

# Reliability and Security Dashboard

Reliability Risk Management

April 4, 2022

## Quarter 4 2021 Dashboard

Indicator 1:  
Reportable  
Events



Indicator 2:  
Protection System  
Misoperations



Indicator 3:  
Transmission  
Outages



Indicator 4:  
Energy Emergency  
Alerts



Indicator 5:  
Operation  
Outside BAAL



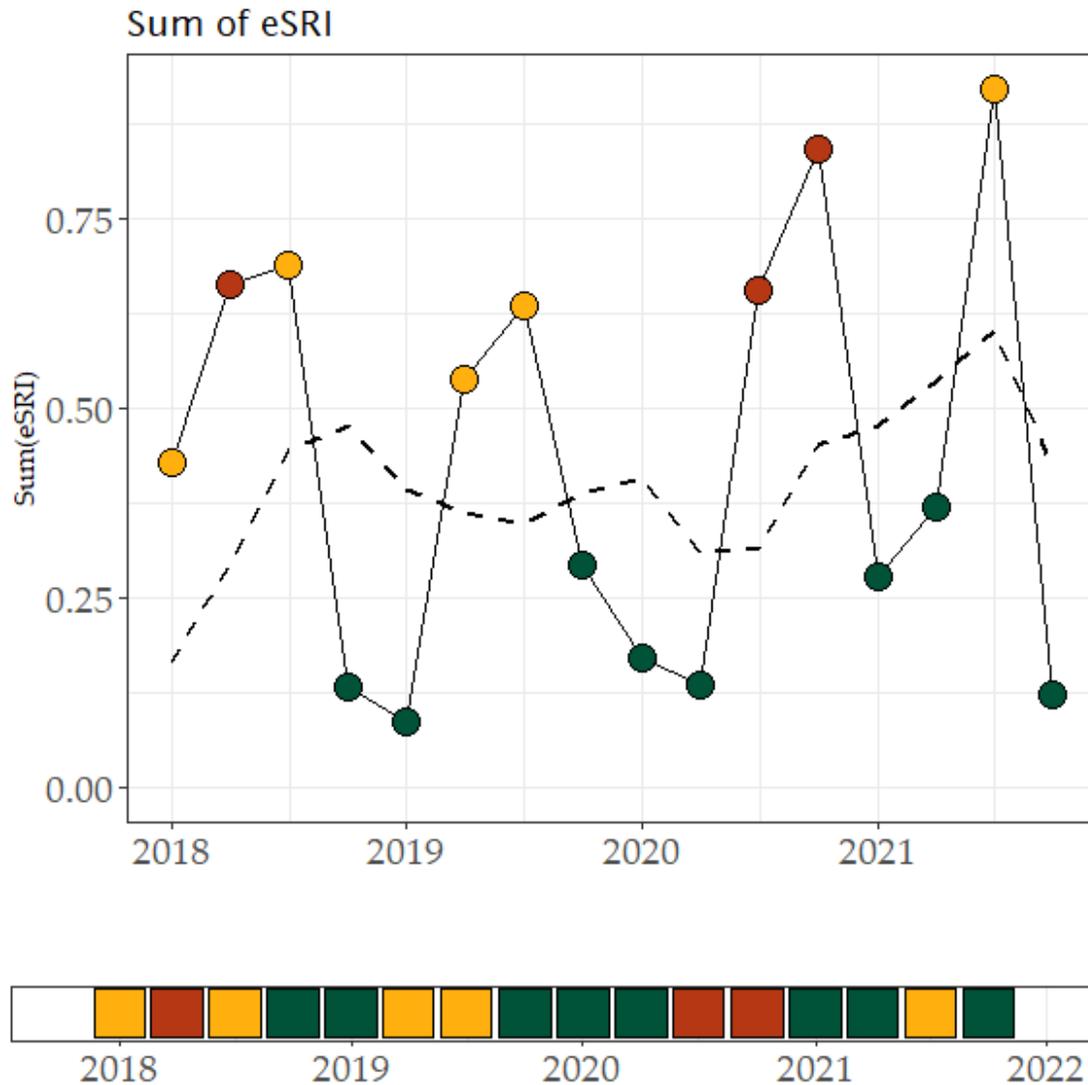
Indicator 6:  
System  
Frequency



Indicator 7:  
