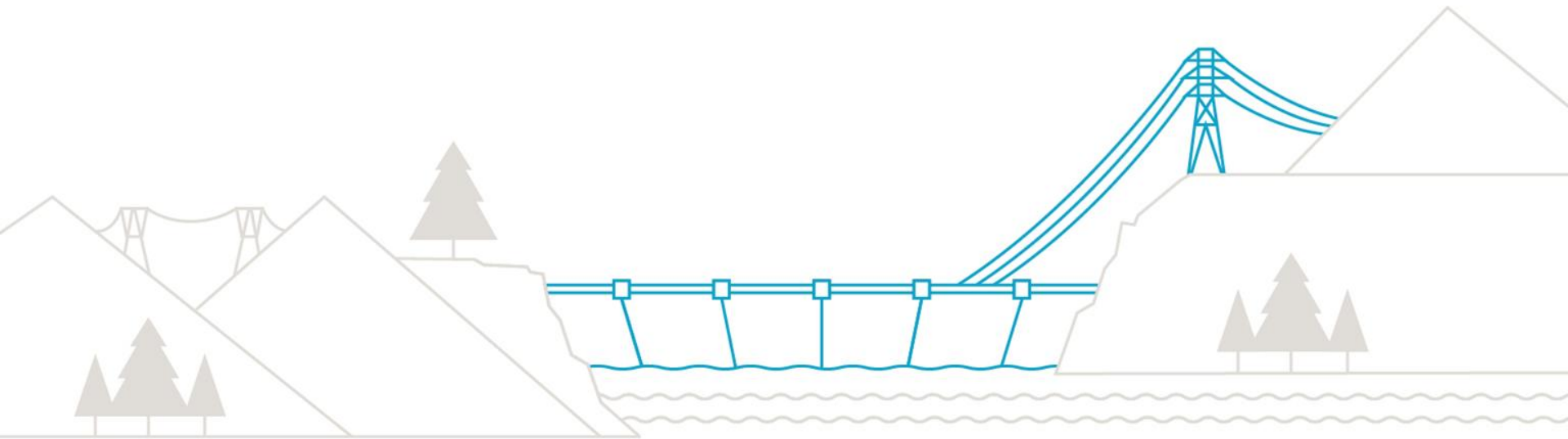


# BC Reliability Coordinator Update



October 2021 – WECC OC

# Agenda

- Operational updates since June 2021
- Wildfire impact summary
- Wildfire related event reviews
- Completed and planned activities

# BCRC Operations Review

- Operational updates since June 2021
  - Seasonal to above average temperatures
  - June 27-30 RC area breaking all-time temperature records
    - Multiple record peaks (new summer peak 9532 MW on June 28; All time peak remains 11,541 MW)
  - 500kV undersea cable to Vancouver Island forced outage
  - Unprecedented wildfire impacts to 500kV transmission system
- COVID-19 operations
  - Vaccines required November 22nd – aligns with BC public service
  - Return to office planned for January 10th

# Events

- July 8: 5L29 Malaspina-Dunsmuir undersea cable to Vancouver Island forced out – oil leak, *returned to service Aug 20*
- July and August wildfire impacts:
  - July 16: 5L91 Ashton Creek-Selkirk – fire retardant
  - July 18: Smoke resulted in loss of 5L76/5L79 Nicola-Ashton Creek, subsequent trip of Revelstoke GS
  - July 25: Smoke resulted in loss of 5L76 and 5L79, RAS operation opened 138kV paths
  - Aug 13: Smoke resulted in loss of 5L1/2/3 connection between Peace generation and Western Interconnection
  - Several other lower voltage circuits impacted

