

2025 Annual Wildfire Data Analysis

Reliability Risk Committee

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Reliability Initiative Director

**Electric Reliability
& Security for the West**

July 9, 2025

Wildfire Statistics (acres burned)

	2022	2023	2024
Alberta	323,357	5,436,318	1,767,302
Arizona	124,165	319,543	282,989
British Columbia	329,730	7,019,139	2,671,487
California	309,287	357,361	1,081,144
Colorado	45,732	40,527	60,539
Idaho	436,733	96,542	996,762
Montana	137,509	113,152	352,491
Nevada	58,402	9,851	70,410
New Mexico	859,906	172,823	82,531
Oregon	456,082	197,338	1,797,796
Utah	27,245	18,200	90,417
Washington	173,659	155,401	275,593
Wyoming	25,766	7,657	620,069
Totals	3,307,573	13,943,852	10,149,530

2025 Wildfire Data Analysis Statistics

- Relevant data reporting timeline: January 1–December 31, 2024
- 2025 Wildfire DR was sent to 49 Transmission Operators (U.S. and Canadian entities)
- 26 TOPs reported events associated with fires during reporting period
- 23 TOPs reported no outages associated with fires during reporting period
- 39 TOPs reported having Wildfire Mitigation Plans
- 29 TOPs reported they have some form of PSPS program

Wildfire Data Analysis Trends

- Total reported incidents by years
- Total incidents by voltage class
- Number of incidents on BES lines by voltage class
- Number outages caused by wildfires on lines part of the Major WECC Transfer Paths
- Total number of reported incidents by reason for line removal
- Total amount of load loss per incident
- Total number of customers losing service per incident

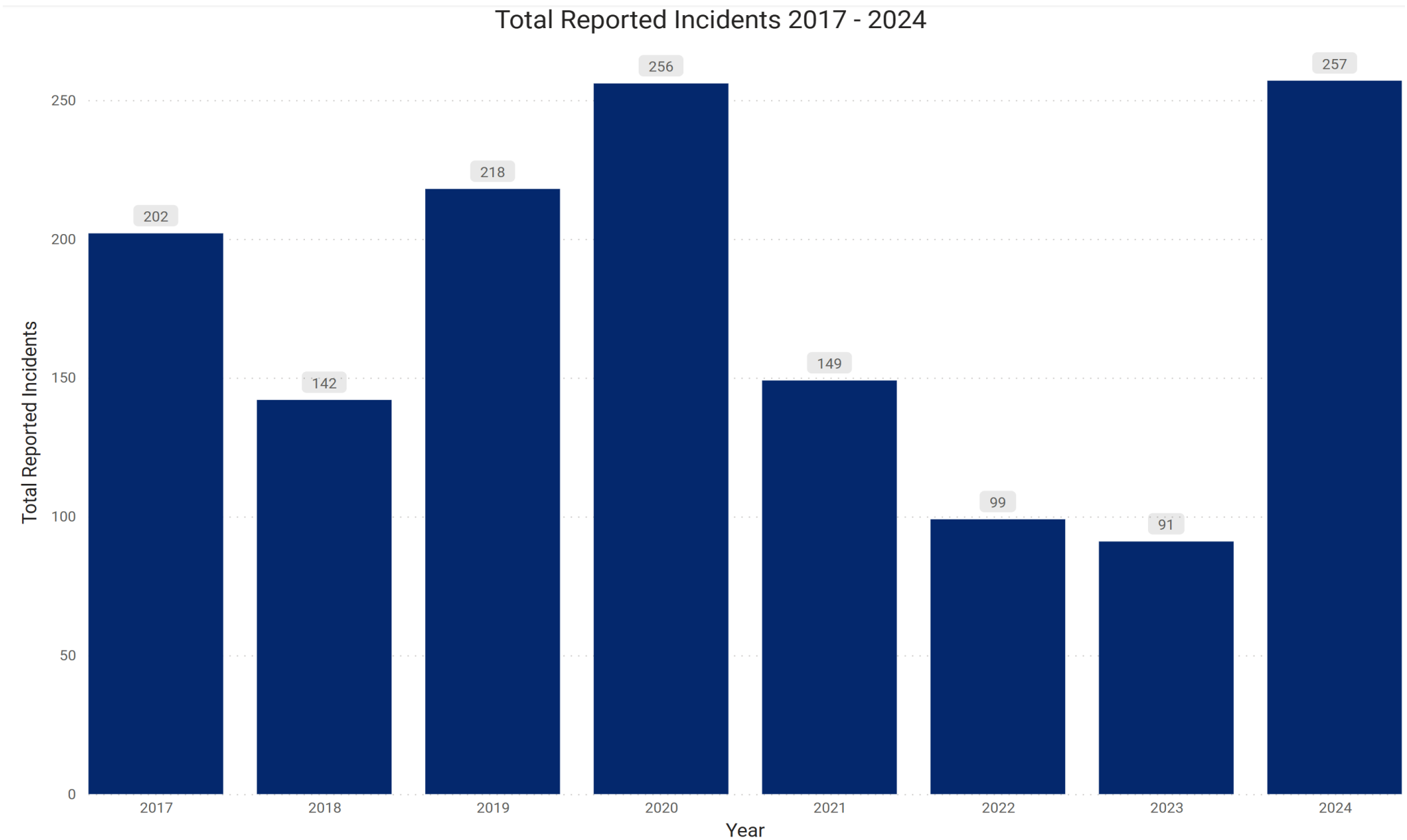
2024 Major Wildfire Events

- In 2024, there were four wildfire-related events during which major transmission facilities were affected, putting the system into a “Potential Open Loop” condition. While no open loop conditions developed, major transmission paths were derated, affecting the ability to transfer energy to serve demand during peak periods.
- A summer wildfire burning through a transmission corridor tripped two transmission lines. This caused several IBR plants to trip offline unexpectedly and drop over 900 MW of generation.
- In fall 2024, a wildfire in the Pacific Northwest caused a loss of transmission lines, which in turn activated a protection scheme that dropped 2,000 MW of generation.