Standards  
Compliance



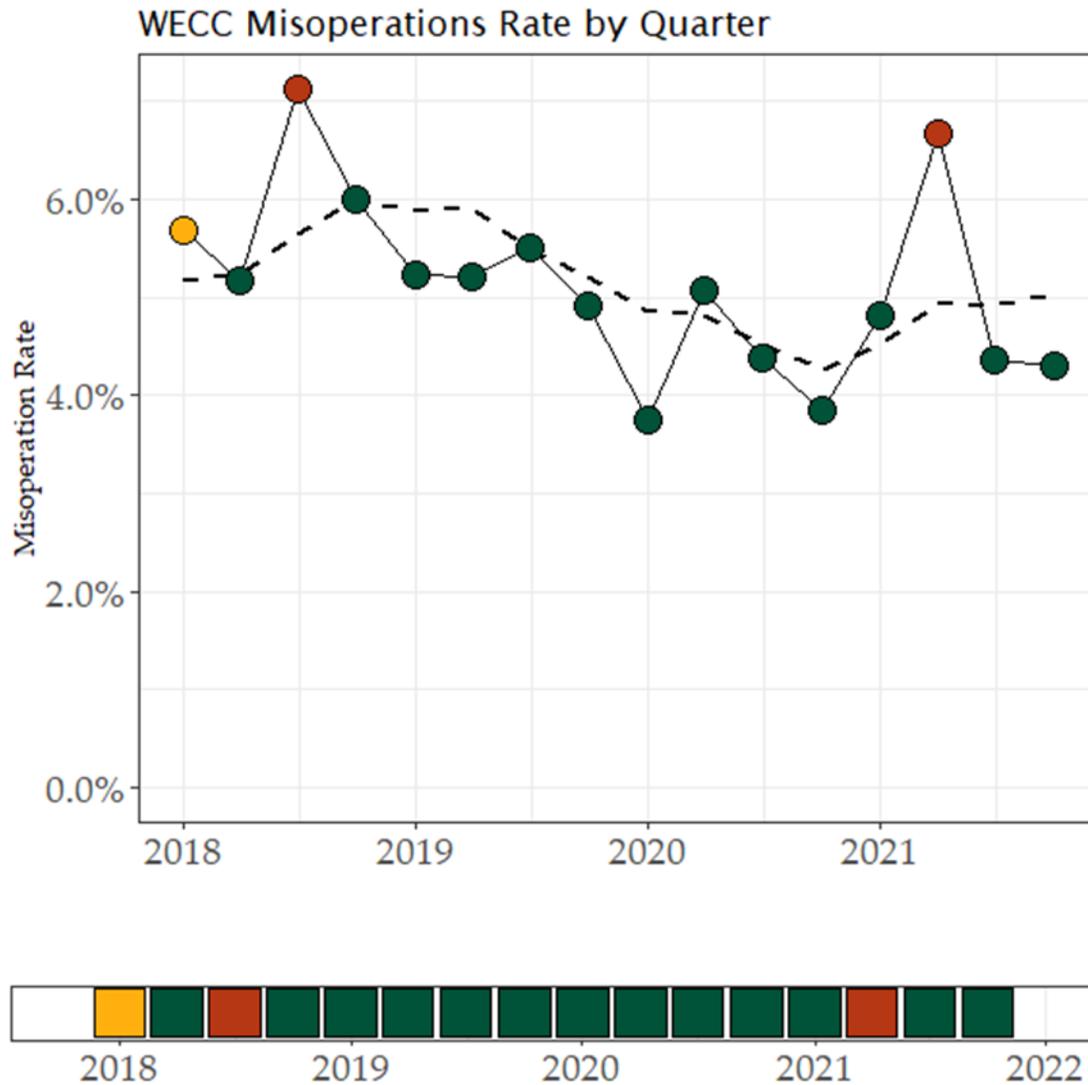
## Indicator 1



## Quarterly Evaluation

There were no Level 2 or higher events in the fourth quarter of 2021, and the eSRI total was less than the mean of the four quarters up to and including that quarter. In fact, the eSRI total was almost as low as it has been at any point over the last four years. The status of this indicator is green.

