

December 2018 Windstorm response

AVICC - BC Hydro



April 13, 2019

Quick Facts from bchydro.com



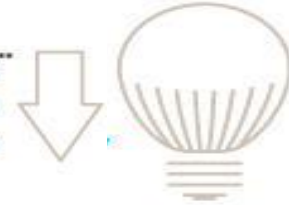
98%
clean electricity generated
in B.C. in fiscal 2018

Serves
95%
of the province's
population

The average household
uses approximately
10,000 kWh
per year

Provides over **4,000,000**
customers with reliable electricity

Among the lowest^{**}
residential rates
in North America



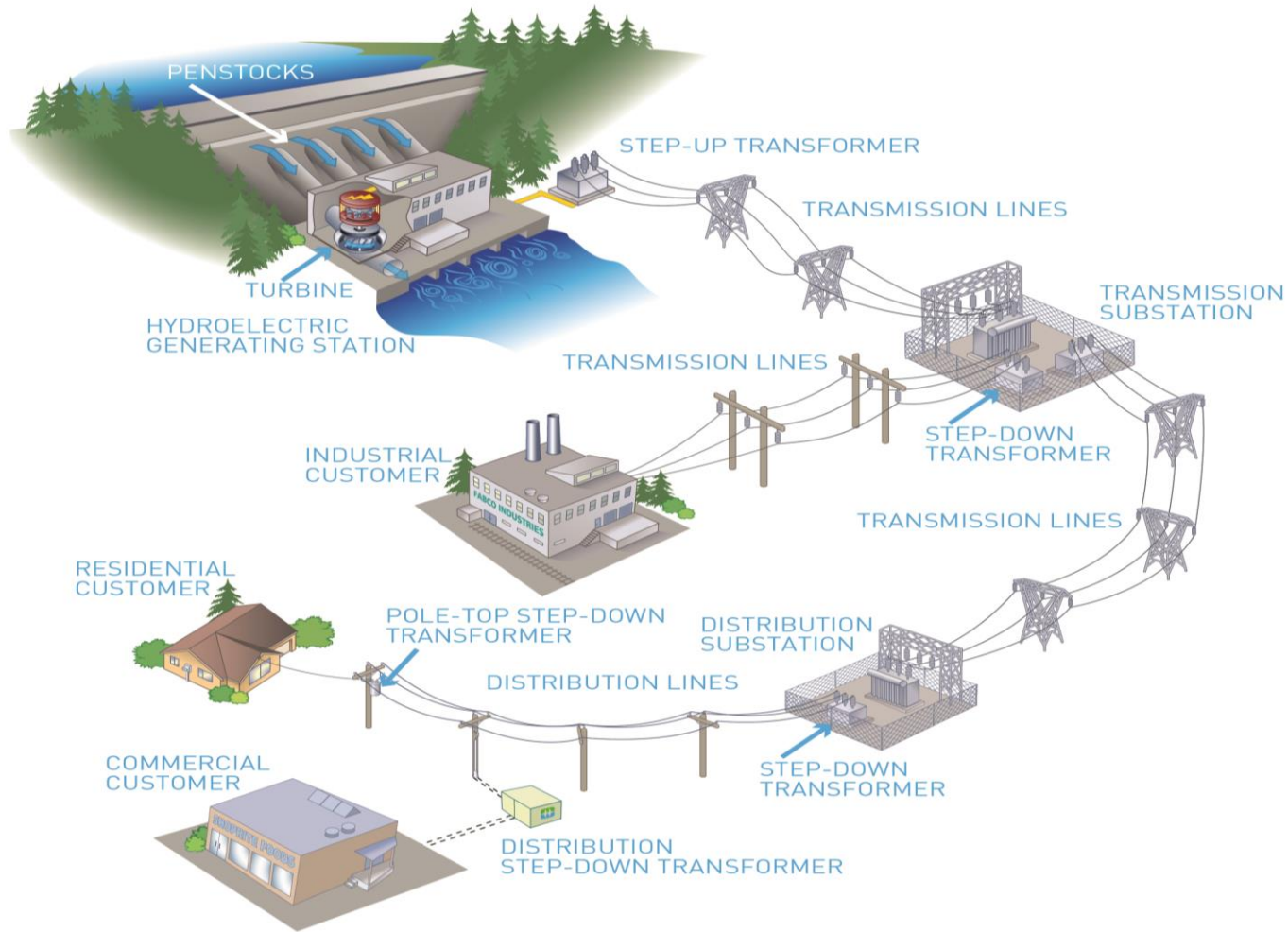
30
Hydro
Plants



BC Hydro has
a network of
approximately
79,000 kms
of transmission &
distribution lines