WECC Annual Wildfire DR Statistics

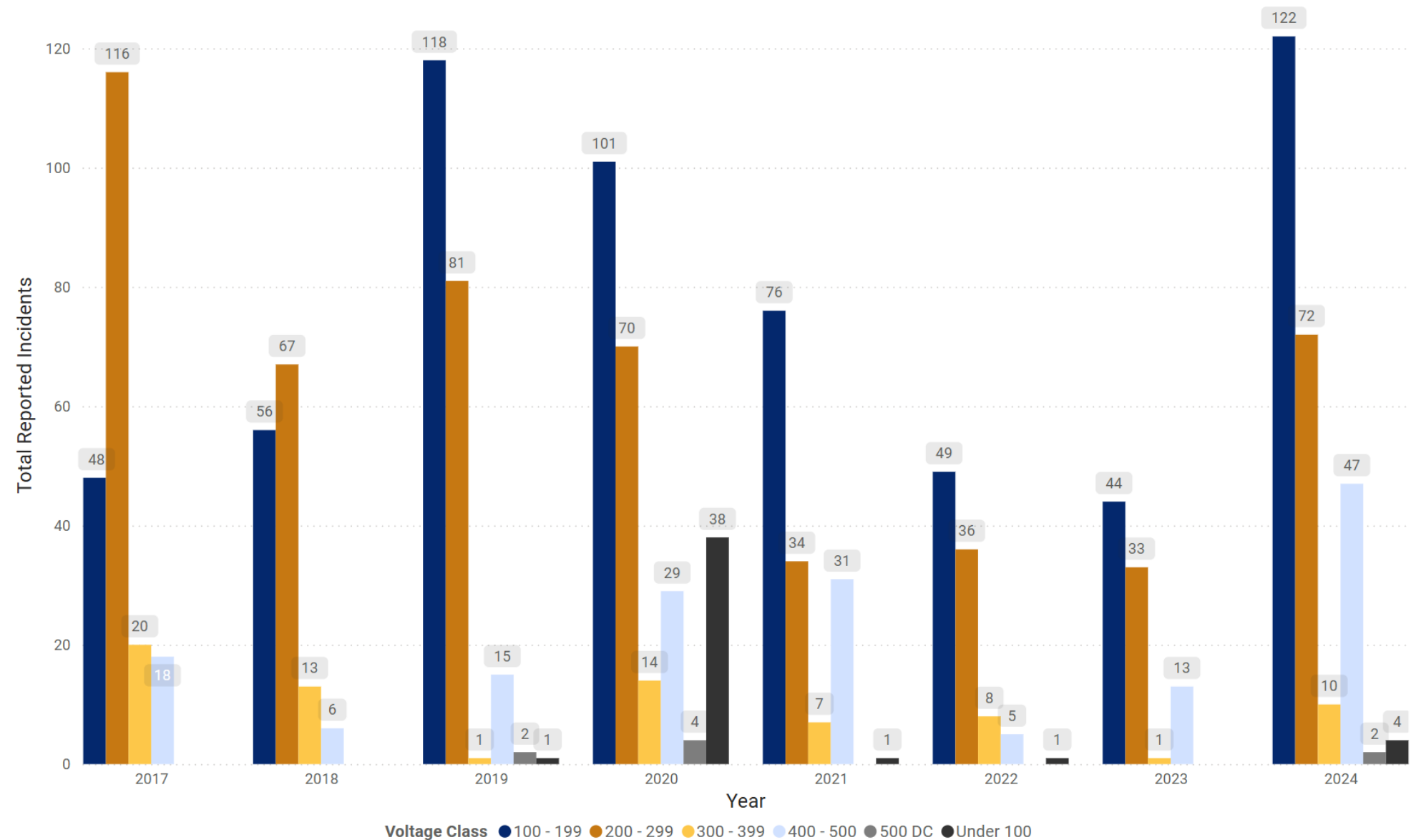
WECC 25HS4 Base Case	Number of lines per voltage class	Number of outages per voltage class (2024)	Number of outages per voltage class (2017-2024)
<100- kV	17,238	4	45
100-199-kV	7,903	122	620
200-299-kV	2,879	72	511
300-399 – kV	308	10	74
400-499- kV	8	0	0
500-kV	506	47	167
500-kV DC	5	2	8
Total	28,847	257	1,425