## Indicator 2

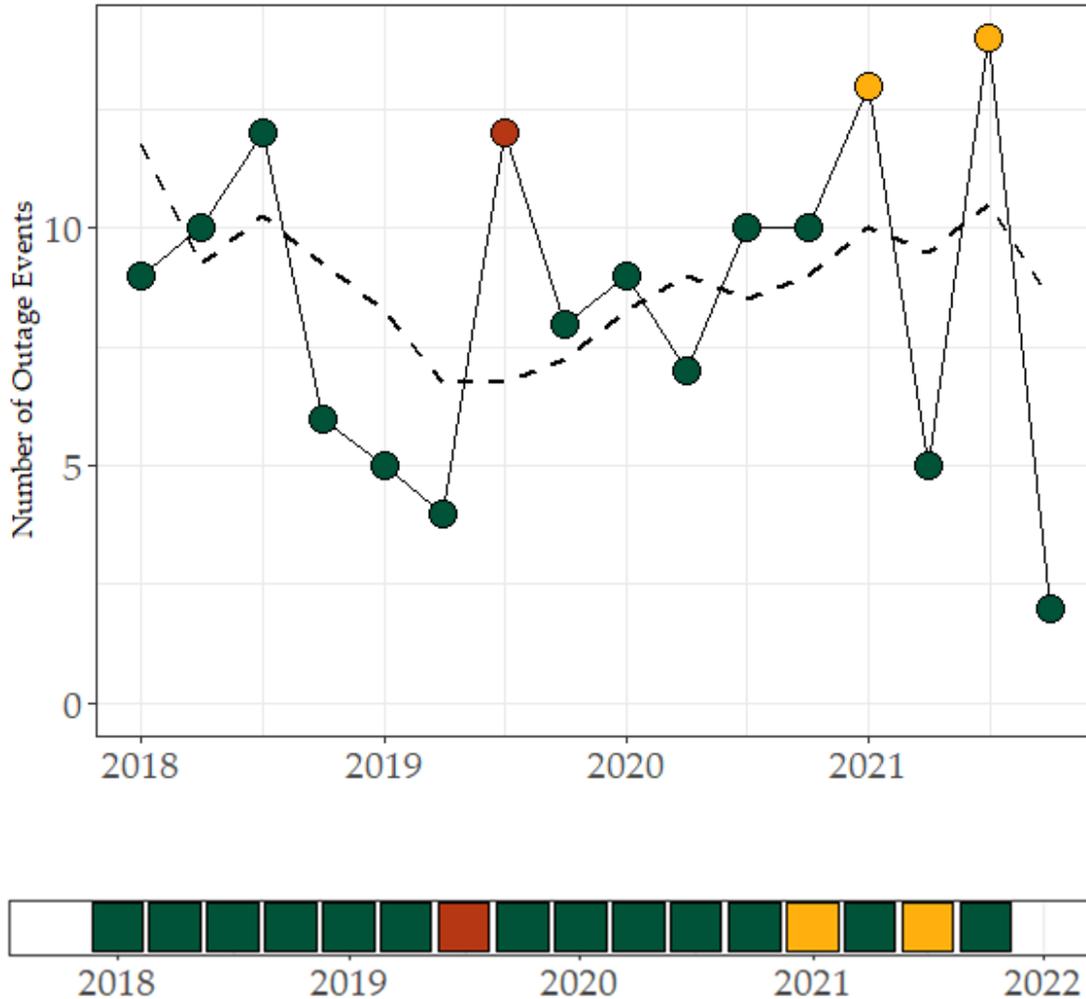


### Quarterly Evaluation

The misoperation rate in the fourth quarter of 2021 remained low value relative to the running average over the past year. This indicator is green for the fourth quarter. The unusually high value in the second quarter of 2021 appears to have been an anomaly.

