

FortisAlberta Wildfire Mitigation Strategies

Conservative



Recloser Blockage – EPSS (Enhanced Powerline Safety Settings)

Protective safety settings preventing automatic re-energization after a fault has been experienced.

Advanced



Fast Trip – EPSS (Enhanced Powerline Safety Settings)

Advanced protection coordination enabling nearly instantaneous system fault isolation.

Critical



PSPS (Public Safety Power Shutoff)

A last measure resort involving proactive system de-energization during periods of severe fire risk.

Recloser Blockage – EPSS

- Baseline wildfire ignition protective measure with the lowest impact to system reliability.
- Does not disrupt system protection coordination and maintains sectionalized restoration patrol abilities.

Protection Device Criteria	Devices with blockage functionality protecting FortisAlberta Overhead Assets in High Risk Fire Areas 5 and 6.		
Monitoring Area	Grasslands	Forested	
Wind Speed	N/A	N/A	
Fire Risk Metrics:			
1)	FWI >30	FWI >30	
2)	Grass Curing 75%	N/A	
Other Considerations	<ul style="list-style-type: none"> • AB Wildfire Red Flag Warning 		

Fast Trip – EPSS

- Rapidly detects and deenergizes powerline faults within 100 milliseconds.
- Disrupts system protection coordination, increasing outage durations and restoration patrol demands.
- Increased probability of negative reliability impact, drives the need for precise utilization supported by complex enablement criteria.
- System device coordination limitations can prevent the effective application of Fast Trip Protection due to incompatibility.

Protection Device Criteria	Devices identified through an engineering analysis across all fast trip capable devices within designated PSPS Areas.			
Monitoring Area	Grasslands	Foothills/ Mountains	Crowsnest Pass	Edson/ Whitecourt
Wind Speed	>40 km/h	>40 km/h	>40 km/h	>30 km/h
Fire Risk Metrics:				
1)	ISI >15	FWI >30	FWI >40	FWI >30
2)	Grass Curing 75%	Temp/RH Crossover	Temp/RH Crossover	Temp/RH Crossover
3)	FFMC >92	N/A	N/A	N/A
Other Considerations	<ul style="list-style-type: none"> • AB Wildfire Red Flag Watch/Warning • Fire Bans • Wind gusts • HDWI (Hot, Dry, Windy Index) • Upper air soundings • Seasonality/Burning Period 			

PSPS

- Implemented when critical fire weather conditions are present.
- Highly effective in eliminating ignition risk.
- Considered a last resort due to its disruptive nature.
- Requires careful impact planning and proactive stakeholder communication.
- Continuous Monitoring
- Detailed Review at Criteria Thresholds
- PSPS Approval/Communication Protocols
- De-Energization
- PSPS Local Event Support (Emergency Operations Centre)
- Conditions Improvement Restoration Patrol
- PSPS Patrol Completion/Re-Energization

Protection Device Criteria	Feeders identified in the high-risk areas PSPS analysis.		
Monitoring Area	Edson/Whitecourt	Banff/ Canmore	Crowsnest Pass
Wind Speed	>40 km/h	>60 km/h	>60 km/h
Fire Risk Metrics:	FWI >40	FWI >60	FWI >60
Other Considerations	<ul style="list-style-type: none"> • AB Wildfire Red Flag Watch/Warning • Fire Bans and Forest Closures • Wind gusts • Structural Wind Loads • Temp/RH crossover • HDWI (Hot, Dry, Windy Index) • Upper air soundings • Seasonality/Burning Period 		

• Fire Weather Index (FWI) • Initial Spread Index (ISI) • Fire Fuel Moisture Code (FFMC)