# Wildfire prep 2021

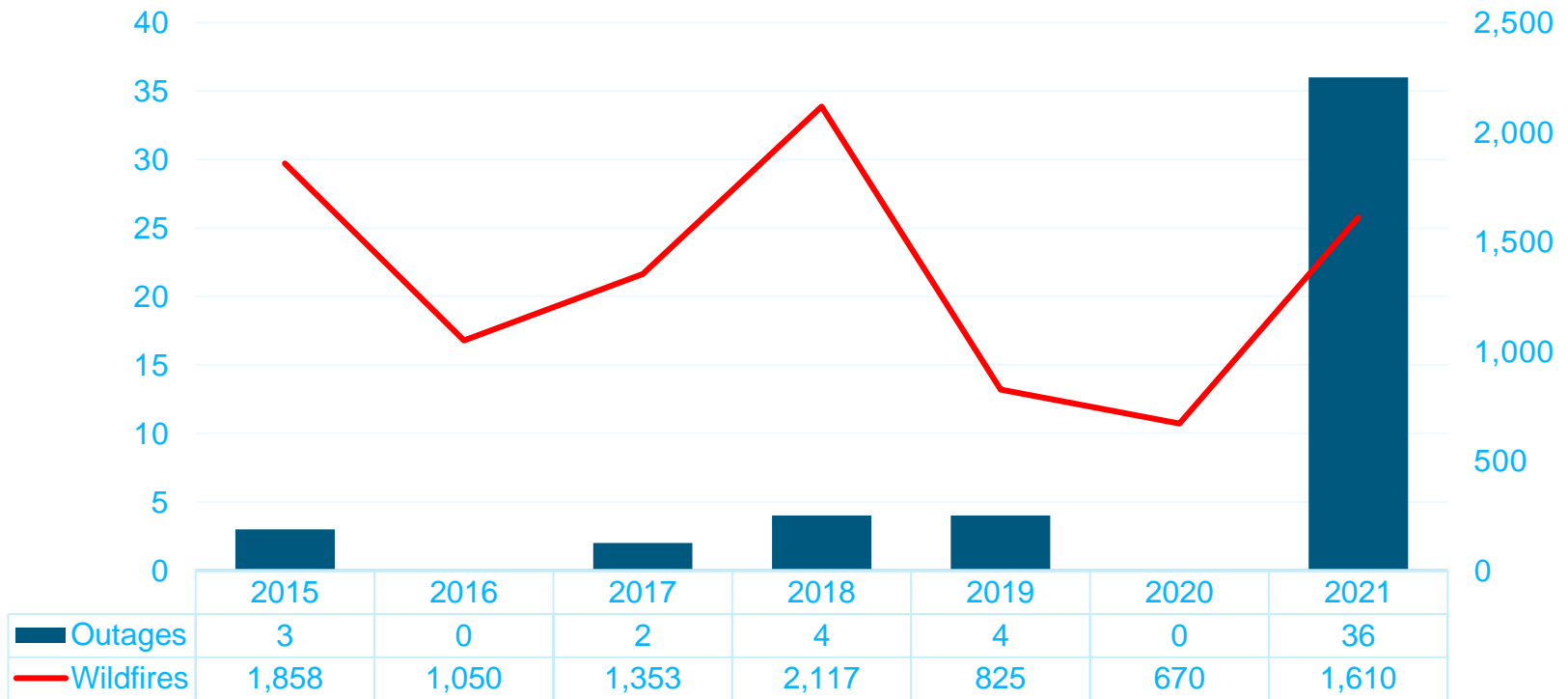
- No special precautions taken, standard readiness activities
- A higher than average fire year was expected based on preliminary forecast data, after two lower than average years
- Awareness maintained through various tools that integrate multiple data sources
- Wildfire coordination takes place as needed internally/externally
- Generally, wildfires are not a concern for 500kV system built on steel lattice towers, minimal impacts, more concern for sub-transmission, distribution built on wood poles that can be damaged and require repairs/replacements
- Recent significant fire years in 2017/2018 had minimal impacts to Bulk Electric System