2025 Annual Wildfire DR Analysis Trends

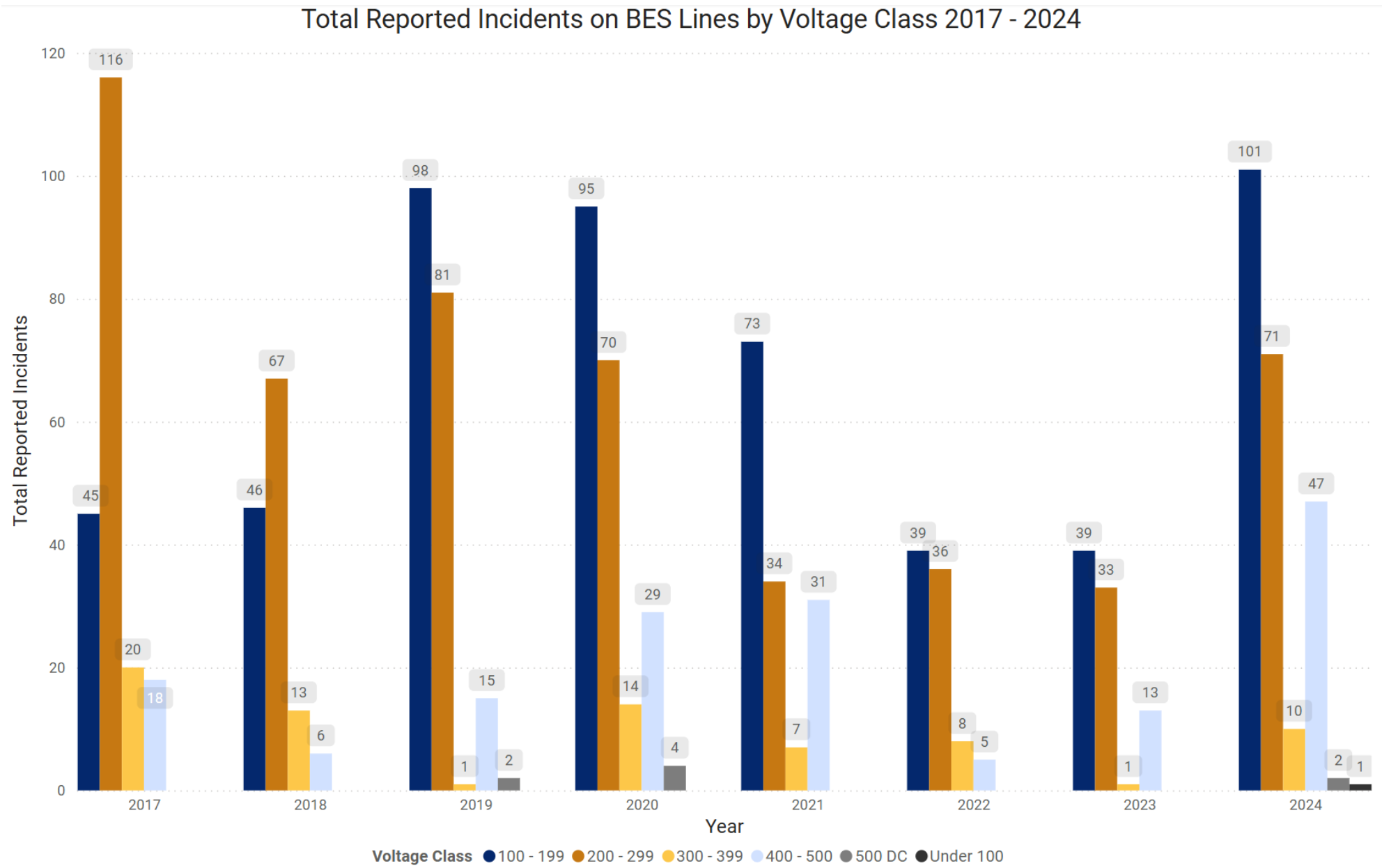


2025 Annual Wildfire DR Analysis Trends

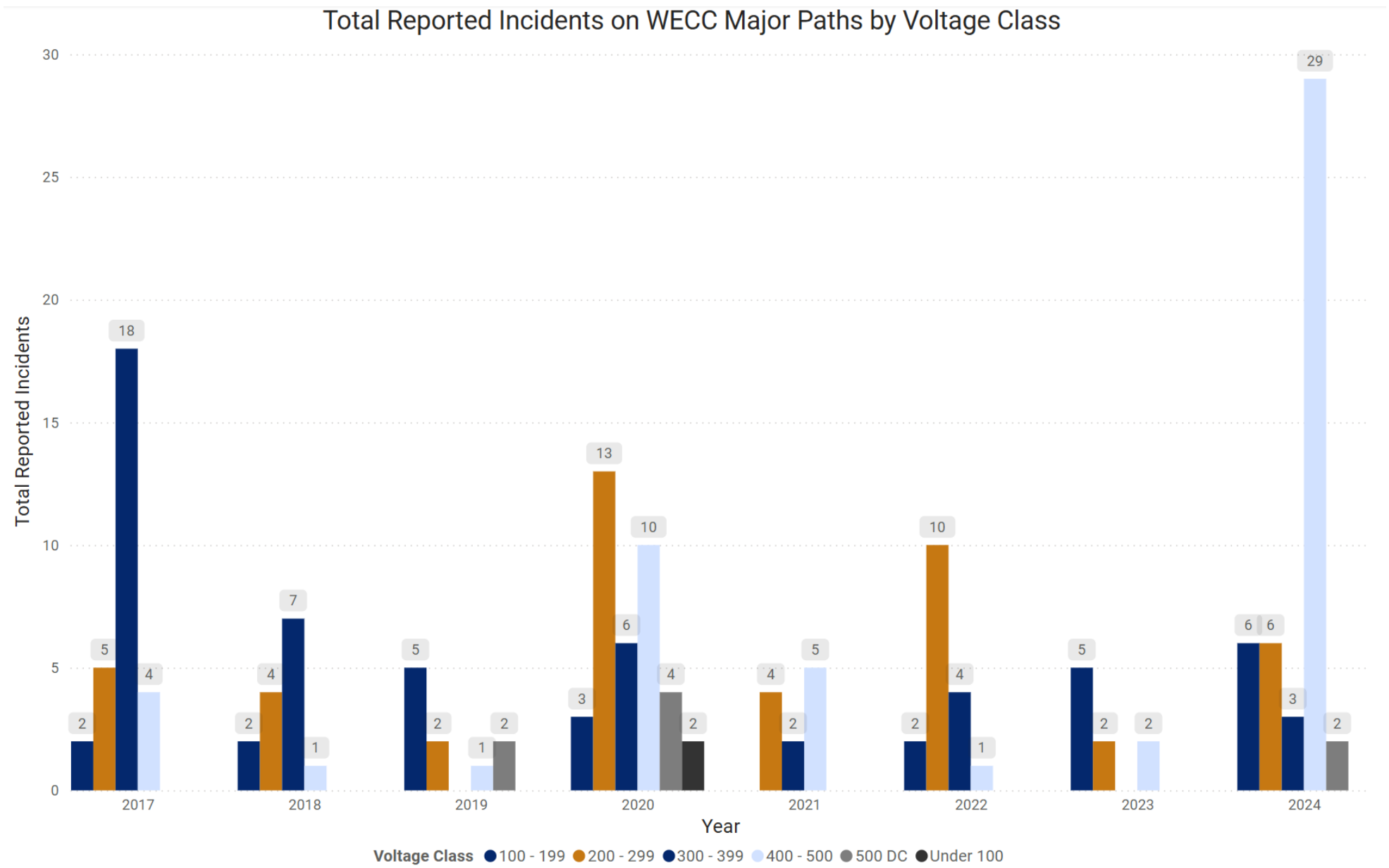
Total Reported Incidents by Voltage Class 2017 - 2024