### Indicator 3

Unplanned Transmission Events of Three or More Elements

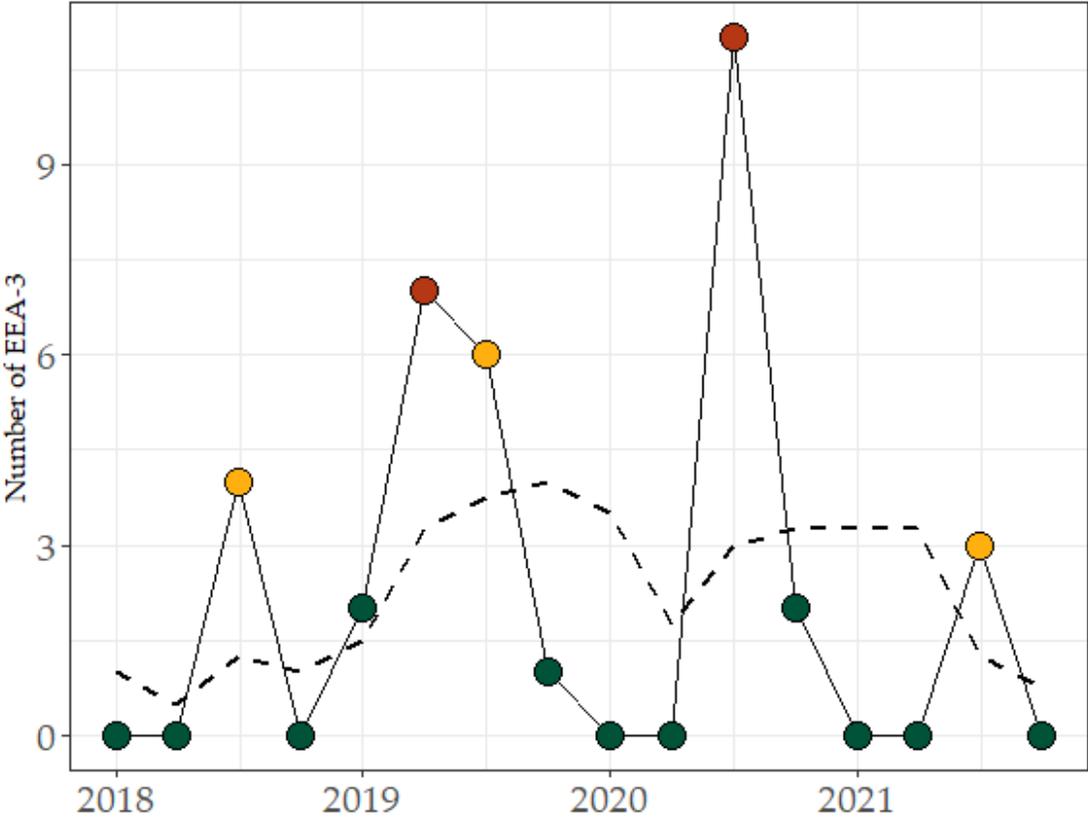


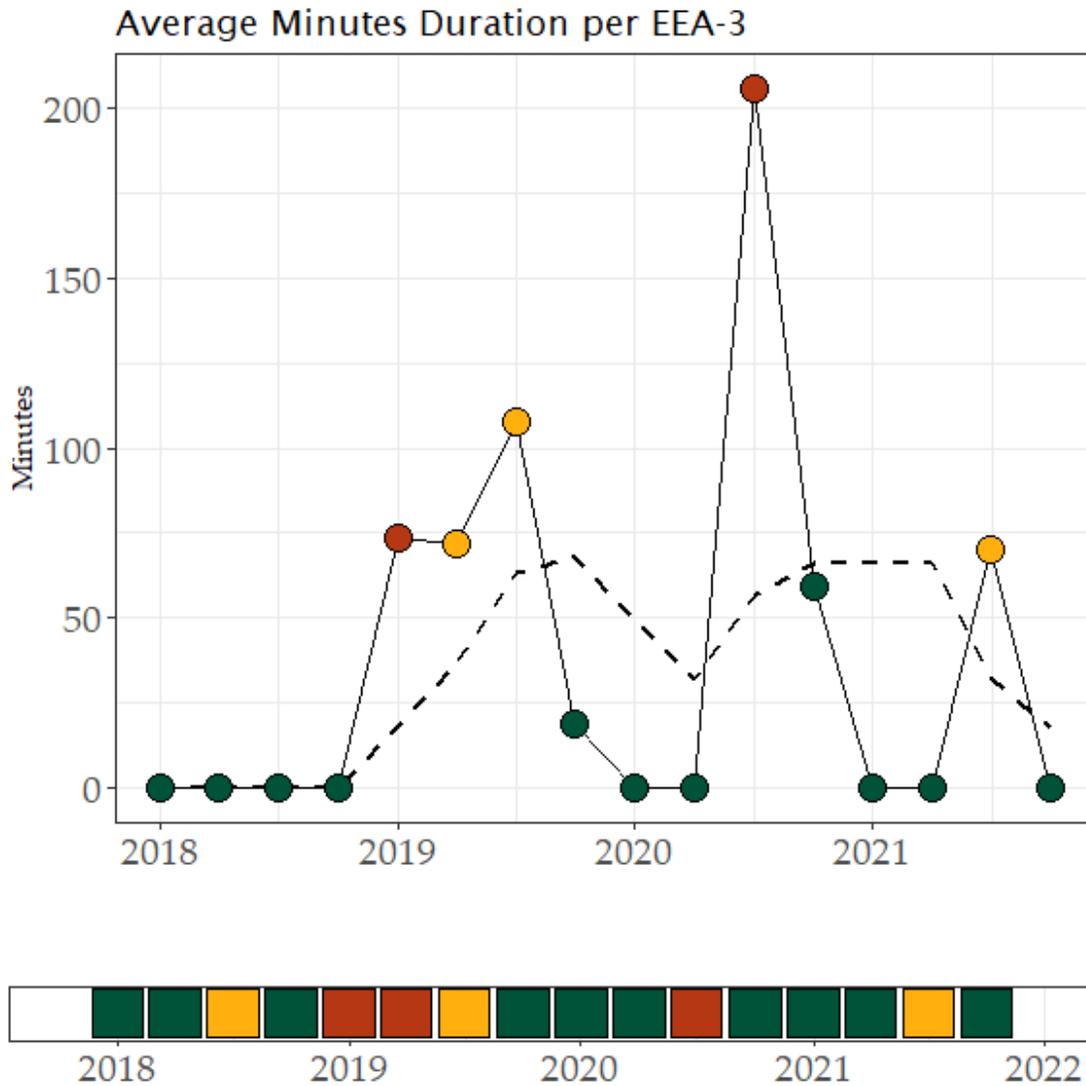
### Quarterly Evaluation

The number of unplanned transmission events of three or more elements was below the rolling average in Q4 of 2021. Also, the number was fewer than at any time in the last four years. This indicator is considered green for the fourth quarter. The current number of unplanned transmission outages involving three or more elements does not pose a high risk to system reliability. Note that Q1 and Q3 were retroactively elevated to yellow based on data reported at the end of 2021.

