Q. **Reference: Volume II, Upgrade Worst-Performing Distribution Feeders (2027–2028); Schedule 1, page 21, Table 5**

The project is the refurbishment of Fleur de Lys Line 1. The estimated cost is $176,300 in 2027 and $3,565,100 in total. Hydro states that the feeder serves approximately 130 customers and reports five-year average customer-hours of interruption of 3,026.89. Table 5 ranks South Brook, Line 1 first by customer-hours of interruption, at 16,075.

a) Please provide, for Fleur de Lys Line 1 and South Brook Line 1: customer count; five-year SAIDI, SAIFI, and customer-hours of interruption; dominant outage cause; 2027 and total cost, if any; and cost per customer.

b) Please provide the forecast change in SAIDI, SAIFI, or customer-hours of interruption from the proposed Fleur de Lys work, and the reason South Brook, Line 1 was not selected.

c) Please identify the weather-hardening standard Hydro states it has updated "*due to climate change,*" the respects in which Fleur de Lys Line 1 does not meet that standard, and the cost of the work required for compliance as distinct from the replacement of failed or deteriorated components.

A. **a)** Please see Table 1 for customer count, five-year SAIDI[1], SAIFI[2], and CHI[3], dominant outage cause, 2027 and total cost, and cost per customer for Fleur de Lys Line 1 and South Brook Line 1.

[1] System Average Interruption Duration Index.
[2] System Average Interruption Frequency Index.
[3] Customer-hours of interruption.

Table 1: Fleur de Lys Line 1 and South Brook Line 1 Outage Information[4]

	Fleur de Lys Line 1	South Brook Line 1
Customer Count	184	913
Dominant Outage Cause	Insulator Failure	Vegetation
2027 Cost ($)	$176,300	N/A
Total Cost ($)	$3,565,100	N/A
Cost per Customer ($)	$19,375.54	N/A

b) As discussed in Newfoundland and Labrador Hydro's ("Hydro") response to CA-NLH-005 of this proceeding, Hydro is not currently able to quantify a discrete reliability improvement attributable to each individual asset investment. Therefore, Hydro does not forecast a change in SAIDI, SAIFI, CHI, or any other reliability metric as a direct result of the completion of proposed work. The proposed work was introduced and justified based on recent definitive reliability data and analyzation during the Worst Performing Feeder Analysis.

The reason that South Brook - Line 1 was not selected is due to vegetation being the dominant outage cause for the five-year data period. This issue will be resolved through Hydro's operational Vegetation Management Program, with vegetation management activities ongoing throughout 2026. Component failure was identified only as a minor contributor to outage statistics for the five-year period.

c) Hydro Distribution Weather Hardening Design Standard was developed to improve system resiliency against adverse weather conditions such as rain, ice storms, snow, winds, extreme ambient temperatures, freezing fog, frost, and other extreme conditions.

The standard provides a general guideline for design aspects to create a more robust system, applicable to specific geographic locations that are prone to an increased number of severe weather events and adverse weather patterns. As such, Weather Hardening Design may be applied to the entire feeder or targeted to specific sections. The extents of Weather Hardening Design are dependent upon the specific location of the line and its relevance to the established design criteria.

[4] "2027 Capital Budget Application", Newfoundland and Labrador Hydro, July 14, 2026, Vol. II, Sch. 7, Project 7.

The standard requirements have been based on the following categories and criteria:

- Geographical location.
  - High elevated area (>500 feet).
  - High salt contaminated area.
  - High density of tree cover.
  - Open wide field- high wind.
- Trouble shooting access-Remote Location.
- Outage history.
  - Cascade effect or separate components on separate structure.
  - Structure performance.

For locations marked as 'weather hardening design', the standard shall be followed for constructing a new feeder or re-routing, repair, and maintenance of an existing.

The section of FDL L1 that has been proposed for upgrading in accordance with this standard is located in a high elevation area which exceeds the specified criteria limit of 500 ft. It is also prone to severe wind and ice storms, which has historically resulted in failures. As such, Hydro has selected to implement specific criteria identified in the Ice Storm (Design 1) standard based on the operational experience including, but not limited to, stronger poles, span shortening, armless construction, increased frequency of dead-ends with composite arms, and additional guying. This standard is provided below.

Ice Storm Area (Design 1)

- Stronger pole strengths: All wood poles shall be minimum class 2.
- Use armless construction for A and B structures.

- Use composite crossarm for D structures (if available). Use one crossarm for 3D or 3DE.

- Increased number of Deadend: Minimum one Deadend structure is recommended for every 5 spans.

- Additional guy wires for Deadend structures: Additional guy wires shall be installed for “D” structures.

- Span length reduction: Where practical, the span length is recommended to be reduced to 80% of the chart values (DI-03-17, DI-03-18 and DI-03-19) or 70m whichever is smaller.

The cost for this work that is distinct from the like-for-like replacement of failed or deteriorated components for this project specifically is $461,000.