2025 Annual Wildfire DR Analysis Trends

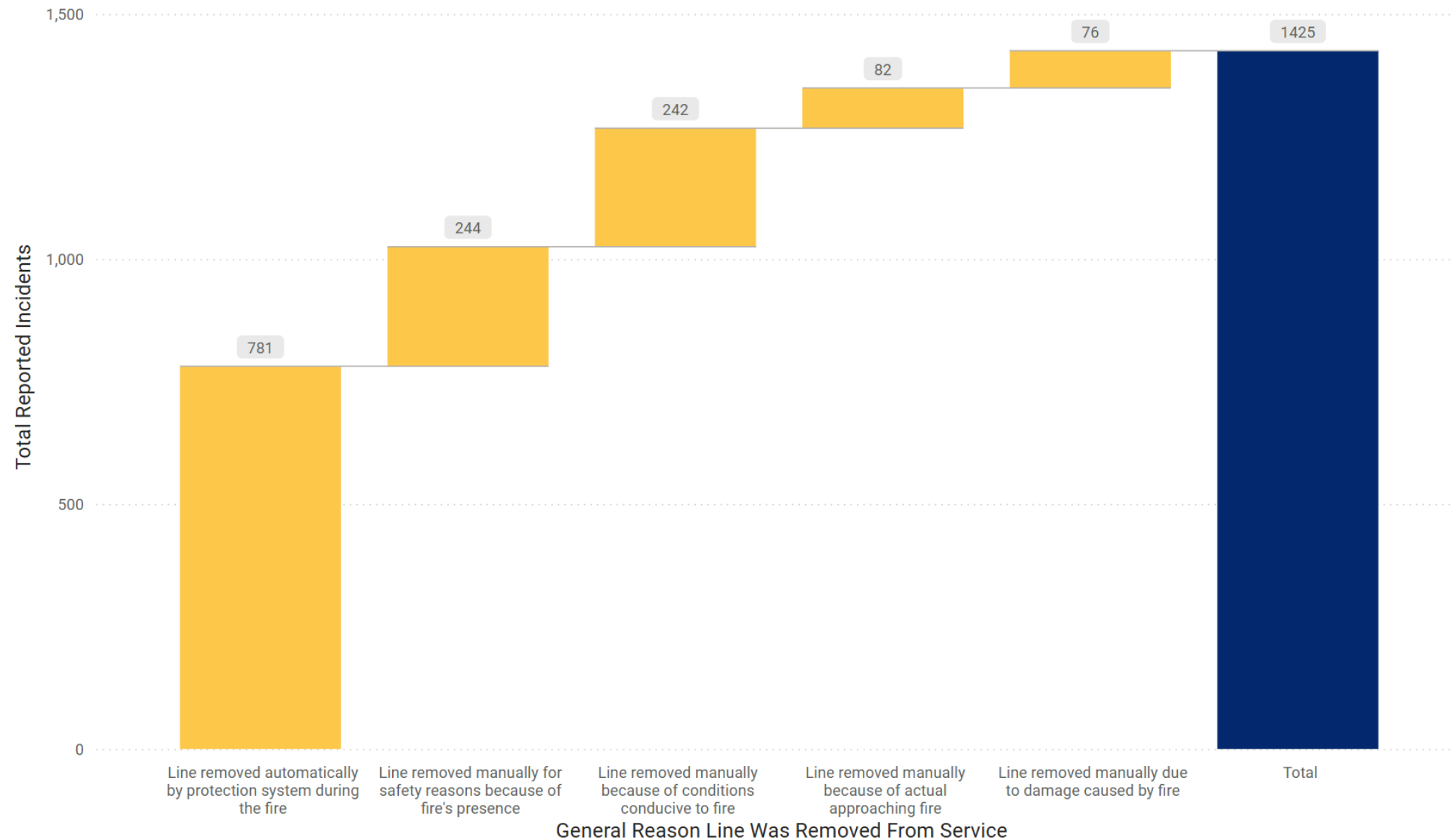


2025 Annual Wildfire DR Analysis Trends



2025 Annual Wildfire DR Analysis Trends

Total Number of Reported Incidents by Reason For Removal From Service



2025 Annual Wildfire DR Analysis Trends

Total Amount of Load Dropped (MW)