Indicator 4

Number of EEA-3



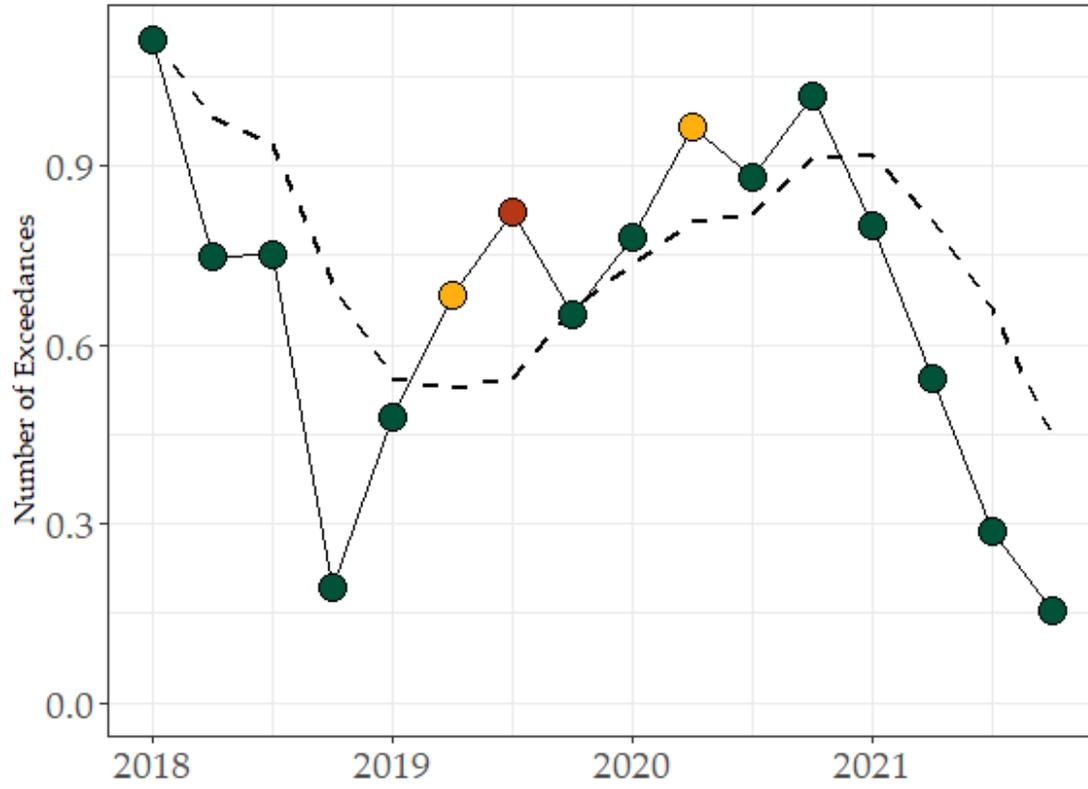


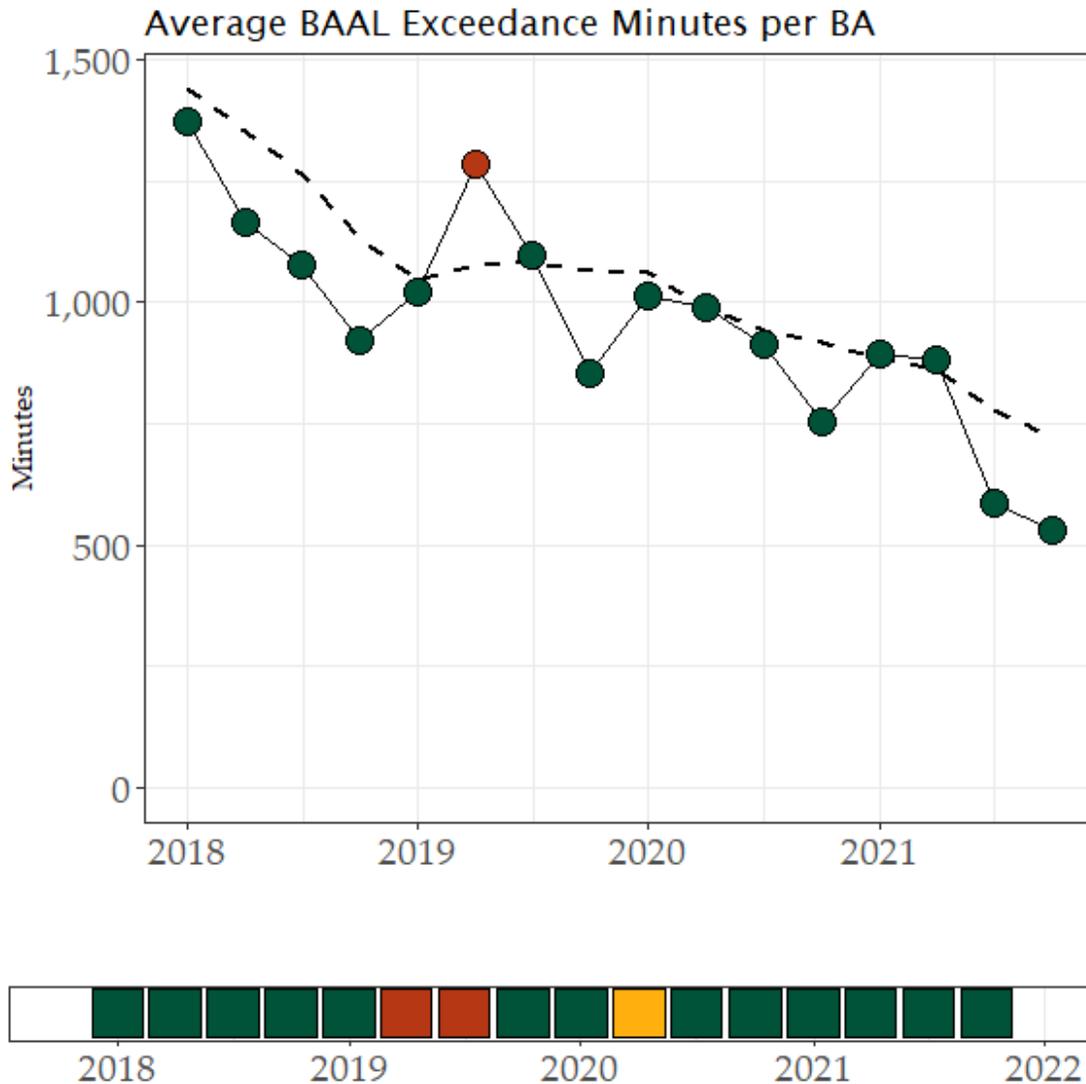
### Quarterly Evaluation

An overall mild fourth quarter with no extreme weather or major events in the transmission system resulted in extended periods of normal operating conditions. Consequently, the fourth quarter of 2021 had no EEA-3, and this indicator is green.