Over 300
substations



December 2018

Transmission

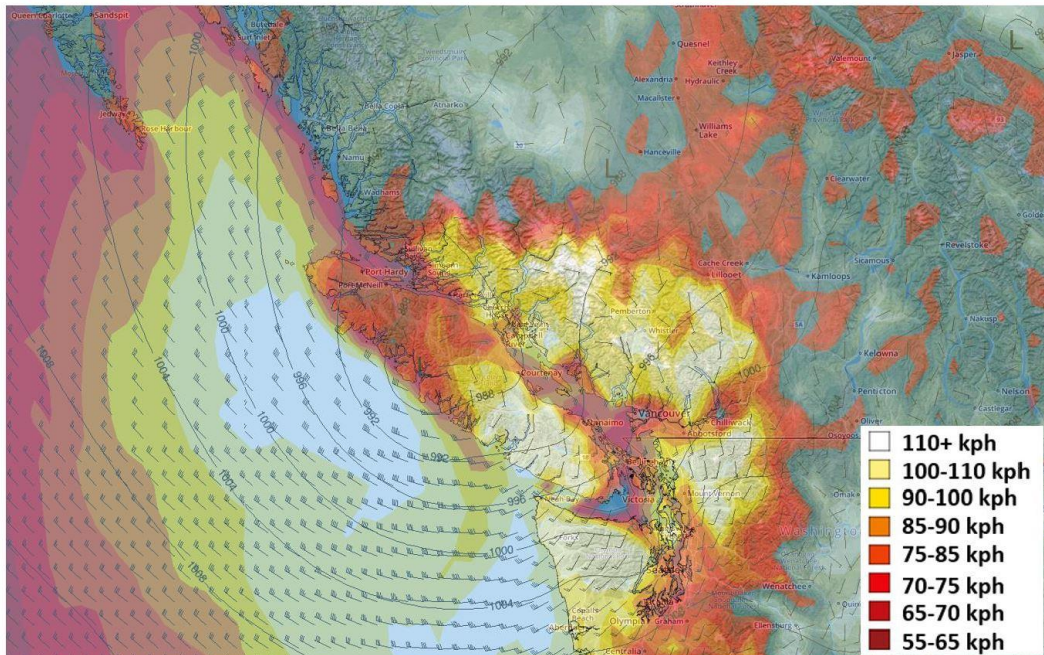


Legend

- Hydro Dam and Generating Station
- Hydro Dam – no Generating Station
- ▲ Thermal Generating Station
- ◆ Diesel Generating Station
- 230 kV Substation
- 287 kV Substation
- 500 kV Substation
- Regional Office
- Series Capacitor Station
- 500 kV Bulk System Transmission Line
- 287 kV Bulk System Transmission Line
- 230 kV Bulk System Transmission Line

Leading up to the storm

Thursday 16:00 PST – Forecast Wind Gusts and Direction:



Condition Orange - BC Hydro High Wind Warning

Valid 2:00 AM, Thu, Dec 20 to 6:00 PM PST, Thu, Dec 20, 2018

StormGeo has issued a Condition Orange for High Wind Warning for the following locations from 2:00 AM PST, Thu, Dec 20 to 6:00 PM PST, Thu, Dec 20.