WECC Major Path

BES Line

Voltage Class

Transmission Operator

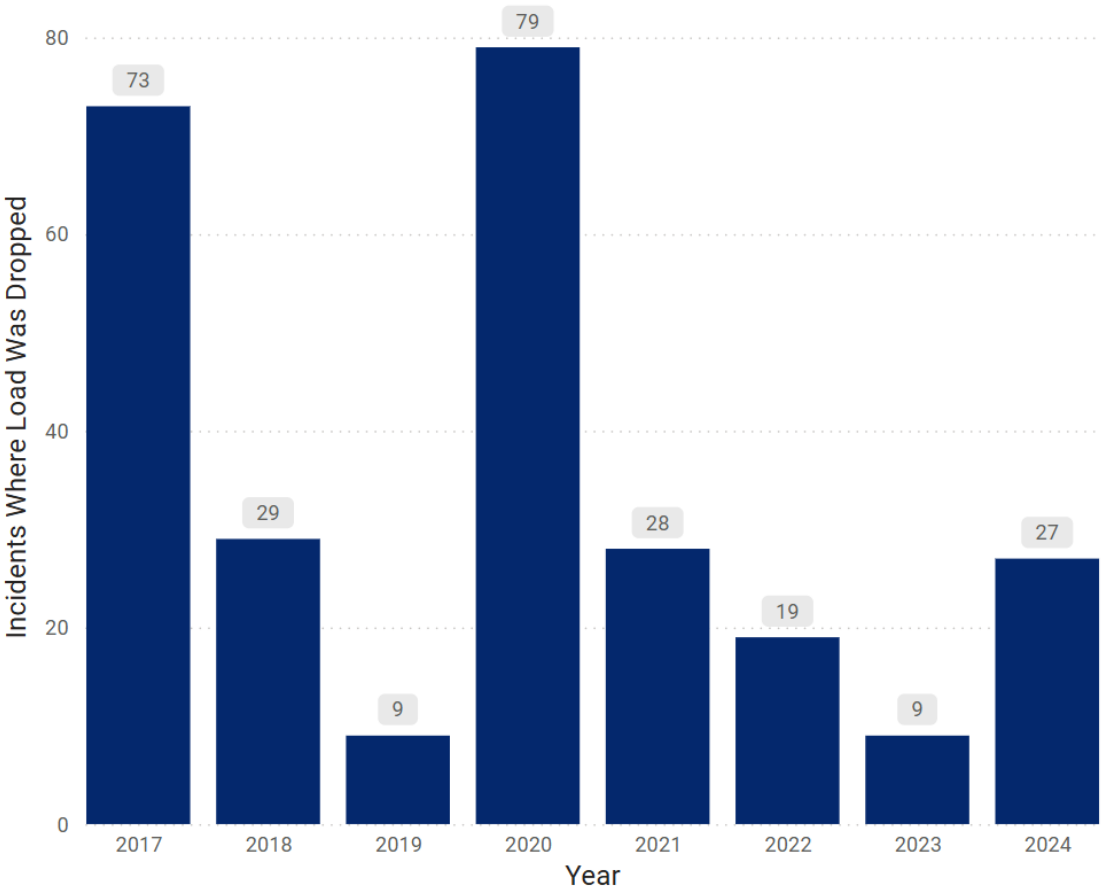
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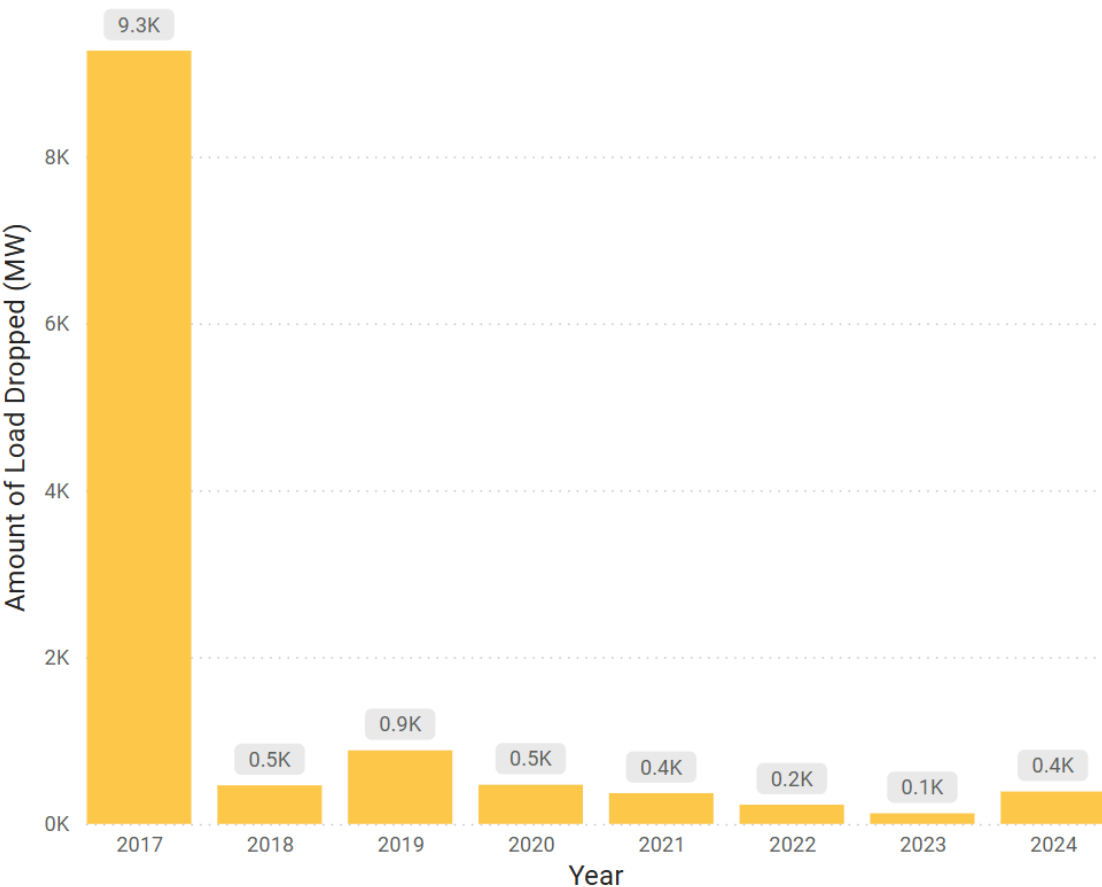
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Number of Incidents Where Load was Dropped



