Fort Frances Power Corporation Local Generation Developments & Customer Reliability Concerns

PREPARED FOR MARCH 8TH, 2021 NW IRRP WORKING GROUP KICK-OFF MEETING

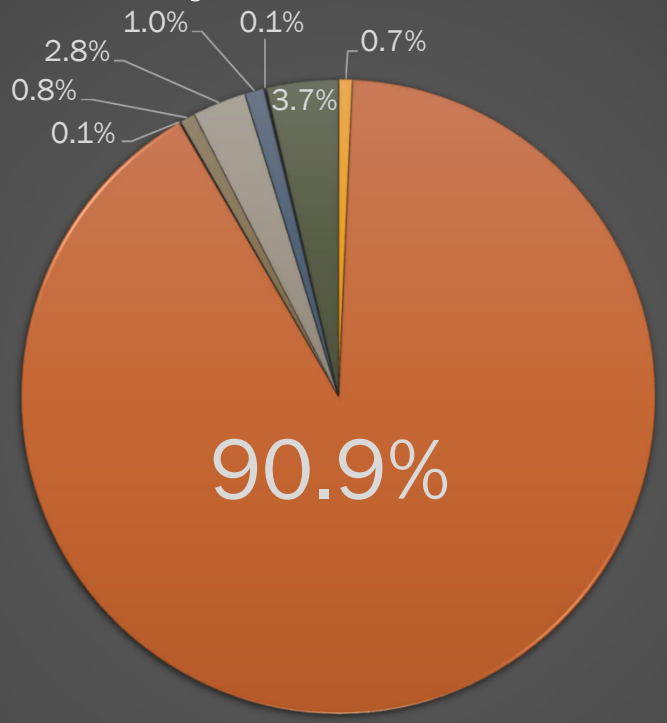
Local Generation Developments

- Town of Fort Frances in partnership with FFPC and other community stakeholder are exploring repurposing the former Resolute Pulp and Paper Mill's Biomass Boiler and Cogeneration Plants.
- A $400,000 feasibility study is currently in Phase 2 approval for funding from FedNor.
- Funding decision to be expected within next 2 months.
- Potential exists for up to 100 MW of Generation to come online.
    - 50 MW Biomass Powered
    - 50 MW Cogeneration (Natural Gas) Powered
- Main purpose of study is to prevent the demolition of these assets and to attract industrial partner.

Customer Reliability Concerns

- Town of Fort Frances experiencing annual/semi-annual “Loss of Supply” outages due to necessary planned removal of circuit F1B from service.
- Due to single transmission circuit supply design, removal of circuit F1B results in community wide power outage as there is no alternate supply (urban designs usually incorporate alternate supply – Dual Electricity Supply Network (DESN) design commonly used).
- Outage durations typically between 4 – 8 Hours.
- FFPC receiving increasing pressure from customers to eliminate extended outages.
  - Complaints from Regional Hospital that no surgeries can be conducted.
  - Complaints from local Clinics regarding fears of vaccines spoiling from loss of refrigeration.
  - Complaints from Hotels that guests cannot be accommodated (no hot shower, no lights, etc.)
  - Complaints from local Businesses due to forced business closures.
  - Complaints from customers ranging from concerns of sump pumps not running, to not children not having WIFI access.
- Customer surveys suggest that most customers can live with short outages (such as switching outages), but are upset when extended outages occur.

Town of Fort Frances 10 Year % Customer Interruption Hours by OEB Cause Code



OEB Cause Code	10 Year % Customer Interruption Hours by OEB Cause Code
0 - Unknown/Other	0.0%
1 - Scheduled Outage	0.7%
2 - Loss of Supply	***90.9%***
3 - Tree Contacts	0.1%
4 - Lightning	0.8%
5 - Defective Equipment	2.8%
6 - Adverse Weather	1.0%
7 - Adverse Environment	0.1%
8 - Human Element	0.0%
9 - Foreign Interference	3.7%
Total Customer Interruption Hours	**100.0%**