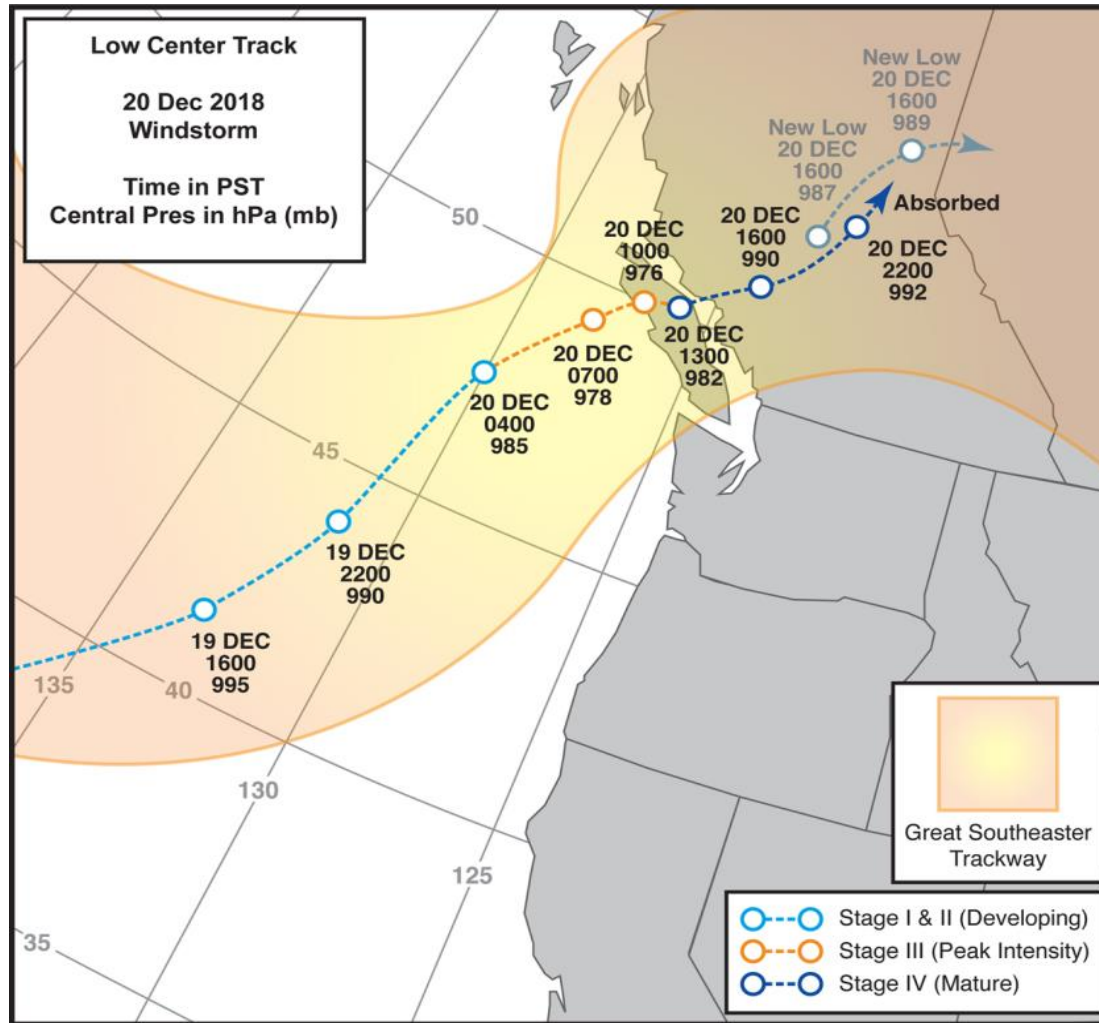
Location	Location
Port Alberni District Office	Campbell River
Uclulet	Duncan
Port Hardy	Port Alberni
	Victoria

Discussion:

An area of low pressure will track across the region tomorrow resulting in a round of strong gusty winds across the area. Look for southerly winds to increase during the early morning hours, peak during the mid-morning through early afternoon and then decrease during the evening. As the low tracks across the area, look for the winds to become northwesterly by the early afternoon. Peak wind gusts near the coast could reach up to around 90-110 kph.

Meteorologist: M. Haworth

Storm track



Really, really, really windy ...



South Rd, Gabriola Island

Summary of wind speeds

Location	Wind speed
Lennard Island Lighthouse	144 km/h
Tofino	111 km/h
Saturna Island	102 km/h
Abbotsford	101 km/h
Tsawwassen	98 km/h
Esquimalt	94 km/h
Victoria Airport	89 km/h
Vancouver Airport	87 km/h
Nanaimo	85 km/h

Source: Environment Canada

Emergency and storm response

SAFETY IS FIRST PRIORITY

- Life or limb calls
- High voltage transmission lines
- Priority circuits (Hospitals)
- Police/ fire calls
- Major infrastructure (water/ sewer)
- Ferry terminals
- Largest number of customers
- Smaller neighbourhoods

