

- 1 Q. The Upgrade Worst-Performing Distribution Feeders (2025–2027) program (“WPF Program”),
2 approved in P.U. 28(2024), included refurbishment of English Harbour West (“EHW”)
3 distribution feeder EHW-L1. The approved WPF Program identified two sections of three-phase
4 line for upgrade. Section 1, approximately 23 kilometres, is also part of the distribution upgrades
5 required for the customer and reflected in the CIAC calculation (“CIAC Project”). The CIAC
6 Project also includes installing a 477 ASC overhead conductor.
- 7 a) Explain whether the increased conductor size caused changes to the distribution structures
8 (poles, cross arms and insulators) on the 23 km section of the existing distribution system
9 and identify the quantity of poles, cross arms, conductor and insulators that are in common
10 between the WPF Program and the CIAC Project.
- 11 b) Provide the detailed calculations of the \$3,250,700 for the CIAC Project, including the cost
12 and quantity of poles, cross arms, conductor and insulators and a separate breakdown of
13 the amounts for the 5.5 km extension and the 23 km upgrade.
- 14 c) Explain, in detail, how the already approved WPF Program costs are impacted and how they
15 are treated in the CIAC Project costs, including if there is an anticipated reduction to the
16 WPF Program cost estimate.
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- 19 A. a) The increased conductor size will result in changes to the quantity of planned structures
20 originally planned for the Worst Performing Feeder (“WPF”) project. The Contribution in
21 Aid of Construction (“CIAC”) project will require approximately seventy additional
22 structures within the common 23 km section of distribution line. These structures will be
23 single pole structures with frameless construction so no cross arms will be required. The
24 costs for these additional structures have been accounted for in the CIAC project proposal.
25 No additional scope/costs are included in the WPF Project as a result of customer
26 requirements under the CIAC project proposal.

- b) Refer to attached cost estimates for both the 23 km upgrade section and the new 5.5 km section of distribution line. Refer to table below for cost details and quantities associated with poles, cross arms, conductor and insulator with respect to the CIAC cost estimate.¹

Component	23 km Section	5.5 km Section
Poles (prices only include pole installation and not framing)	70 Additional Poles (\$326,000)	100 Poles (\$468,000)
Cross Arms	Cross arms will not be used for this project as we will be utilizing armless construction standards.	
Conductor	72,450 m of 477 ASC (\$1,159,200) 24,150 m of 4/0 AASC (\$241,500) The prices proposed in the CIAC estimate would only include the incremental cost compared to the WPF Project. As such, the price for Conductor in the CIAC estimate would be \$627,900.	17,325 m of 4/0 AASC (\$173,250) 5,775 m of 1/0 AASC (\$46,200)
Insulators ²	210 Insulators + Clamps (\$52,500) The prices proposed in the CIAC estimate would only include the incremental cost compared to the WPF Project. As such, the price for insulators associated with the CIAC project would only be due to the additional 70 structures required.	300 Insulators + Clamps (\$75,000)

- c) The CIAC requested from the customer has been calculated based on new line extension and the incremental cost of the increased conductor size, additional structures and new equipment required to meet the requirements of the proposed CIAC project. As the costs proposed for recovery from the customer only represent the incremental work required for the CIAC project, there would be no anticipated impact to the WPF Program cost estimate. As discussed in Newfoundland and Labrador Hydro's response to PUB-NLH-005(c), the

¹ The table reflects the direct cost of supply and installation for each of the specific components requested and does not reflect all aspects of structure/line development. The remaining balance which makes up the total \$3,250,700 relates to other project costs such as engineering design, project management, etc.

² The costs shown for the insulators only include supply as the cost of installation is typically included as a part of structure framing.

- 1 change in sizing of the overhead conductor from 1/0 AASC to 4/0 AASC on the first 23 km
- 2 would have occurred in the absence of the customer's request.