Total Load Dropped in MW



2025 Annual Wildfire DR Analysis Trends

Total Number of Customers Losing Service

WECC Major Path

BES Line

Voltage Class

Transmission Operator

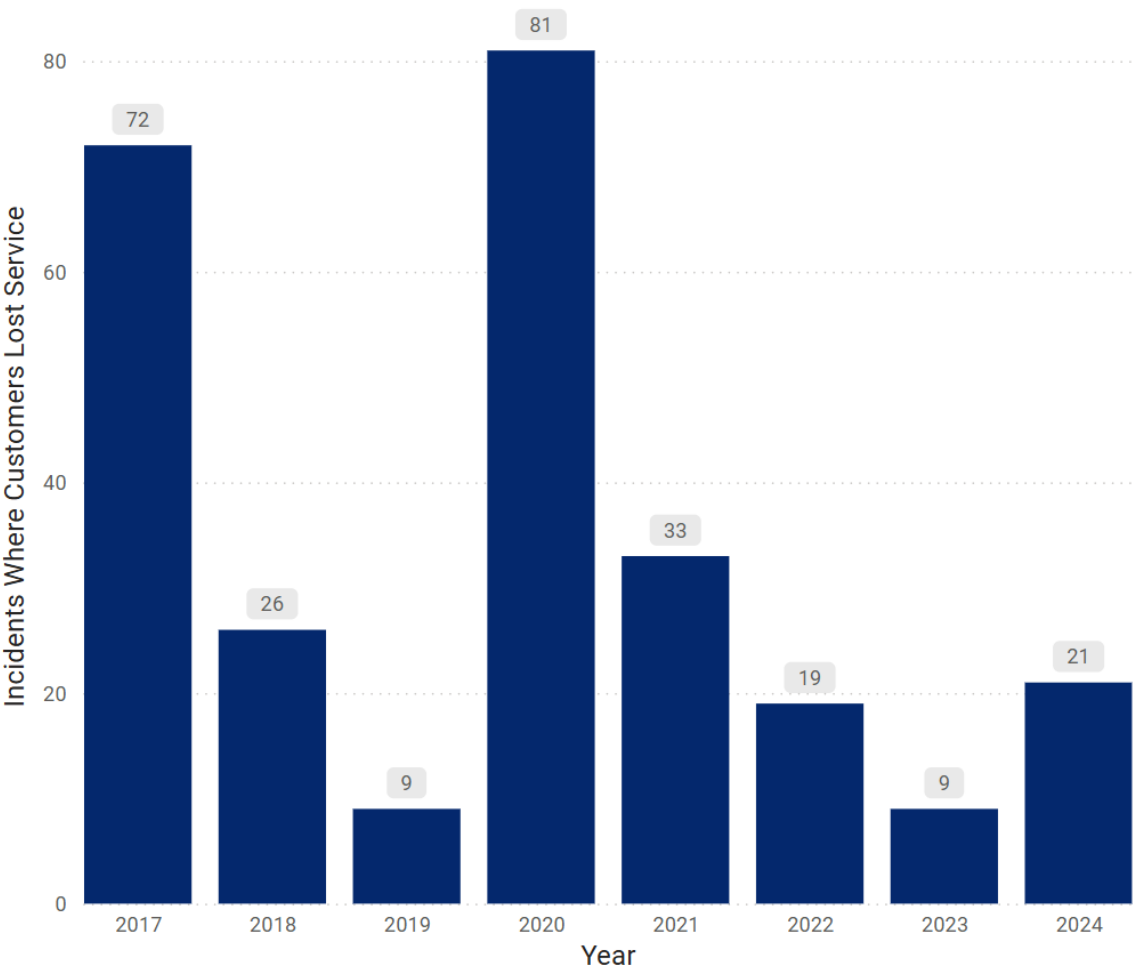
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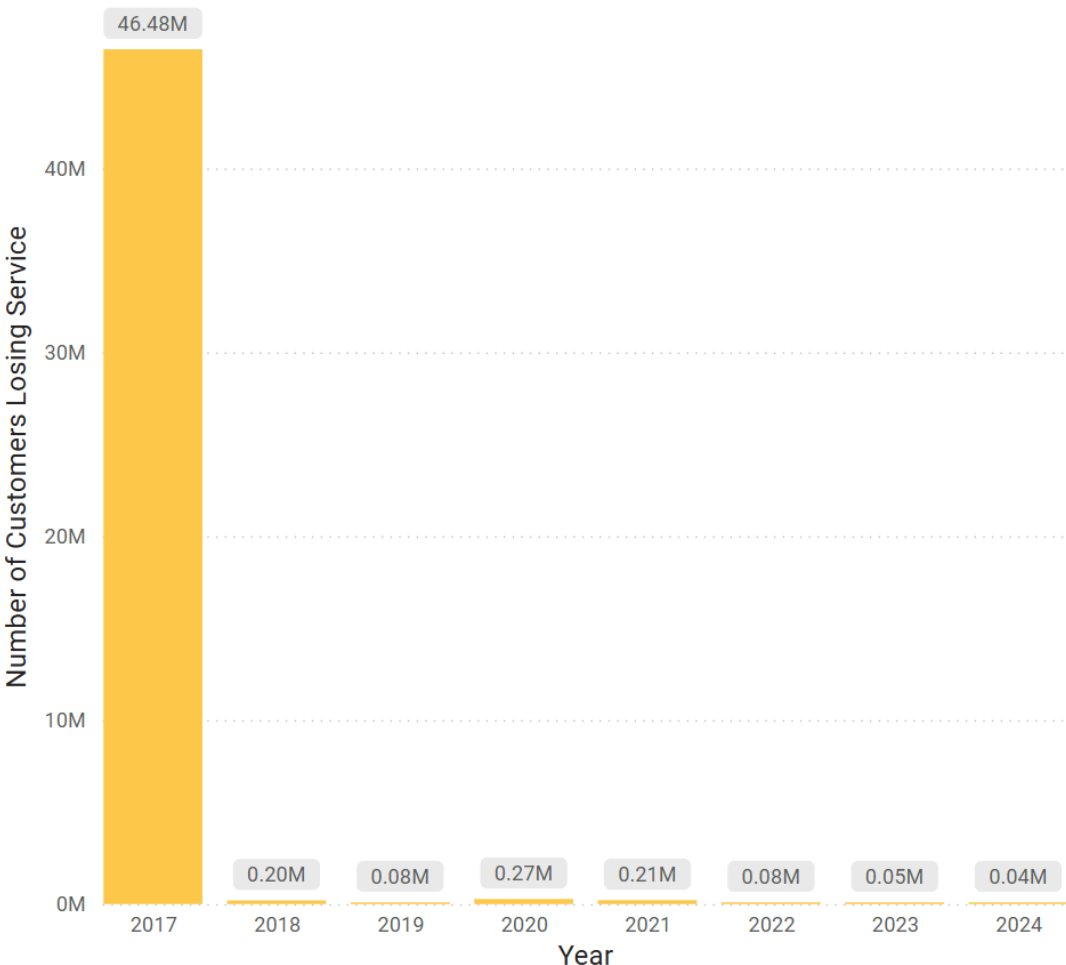
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Number of Incidents Where Customers Were Lost



Total Number of Customers Lost



Wildfire DR Analysis Findings

- Based on the data provided, load/customer loss across the relevant reporting period did not reveal any significant concerns
- There were no reports of extreme high/low voltage due to outages caused by wildfires
- There were no extreme high/low frequency due to outages caused by wildfires
- Adverse System Impacts/Special Circumstances
 - Several reported “Encroachment Events”
 - Increase number of 500-kV line outages
 - Increased number of WECC Major Path outages
 - Multiple events causing radial feed to various size load pockets