## Indicator 5

Average BAAL Exceedances Greater than 20 Minutes per BA

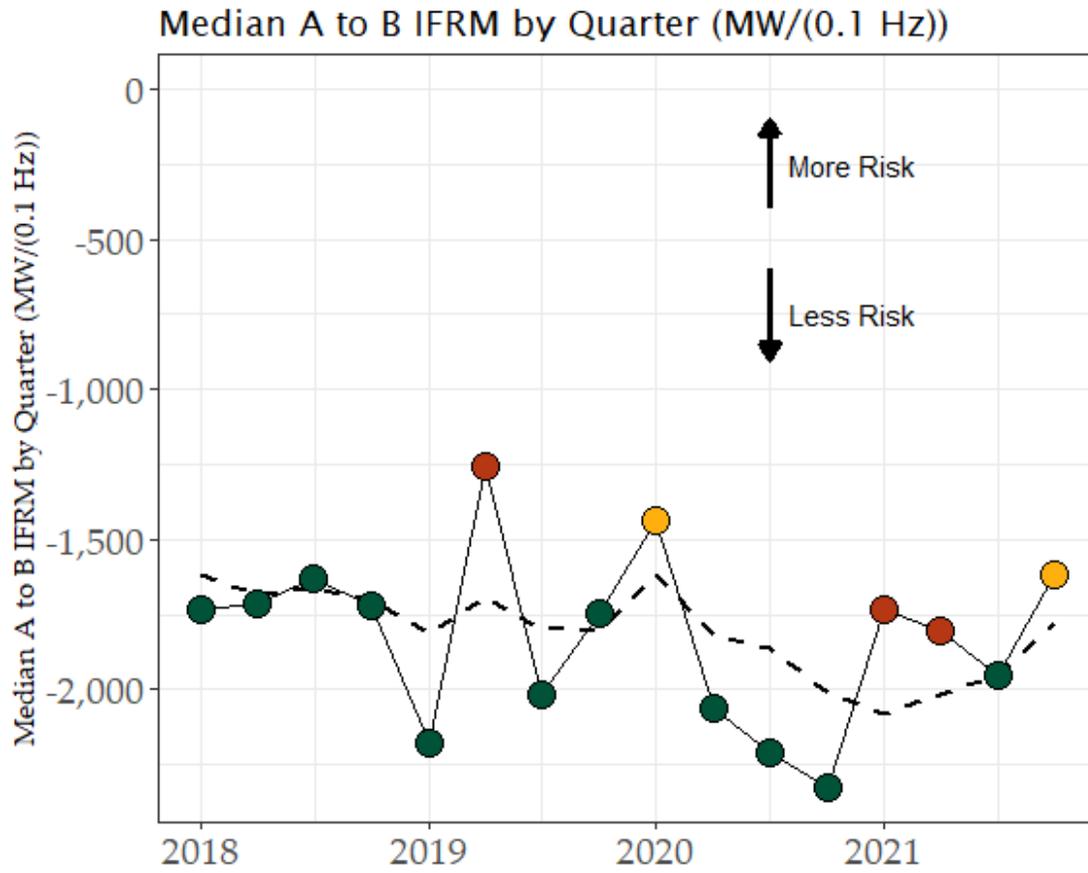




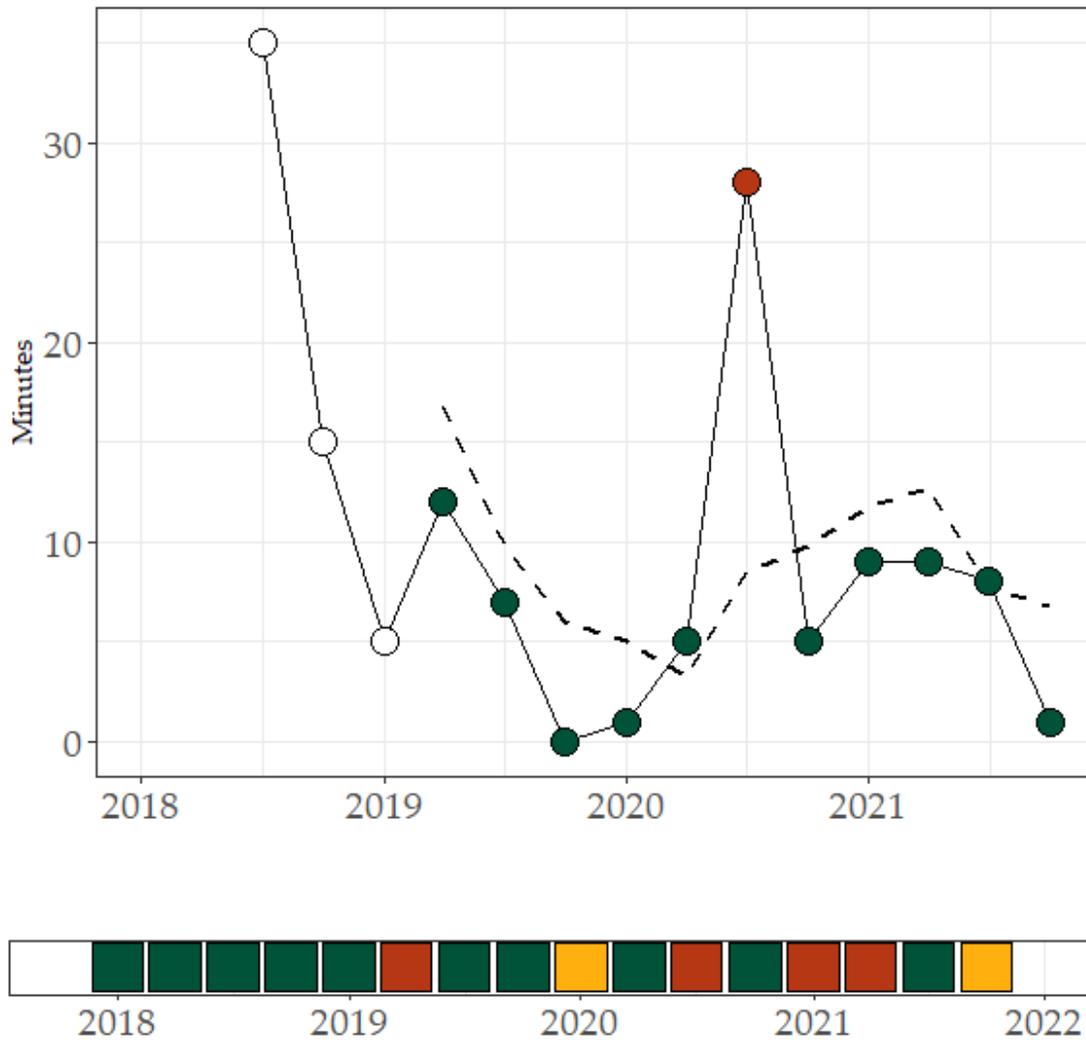
## Quarterly Evaluation

The number of BAAL exceedances greater than 20 minutes, and the total duration of those exceedances, are both lower than the rolling average in Q4 of 2021. This indicator is classified