# Wildfire season 2021

- 2021 represented the third most severe fire season in BC history with respect to area burned
  - 1 - 2018 (1.35M hectares burned)
  - 2 - 2017 (1.22M hectares burned)
  - **3 – 2021 (868,000 hectares burned)**
- Significant increase in wildfire hazard and fire activity in early July following late June heat event
- Aggressive fire behaviour in many cases hindered fire fighting efforts
- **More 500kV corridors (six) impacted than in any year in recent memory, with over 30 separate outage events**
- Typical year has <5 outages on 500kV

# Wildfire data 2015-2021

## Wildfires and 500kV impacts

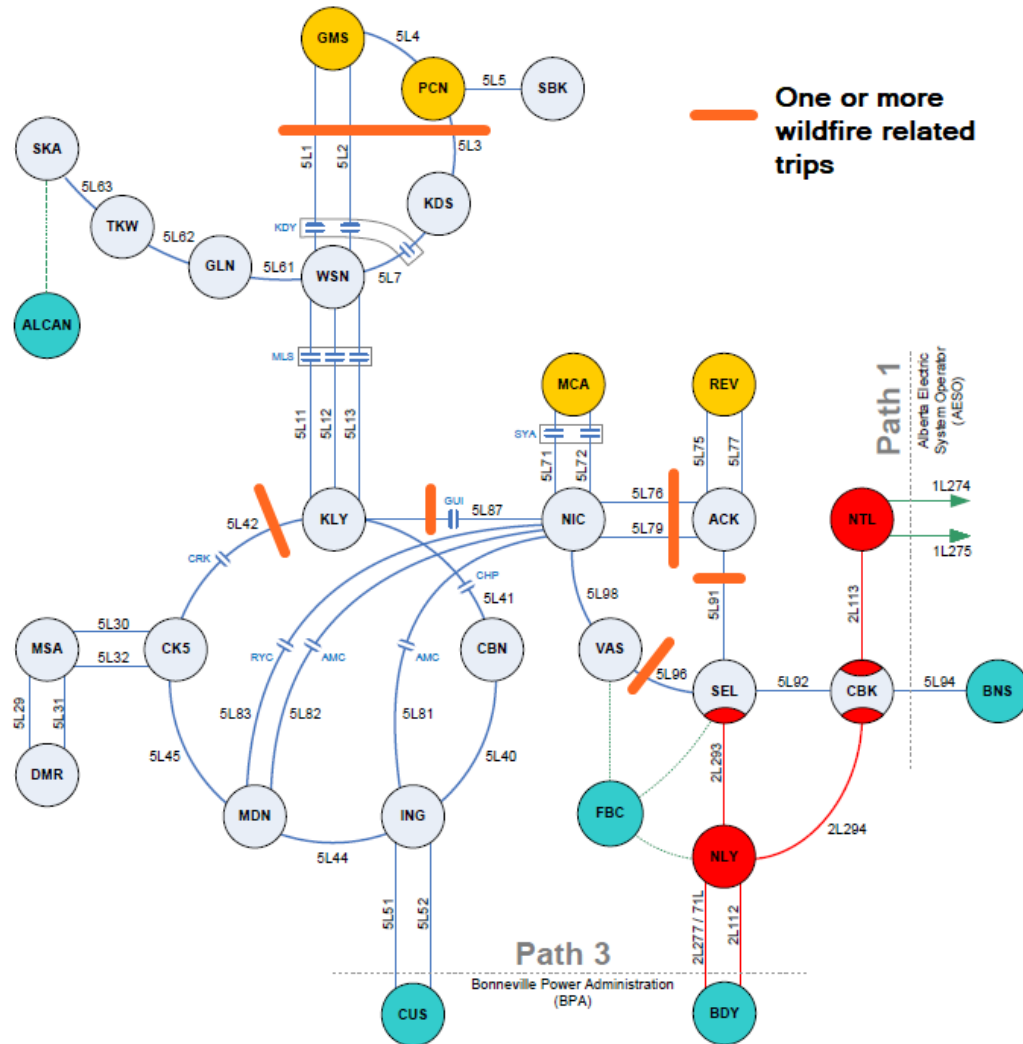


Sources: BC Hydro internal data,

[Wildfire Averages - Province of British Columbia \(gov.bc.ca\)](https://www.gov.bc.ca/wildfire/averages)