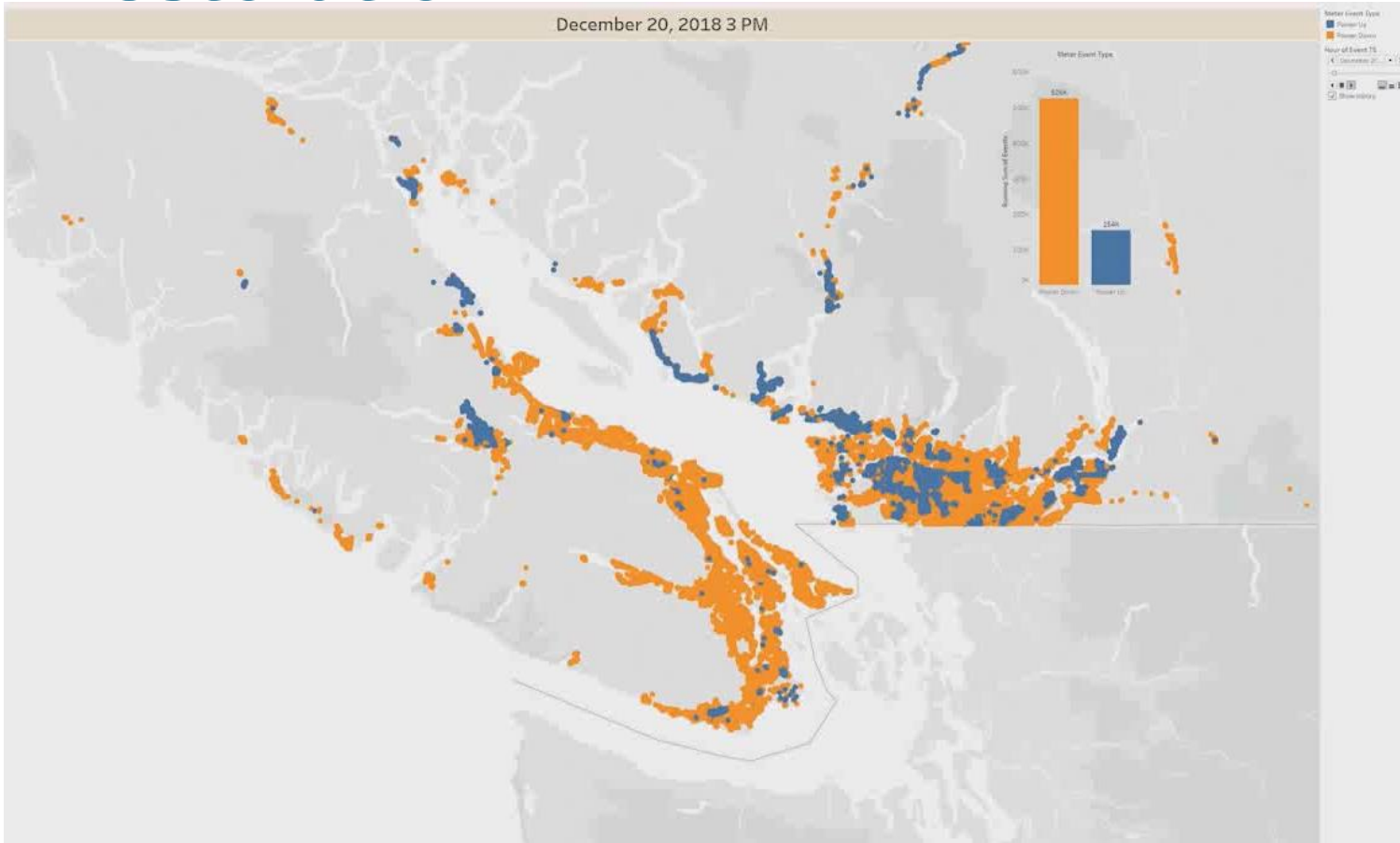
How we responded



73% restored in the first 24 hours

Restoration

December 20, 2018 3 PM



Challenges we faced



Damage ...



