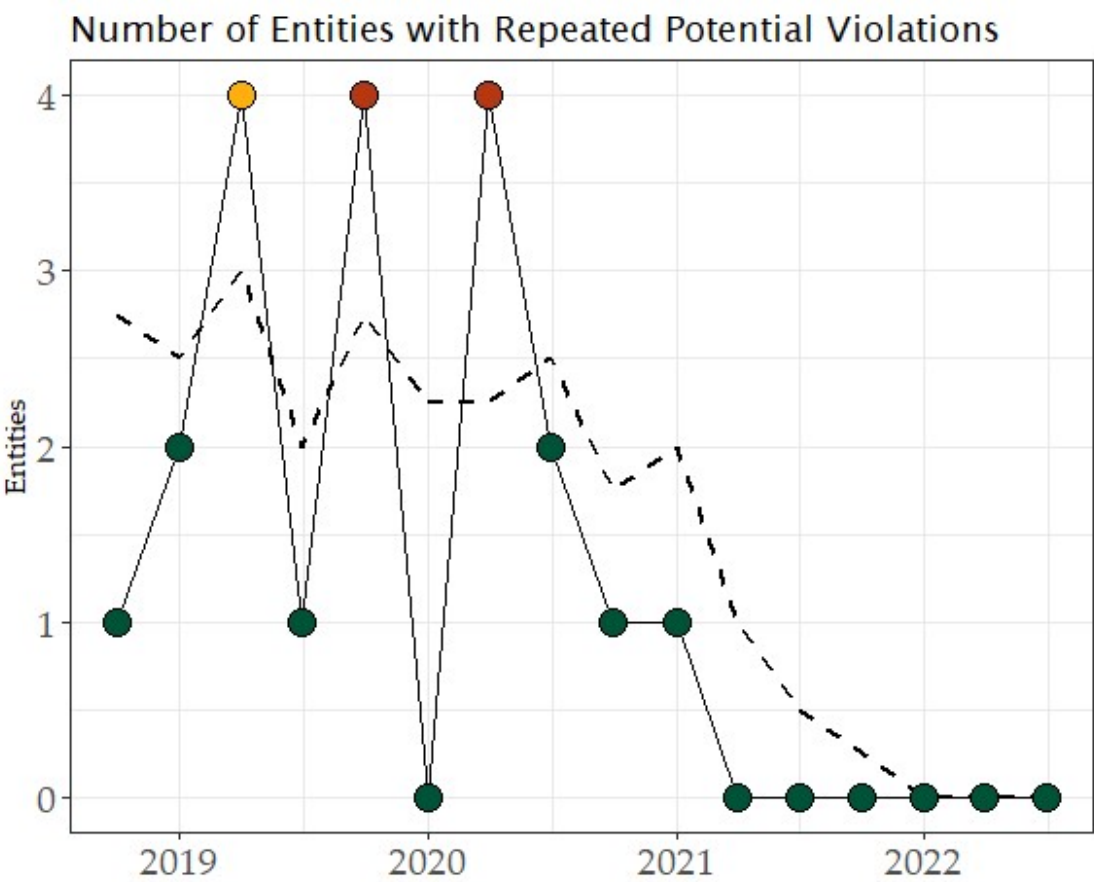


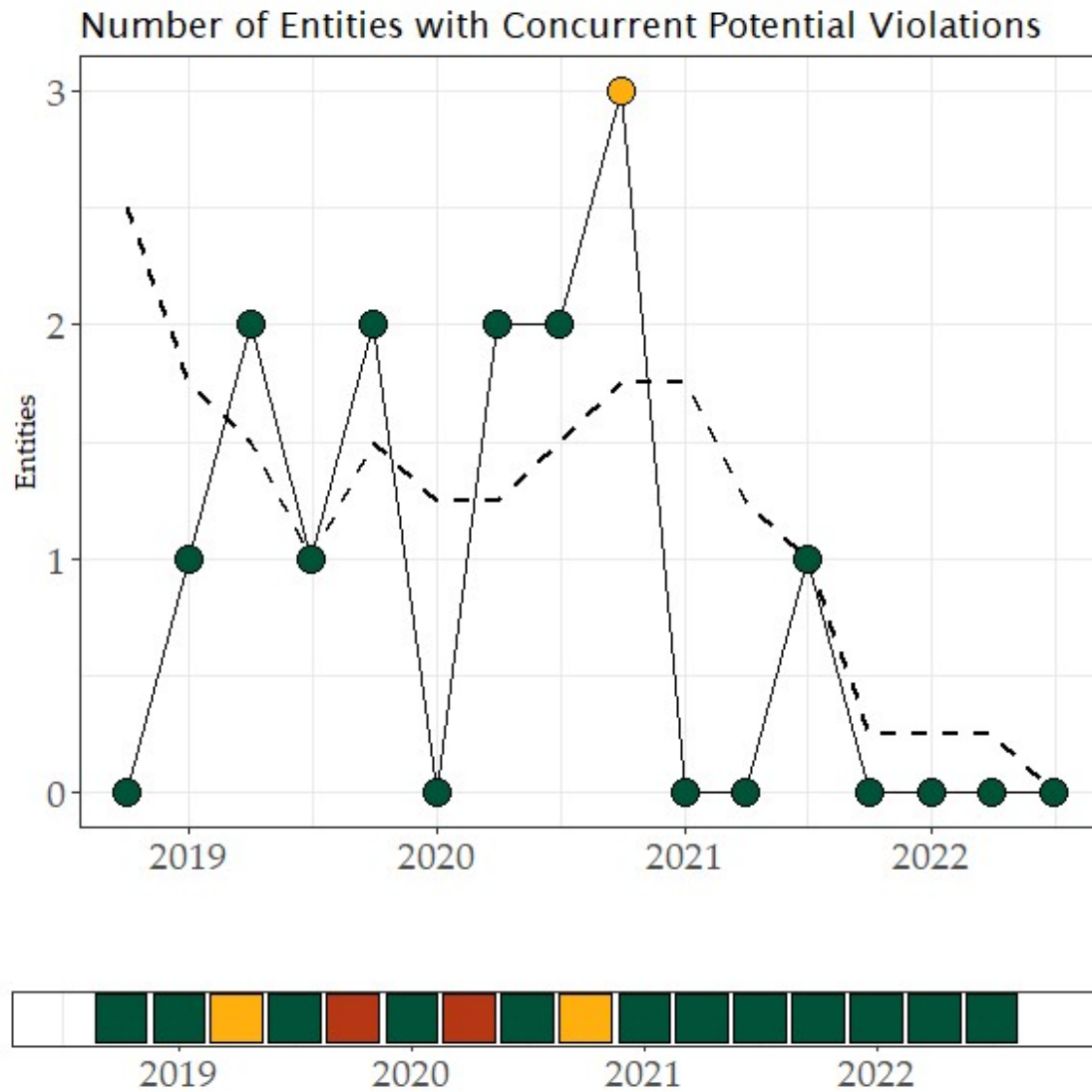
Quarterly Evaluation

Beginning with Q1 2022, Indicator 6 has been modified to use the “operating calendar,” rather than the “standard calendar.” Per the operating calendar, December 2021 through February 2022 represents the first quarter of the 2022 operating year. This change will align Indicator 6 with the meeting, data availability, and reporting schedule of the NERC Resources Subcommittee (RS), which is the source of the IFRM data supporting this indicator. Other indicators will continue to use the standard calendar.

The median A to B IFRM for Q3 2022 (June through August) was below the running average, (which indicated frequency response during events during the quarter was excellent), lowering risk to the interconnection. There were no minutes during which the mean system frequency was more than 0.068 Hz from 60 Hz. Consequently, the combined Indicator 6 is “green.”

Indicator 7





Quarterly Evaluation

The number of entities with repeated or concurrent potential violations was zero for Q3 of 2022. Consequently, this indicator is classified as “green.”