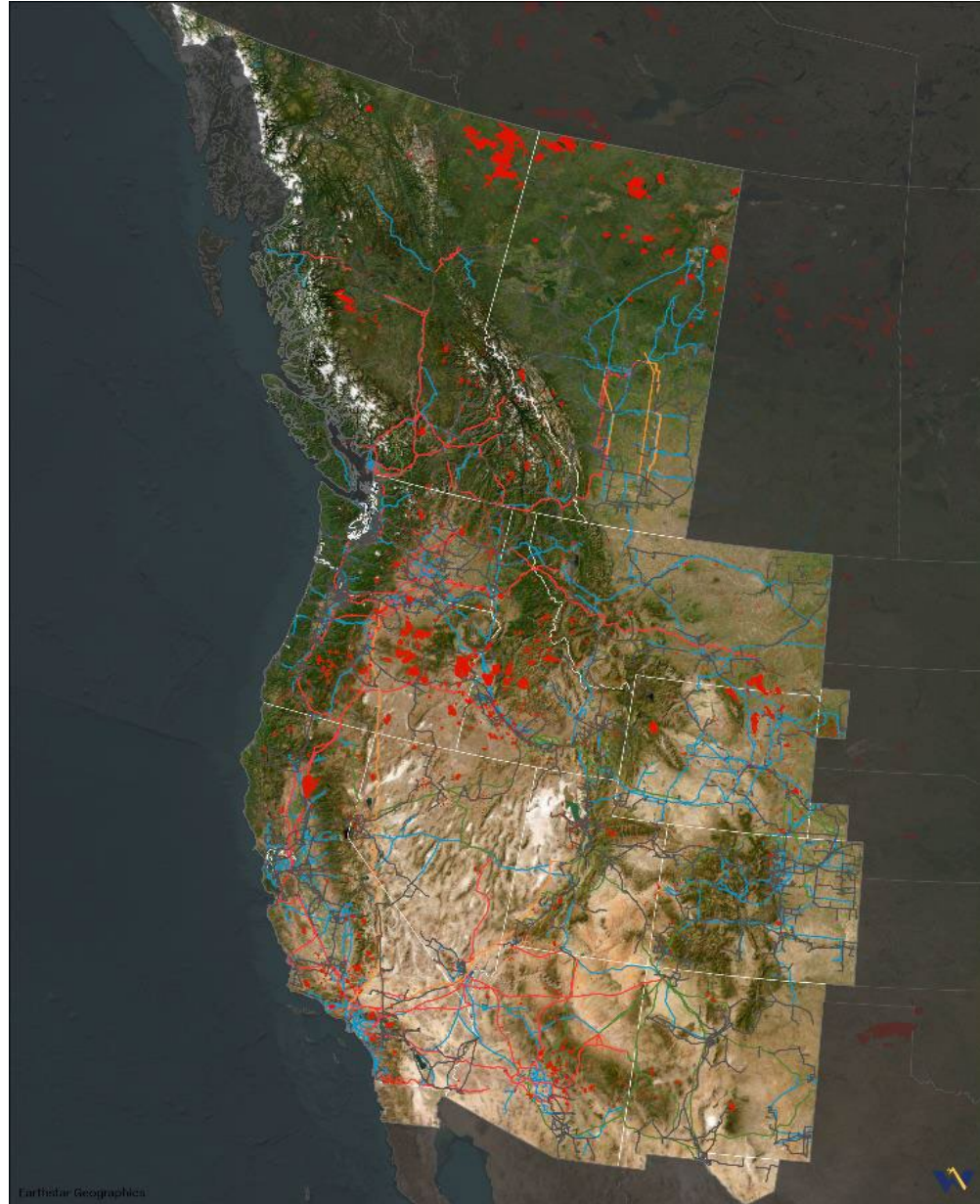
Wildfire Mitigation & System Hardening Activities

- Public Safety Power Shutoff Programs (PSPS)*
- Covered conductor and underground conductor (expense & operational issues)
- Pole replacement and fireproof meshing
- Advanced system protection schemes (rapid earth fault current limiter; open phase detection)
- Situational Awareness
 - Weather stations/HD cameras/weather consultants
 - Weekly fuel sampling at multiple sites (determine fuel conditions)
- AI and Machine Learning Detection (asset inspections, identification of maintenance needs, faster diagnostics and enhanced quality control)

