

1 Q. **Reference:** Schedule 1, page 9, lines 9-13. Hydro states:

2 “While Alternative 4 is the least-cost alternative to meet the projected system requirements of
3 the distribution system as a result of the customer’s request for service, its selection inherently
4 provides additional capacity on the EHW system beyond that required by the customer. Hydro
5 has therefore applied a betterment credit in determining the required customer contribution,
6 calculated as the incremental cost of providing that same capacity increase absent the new
7 customer’s load.”

8 a) When the WPF program was proposed in the 2025 Capital Budget Applications, was
9 additional capacity projected to be available on the EHW system after completion of the
10 work? If so, provide the anticipated additional available capacity in MWs.

11 b) Provide the additional capacity, in MWs, anticipated to be available on the EHW system
12 after the WPF program and the proposed CIAC Project are completed. Identify how much of
13 this additional capacity will be used by the CIAC customer.

14 c) Explain why a betterment credit was applied when projected load growth for the EHW
15 system would already be served by the approved WPF project and the anticipated additional
16 capacity will be available only as a result of serving the CIAC customer. Address that Hydro
17 has selected the least cost approach to reliably serve the CIAC customer and that Hydro
18 cannot design system upgrades to match the load requirements of the CIAC customer
19 facility.

20 d) Is Hydro aware of other CIAC calculations/applications where a betterment credit was
21 applied when additional capacity is available only as a result of serving a new customer’s
22 load? If so, provide details.

23 e) Provide the load information and the detailed cost estimate for the calculation of the
24 \$497,516 betterment credit.

25 f) How would Hydro address the betterment credit and the CIAC calculation if the customer’s
26 future load requirements materially exceed the demand forecast used in the CIAC
27 calculation and partially or fully utilized the excess capacity reflected in the betterment
28 credit? Please explain.

g) How would Hydro address the betterment credit and the CIAC calculation if the capital costs of the project materially exceed the estimated costs used in the CIAC? Please explain.

A. a) No, when the Worst Performing Feeders (“WPF”) program was proposed in the 2025 Capital Budget Applications, additional capacity was not projected to be available on the English Harbour West (“EHW”) system after completion of the work.

b) The additional available capacity on the EHW system cannot be defined as a single value, as the impact of additional load depends heavily on a number of factors.¹

For the purpose of this response, it has been assumed that the load growth would be proportional across the system, the peak of the new load will occur the same time as the system peak following the connection of the proposed Contribution in Aid of Construction (“CIAC”) customer, the system power factor will remain unchanged, and that once any criteria violation is present, the available capacity is assumed to have been met.

Under these set of assumptions, the existing capacity of the EHW system is approximately 2.4 MW.² After completing both the WPF program and the proposed CIAC project, the total capacity is expected to be approximately 5.1 MW.³ Of this, approximately 1.6 MW will be distributed to the CIAC customer, leaving approximately 0.6 MW of additional capacity available for new growth.

Please see the table below for the capacity breakdown.

¹ Factors include where the additional load is located, when the additional load will experience its peak demand (winter, summer, etc), and other details such as power factor, or phase configuration. There are also different limits to which the impact of the additional load could be compared to, such as whether the impact causes a system planning criteria violation that can be addressed by operational measures (ex. adjusting voltage regulator settings, balancing the system), whether the impact causes a system planning criteria violation that requires capital upgrades, and whether the impact causes a significant enough planning criteria violation that it poses enough risk to reliability or equipment damage to warrant delaying a customer connection.

² The current load forecast of 2.9 MW exceeds the current capacity of the system (2.4 MW). This planning criteria violation will be addressed by the proposed capital upgrades.

³ It is calculated assuming proportional load growth across the system.

| Scenario | Approximate Capacity (MW) |
|----------------------------------|---------------------------|
| Total after WPF and CIAC Project | 5.1 |
| Less: Current Load Forecast | 2.9 |
| Less: CIAC customer load | 1.6 |
| Additional Available Capacity | 0.6 |

- c) The WPF program in EHW was estimated under the assumption that the overhead conductor on the first 23 km would be replaced with the same conductor that is currently installed (1/0 AASC conductor). Simultaneously with, but not in consideration of Newfoundland and Labrador Hydro’s (“Hydro”) review of the necessary work to meet the Customer’s new service request, Hydro gave additional consideration to equipment sizing for the WPF Project, as is typical practice for Hydro’s capital projects.
- As referenced in PUB-NLH-003 of this proceeding, in 2024, the forecasted load for EHW was approximately 2.9 MW. Load flow analysis using this forecast data indicated a section with low-voltage issues and temporary overvoltage issues on the EHW system. Prior to receiving the new service request from the proposed CIAC customer, Hydro had been working on measures to address the criteria violations.⁴ Due to these system conditions, the sizing analysis recommended using 4/0 AASC on the first 23 km in the absence of the new service request.
- Using 4/0 AASC as the main trunk conductor on a distribution feeder is common and generally recommended. For example, Newfoundland Power’s Distribution Standard⁵ recommends installing 4/0 AASC for rural feeders and heavily loaded branch lines.
- The CIAC project includes installing 477 ASC conductor on the first 23 km of the trunk feeder, reducing voltage drop and resolving these issues. The betterment credit was applied to capture the additional cost of the larger conductor that would have been incurred by Hydro whether the CIAC customer submitted a new service request or not.
- d) Hydro is not specifically aware of other CIAC calculations where a betterment credit was applied when additional capacity is available only as a result of serving a new customer’s

⁴ Measures include load balancing activities during the summer of 2023.

⁵Newfoundland Power’s Standard, 8-1, “Standard Distribution Conductors” retrieved from “<https://workingwith.newfoundlandpower.com/wp-content/uploads/2025/07/8-1.pdf>” on January 6, 2026.

1 load. Hydro notes that the CIAC Handbook referenced by the Public Utilities Board states
2 that "Betterment includes the replacement of parts which has the effect of extending the
3 useful life of the property, *increasing its capacity*, lowering its operating cost, or otherwise
4 adding to its worth through the benefit it can yield."⁶

5 While neither the CIAC policy nor the CIAC handbook set out specific guidelines for the
6 calculation of a betterment credit based on added system capacity, Hydro believes that the
7 allocation of costs associated with incremental capacity which benefit the distribution
8 system as a whole should be allocated as such. Please see Hydro's response to PUB-NLH-006
9 for further discussion.

10 **e)** The calculation is not based on load information.

11 The \$497,516 cost estimate is the incremental cost to include 23 km of 4/0 AASC primary
12 conductor instead of the originally estimated 23 km of 1/0 AASC conductor. This cost is only
13 the conductor replacement cost, as distribution line constructed with 4/0 conductor uses
14 the same number of poles as a distribution line constructed with 1/0 AASC conductor.

15 **f)** In accordance with the CIAC policy, two years following the connection of the electrical
16 service, the CIAC will be reviewed to determine the accuracy of the estimated load
17 requirements provided by the Customer. The CIAC will be recalculated using the actual load
18 data for the 12 months preceding the review and if there is a variation of more than \$100
19 from the original CIAC, the difference will be applied to the customer account for this
20 service as either a credit, or an additional charge.

21 **g)** If the capital costs of a project materially exceed the estimated costs used in the CIAC
22 calculation, Hydro would continue to apply the CIAC Policy as approved. CIACs, including any
23 betterment credit, are calculated and fixed based on estimated costs at the time of approval
24 and the policy does not provide for a post-construction true-up to actual capital costs. As a
25 result, betterment credits are not recalculated and the customer would not be charged
26 additional CIAC due solely to cost overruns.

⁶ Emphasis added.