[Wildfire Season Summary - Province of British Columbia \(gov.bc.ca\)](https://www.gov.bc.ca/wildfire/season-summary)

# 500kV wildfire impacts

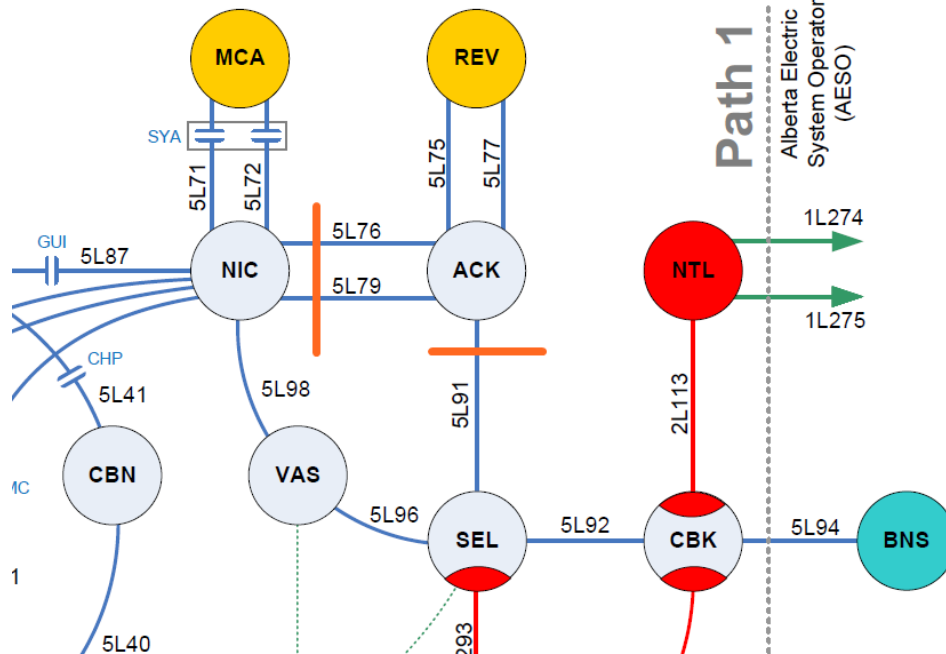


- Six 500kV corridors impacted by wildfire trips
- Majority of outages were short duration
- Outages > 1 hour experienced on four corridors
- Two events with significant generation impacts (July 18, Aug 13)



# July 18 event

REV = 2500 MW capacity



- 5L91 OOS pre-event
- 5L76 and 5L79 tripped due to smoke as wildfire encroached right of way
- REV generation tripped (~1100 MW)
- System frequency to 59.92Hz

