

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.
- Used throughout the service area in high-risk fire areas.

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"> • Alberta Wildfire Red Flag Watch/Warning 		

Fast Trip – EPSS

- Rapidly detects and deenergizes powerline faults within 100 milliseconds.
- Patrols are required before restoration resulting in increased outage duration.
- Increased sensitivity (in fault detection) which may result in more power outages.

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%	Temperature/ relative humidity crossover	Temperature/ relative humidity crossover	Temperature/ relative humidity crossover
3)	FFMC >92	N/A	N/A	N/A
Other Considerations	<ul style="list-style-type: none"> • Alberta Wildfire Red Flag Watch/Warning • Fire bans • Wind gusts 		<ul style="list-style-type: none"> • Hot-dry-windy index (HDWI) • Upper air soundings • Seasonality/burning period 	

PSPS

- Power is proactively turned off when critical wildfire conditions are present.
- Highly effective in eliminating ignition risk.
- Considered a last resort.
- Requires careful impact planning and proactive stakeholder communication.
- Continuous monitoring of real-time weather and threshold criteria.
- Activation of customer communication and warning of potential power shut off.
- Pre-planned and coordinated approach with municipalities during a PSPS (Emergency Operations Centre).
- Patrol prior to turning power back on.

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"> • Alberta Wildfire Red Flag Watch/Warning • Fire bans and forest closures • Wind gusts • Structural wind loads 		<ul style="list-style-type: none"> • Temperature/relative humidity crossover • Hot-dry-windy index • Upper air soundings • Seasonality/burning period

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