Whiskey Creek/ Hilliers

Transportation



Gulf Islands ferry

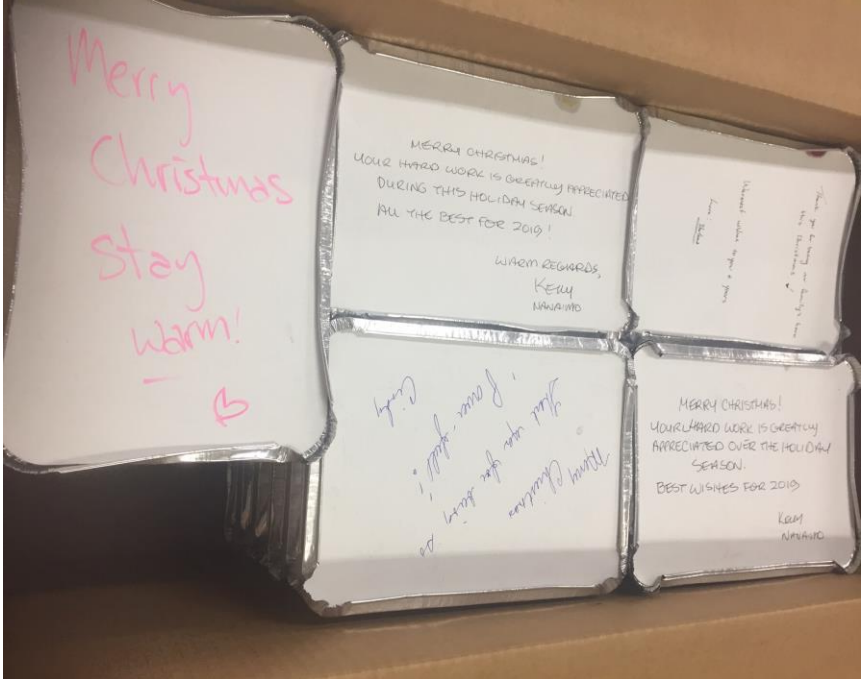
Accommodations



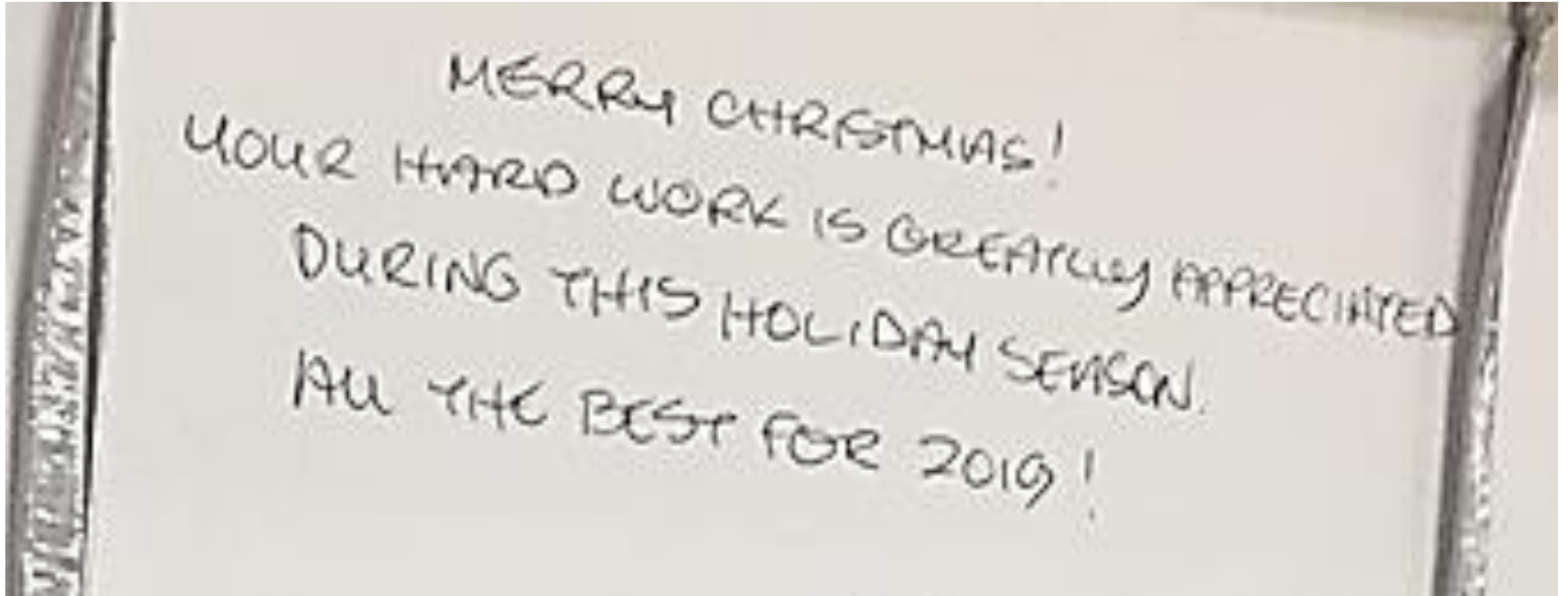
Food



Christmas Day, Nanaimo



...and warm wishes for our crews



Customer feedback

Big thanks to @bchydro crews and all the out of town crews that came to help . They were Santa's elves working their hardest to get everyone back up and running. Hope they can now start to enjoy their Christmas . #thankyoubchydro ❤️