- 0 - Unknown/Other
- 1 - Scheduled Outage
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- 4 - Lightning
- 5 - Defective Equipment
- 6 - Adverse Weather
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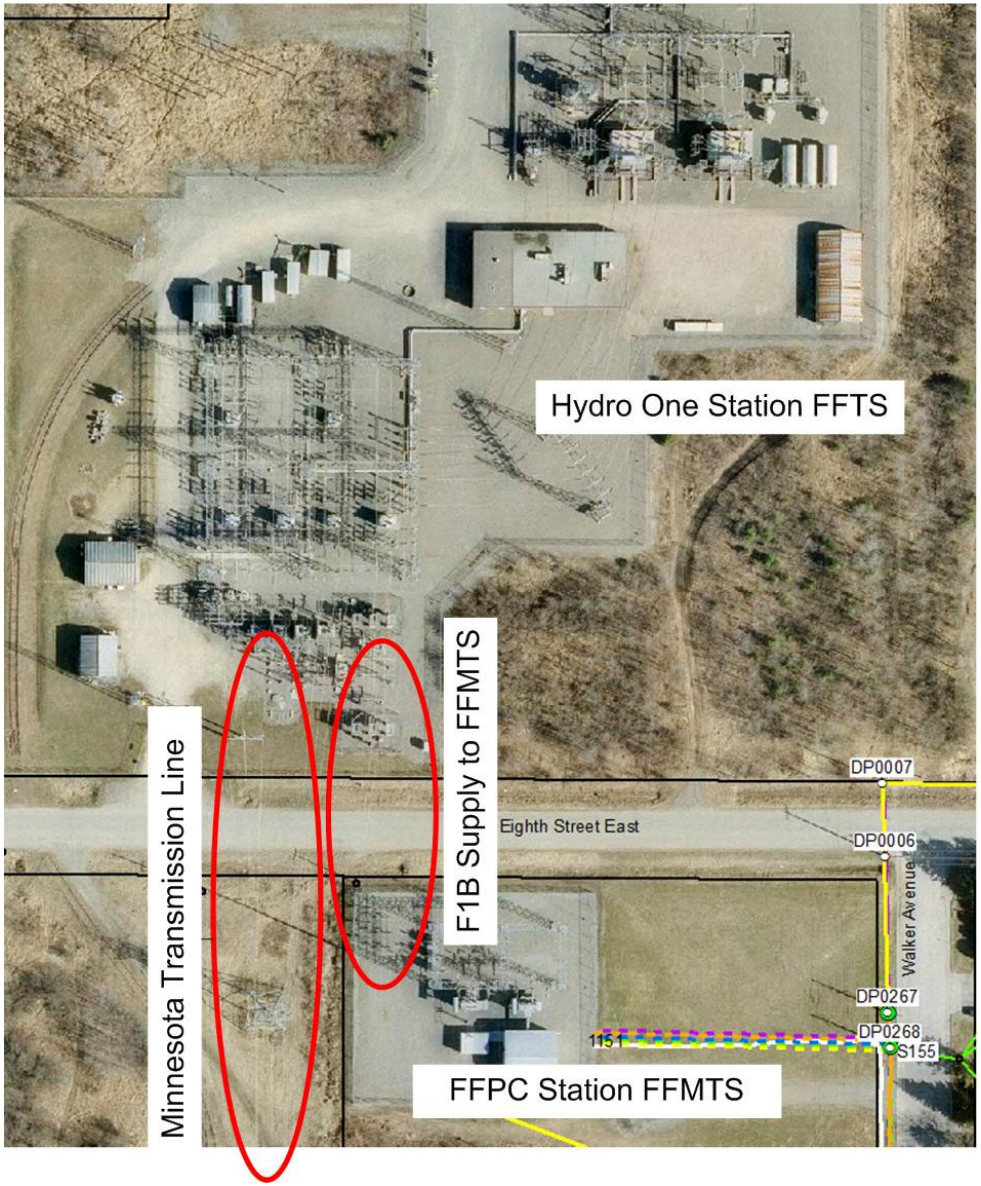
- 8 - Human Element
- 9 - Foreign Interference

Addressing Customer Concerns

- Planned Transmission Circuit Outages are currently not taken into consideration when assessing the performance and reliability of transmission circuits.
  - Recommend that Planned Transmission Circuit Outages be included in assessment of overall circuit reliability and performance.
  - In FFPC's experience, planned transmission circuit outages account for over 90% of all customer interruption hours incurred over the last 10 years.
    - Circuit performance reports currently do not recognize impact of planned outages.
    - Circuit is performing well in all other respects; however, customers are unhappy.
- Opportunities exist for relatively low-cost transmission infrastructure investments to significantly improve the reliability of supply to customers.
  - In the case of Fort Frances, due to the proximity of transformer stations, the construction of a single span of transmission circuit from HONI Station "FFTS" across the street to FFPC's station "FFMTS" could establish a Dual Electricity Supply Network (DESN) configuration.
  - DESN configuration would significantly reduce the probability of any future Loss of Supply type events and could reduce as much as 90% of all customer interruption hours experienced.

Opportunity for low-cost investment to achieve high reliability performance.

Due to proximity of stations, the construction of a single span of transmission circuit from FFTS to FFMTS could provide a “Dual Electricity Supply Network” configuration to serve the Town of Fort Frances, thereby significantly improving the reliability of supply availability to the community. Up to 90% of all customer interruption hours could be eliminated.



Questions?