green. BAs continue to improve their performance in maintaining their ACE and interconnection frequency during normal and abnormal operations. Also, both metrics for Indicator 5 were better in the final quarter of 2021 than at any time in the preceding four years.

## Indicator 6



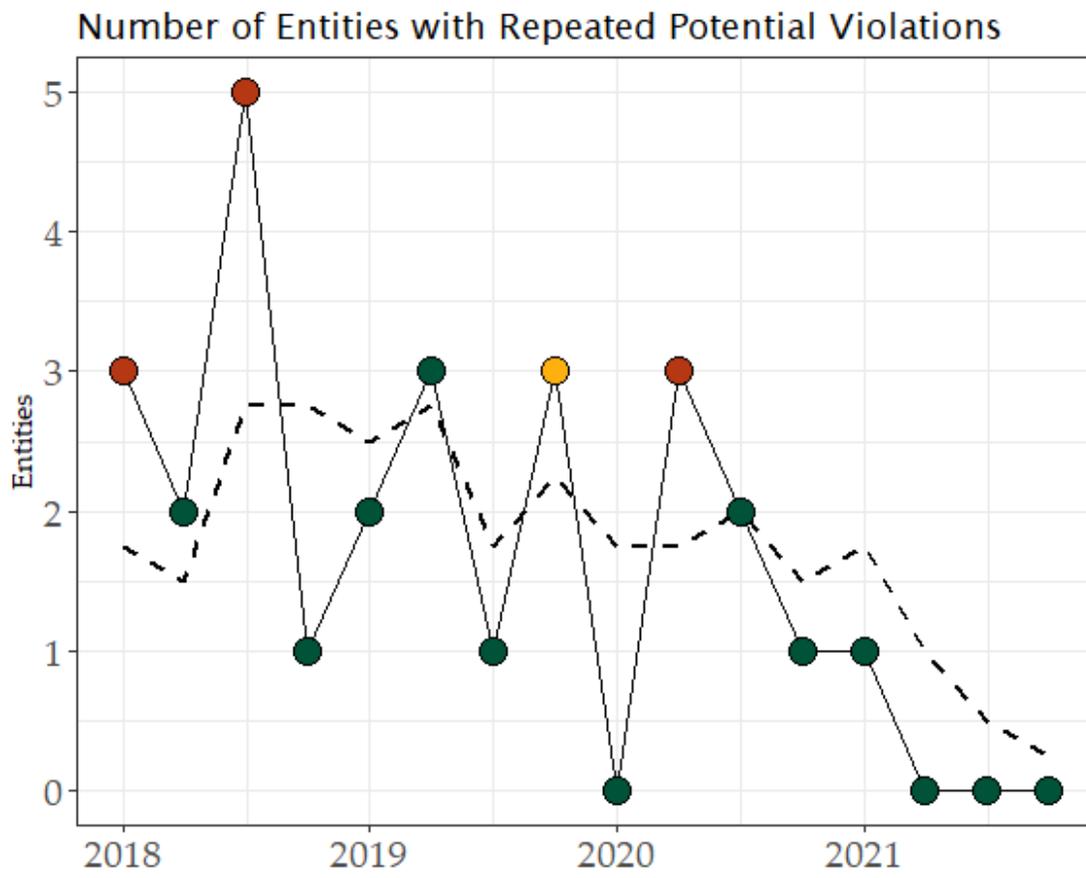
Minutes More than +/- 0.068 Hz from 60.0 by Quarter