THANK YOU TO ALL THE LINEMEN AND ALL OTHERS FROM THE CALL CENTRE TO THE APPRENTICES OUT THERE, YOU GUYS AND GIRLS HAVE DONE A GREAT JOB PULLING 16 HOUR SHIFTS AND BUSTING YOUR AS*ES TO GET THIS ISLAND POWERED BACK UP !! HATS OFF!! POWER IS SOMETHING ALOT OF US TAKE FOR GRANTED.

Huge thank you to all the amazing people working tirelessly to restore power across #BC. And a huge thank you to the families missing their mom, dad, brother or sister etc while they're out working day and night. We are all so grateful.

Thank you so much bc hydro for being out there in the cold weather and not having much family time this Christmas😊. We love and appreciate all the crews working around the clock to get power back on!!! Big hugs to all and merry Christmas and a happy New year❤️❤️

Dear BC HYDRO WORKERS

You could be at home, safe and warm with your loved ones but instead you are braving the cold, the rain and the wild wind storm while trying to restore power to families like ours.

Thank you
#BCstorm @bchydro

A huge shoutout to the hydro and line crews, as well as all of the arborists and cleanup crews, who are sacrificing their holidays to restore electricity to the people of Vancouver Island and the Gulf Islands. Thank you!!!



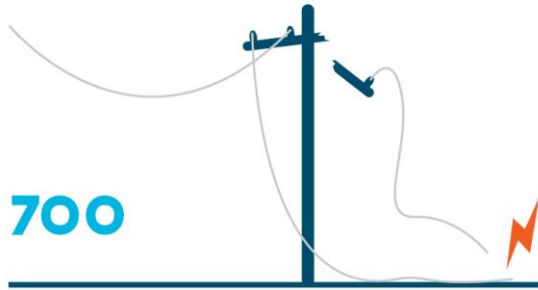
#BCstorm @bchydro



Our power back on today on Salt Spring, thank you!!! My 5 and 7 yr old boys both say they want to grow up to be linesmen @bchydro bc they're such heroes:)

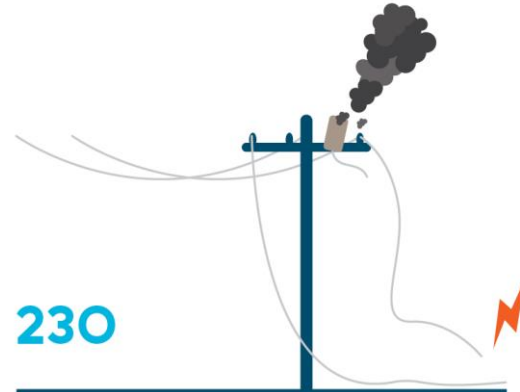
 **BC Hydro**
Power smart

Damage



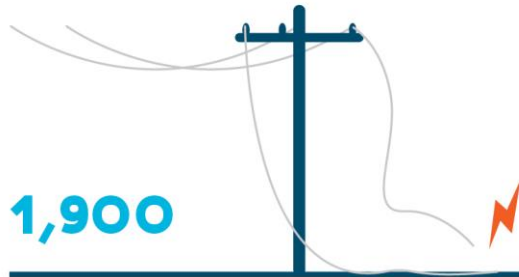
700

Cross-arms



230

Transformers



1,900

Spans of wire down



390

Power poles

Our most severe storm events



Oct 1962



Dec 2006



Aug 2015



Dec 2018

Working with local government

Storm prep meetings – Fall

- Storm prep
- Causes of outages
- Response
- Restoration
- Safety issues
- System - veg mgmt, system planning and improvements
- Coordination with local government
- Roundtable

Storm follow up

- Salt Spring, Southern Gulf Islands, Lake Cowichan, Qualicum

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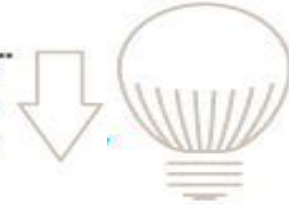
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