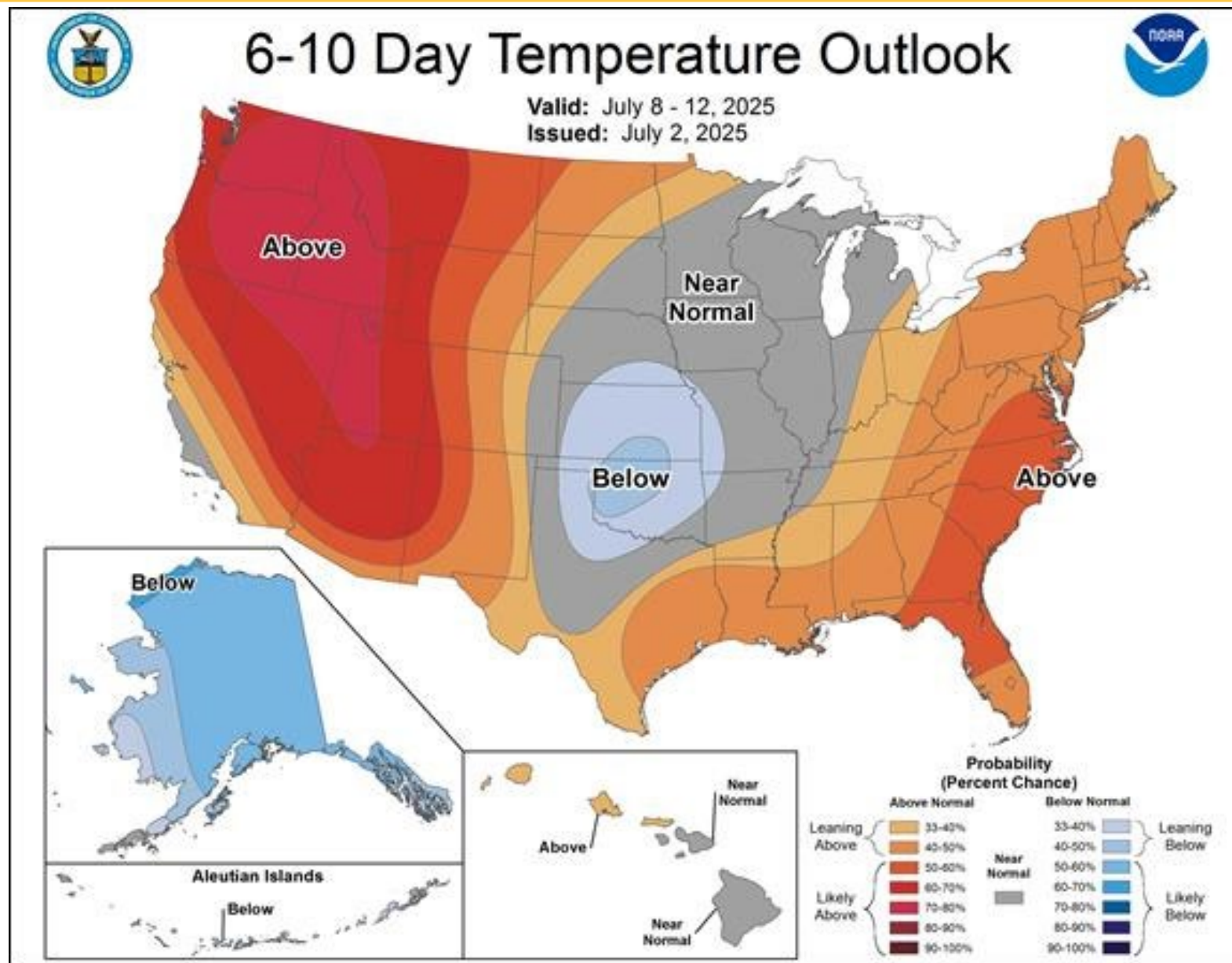
2025 Notable Wildfire Events

- January 7, 2025—Palisades, Hurst, and Eton wildfires (Los Angeles and Southern California areas)—multiple 500 kV, 230 kV and the PDCI impacted along with several thousand customers impacted
- May 29, 2025—Frazier Wildfire (Major 500 kV path interrupted—Potential Open Loop Operations)
- June 10, 2025—Ranch Fire (Multiple 500 kV lines considered a credible multiple contingency due to Ranch Fire in San Bernardino County)
- June 19, 2025—Rancho Fire (Potential Open Loop Operations)—Multiple 230-kV lines in northern California combined with the multiple 500 kV lines OOS

NIFC & NBAC Wildfire Perimeters 2024



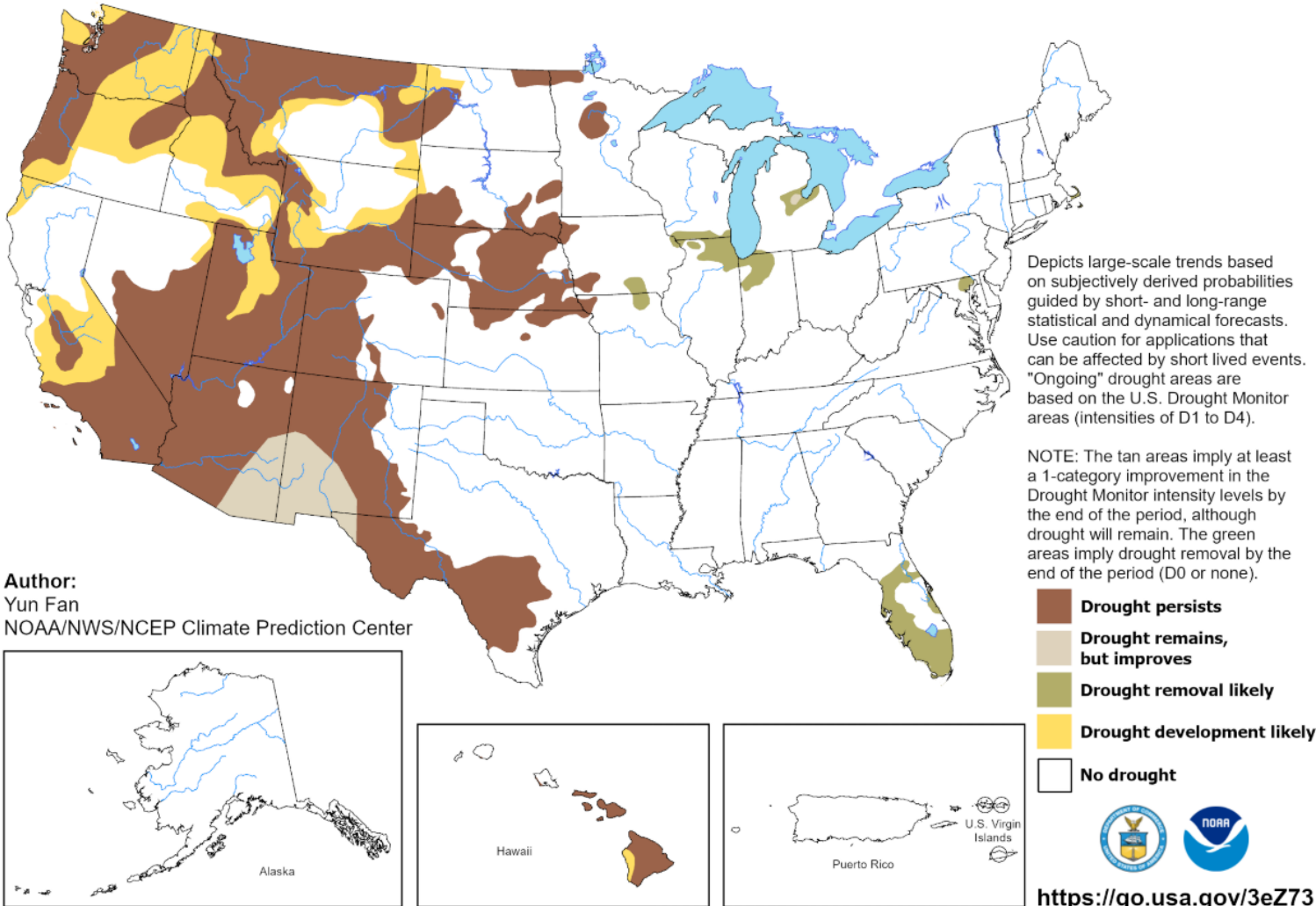
NOAA July 8-12 Temperature Outlook



2025 Seasonal Drought Outlook

U.S. Seasonal Drought Outlook Drought Tendency During the Valid Period

Valid for June 19 - September 30, 2025
Released June 19, 2025



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