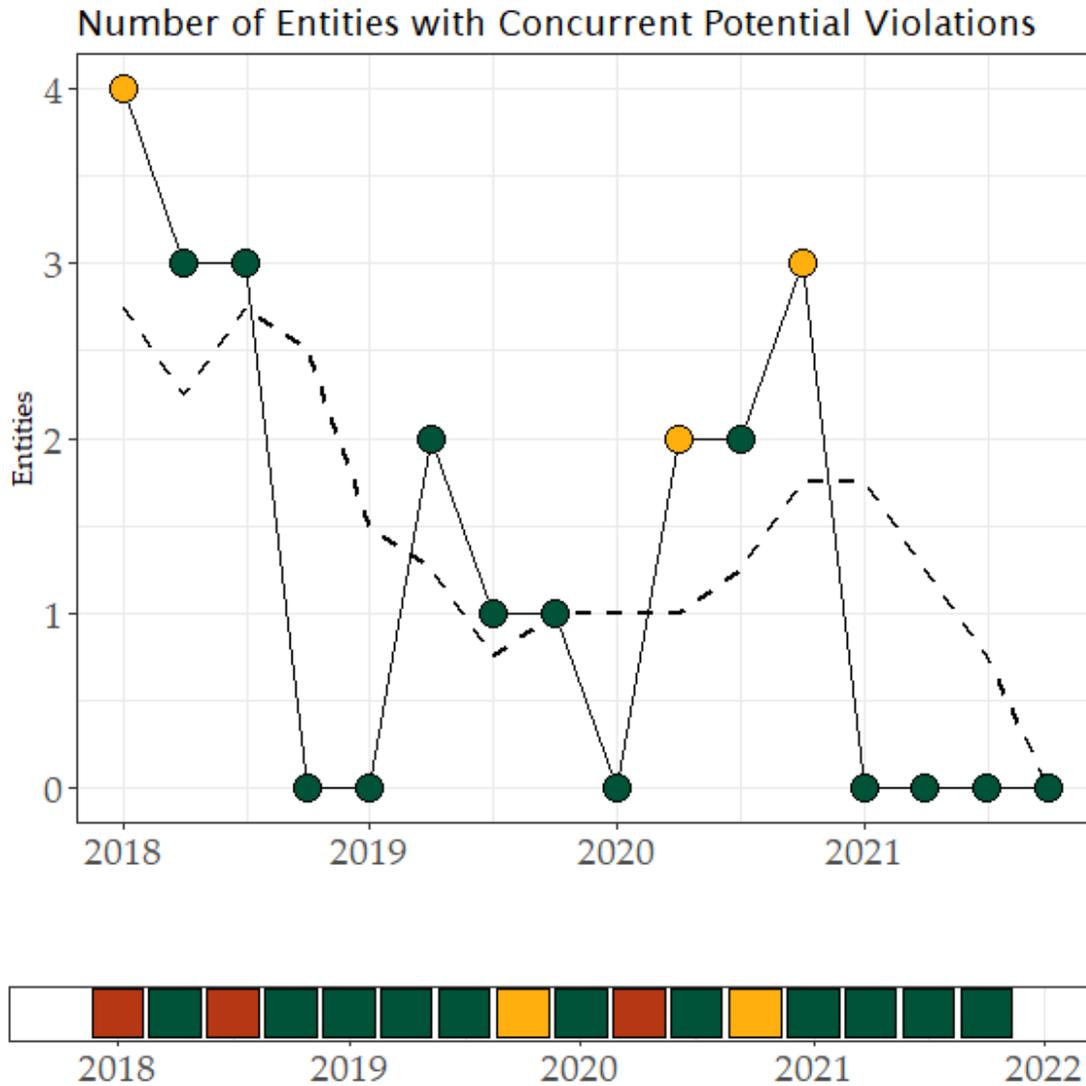


### Quarterly Evaluation

The A-B IFRM metric in Q4 2021 (median measurements based on 12 events) was slightly higher than the rolling average due to two events in the Pacific Northwest. However, there is not an elevated risk to the interconnection, as these events were still significantly above the underfrequency load shedding settings. The frequency performance metric—the number of minutes more than +/- 0.068 Hz from 60 Hz—has continued to decline, indicating that the BAs are maintaining a tight generation/load balance. This indicator is classified as yellow due to the A-B IFRM metric, but does not indicate significant risk to the interconnection.

## Indicator 7





### Quarterly Evaluation

Entities continue to strengthen their internal controls and compliance programs to reduce the likelihood of future noncompliance. WECC works with entities to remediate issues when they do occur to develop robust preventive controls. Entities have not reported any repeated or concurrent noncompliance issues in Q4 of 2021. This indicator is classified as green.