# August 13 event



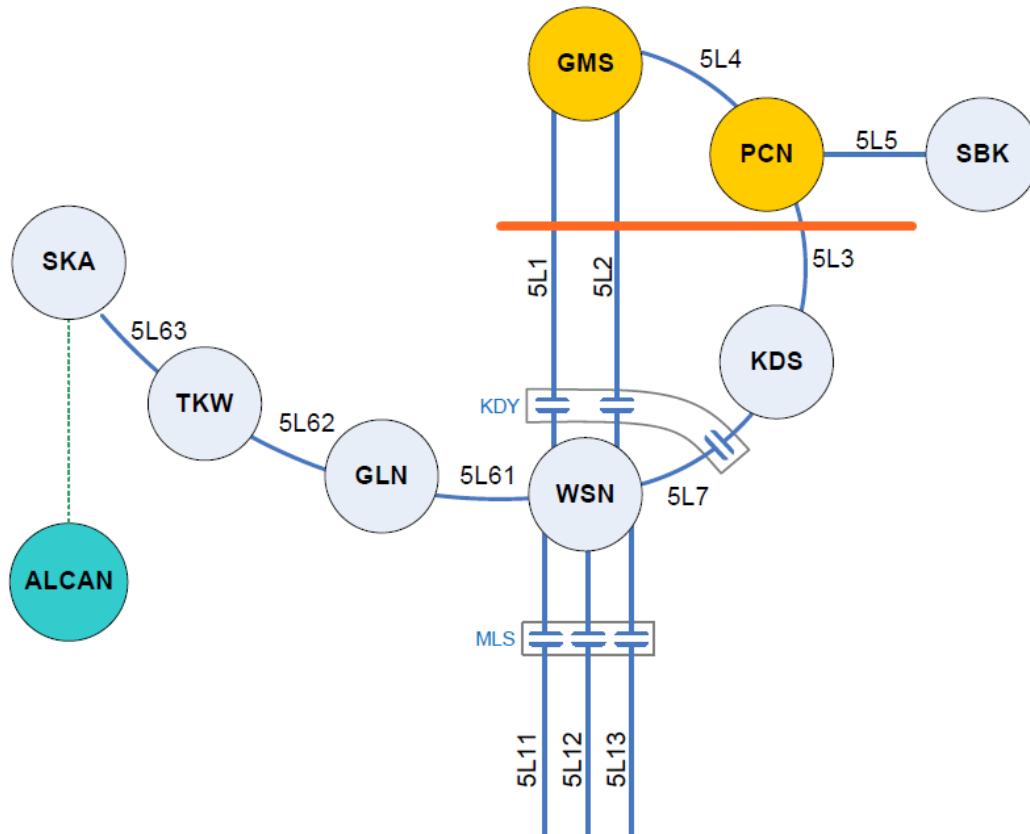
[#BCWildfire](#) is currently responding to fire # G72591 between [#MackenzieBC](#) and [#Chetwynd](#) on [#BCHwy97](#). The fire is approx. 150 hectares and is currently burning extremely vigorously. Structures have been lost and additional structures are immediately threatened.

6:25 PM · Aug 13, 2021 · Twitter Web App  
99 Retweets 9 Quote Tweets 148 Likes

**BC Wildfire Ser...** · Aug 13  
Replying to [@BCGovFireInfo](#)  
This wildfire has impacted a major BC Hydro transmission line. [#BCHwy97](#) is closed between Powder King Rd and Hasler Rd. [@DriveBC](#) [#BCWildfire](#)

# August 13 event

GMS + PCN = 3500 MW capacity



- High wildfire risk
- No known fires in area
- Several trip/reclose events with loss of all circuits less than 1 hour after first trip
- Loss of 2000+MW
- System frequency to 59.83Hz
- EEA-2 declared for 90 minutes
- Fire continued to burn along right of way for several hours

# After the fire



# Lessons learned and next steps

- Routine coordination calls with TOPs/RCs were helpful in ensuring all parties had same information
- Aggressive fire behaviour can be unpredictable and system risks/impacts can change rapidly
- August 13<sup>th</sup> event shows how significant BES impact can arise with little or no notice, plan to submit as Category '0' for further discussion at EPAS

# Completed Activities

- Annual Self-Assessment and RSAW refresh
- Recruitment – 1 RC Operator, 1 Compliance Advisor
- PRC-012 now effective in BC as of October 1<sup>st</sup>



# Upcoming Activities

- 2021 Restoration training – October 20, November 3, 10
- Continue establishing baseline for RC metrics
- Oscillation Monitoring coordination with other RCs, NERC/WECC working groups
- Participate in WECC Wildfire RC task force





