

1     **Q.     Reference: Schedule 1, 2027 Capital Budget Overview; Schedule 7**

- 2             **a)** Please identify material capital projects/programs completed during 2022–2025 for which  
3             one or more of the following formed a material part of the justification for approval: i)  
4             reduced reliability risk; ii) reduced outage frequency or duration; iii) reduced operating or  
5             maintenance costs; iv) extended asset life; v) improved productivity/operational  
6             efficiency; or vi) other quantifiable customer benefits.
- 7             **b)** For each project/program identified in part a, please provide a table showing: i) approved  
8             cost; ii) actual cost; iii) forecast in-service date; iv) actual in-service date; v) material  
9             customer benefits forecast when approval was sought; and vi) actual benefits realized to  
10            date.
- 11            **c)** Please identify any project/program for which the material benefits relied upon in seeking  
12            approval have not been realized, or have been materially lower than forecast, and explain  
13            why.
- 14            **d)** Please explain how Hydro incorporates actual post-completion experience regarding  
15            costs, schedules and realized benefits into its assessment and prioritization of subsequent  
16            capital expenditures.
- 17            **e)** Please explain whether Hydro has a formal post-investment review or benefits-realization  
18            process for completed capital projects. If so, provide the applicable policy or guidelines  
19            and any reports completed during 2024–2026.

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- 22     **A.     a)** Newfoundland and Labrador Hydro (“Hydro”) notes that a significant portion of its capital  
23             investment during the 2022–2025 period was related to the renewal of existing assets. For  
24             renewal investments, the expected benefits are inherent in the nature of the work and  
25             generally include maintaining or restoring asset condition, extending or preserving useful  
26             service life, reducing the likelihood of asset failure and associated unplanned outages, and  
27             maintaining safe and reliable operation. For example, Hydro’s condition-based distribution  
28             renewal approach is intended to address deteriorated assets before failure and thereby

1 reduce corrective work and the associated reliability risk. Accordingly, Hydro has not  
2 identified every renewal project completed during the period solely on the basis that it  
3 provided one or more of the benefits listed in the request.

4 CA-NLH-042, Attachment 1 identifies completed projects and programs for which a  
5 reduction in reliability risk, improved reliability performance, reduced operating or lifecycle  
6 costs, or improved operational efficiency was a more distinct or material component of the  
7 justification presented in support of the investment.

8 Hydro specifically notes its Upgrade Worst-Performing Distribution Feeders Program. Since  
9 2019, Hydro has used the program to target feeders exhibiting poor reliability  
10 performance. Candidate feeders are prioritized using five-year average reliability indices,  
11 including SAIDI,<sup>1</sup> SAIFI,<sup>2</sup> CHI,<sup>3</sup> CHIKM<sup>4</sup> and CIKM,<sup>5</sup> with condition assessment information  
12 subsequently used to confirm the required scope. Accordingly, improved reliability  
13 performance is an inherent objective of investments made under this program.

14 **b)** Hydro does not generally maintain a separate, project-by-project record quantifying the  
15 benefits actually realized following completion of a capital investment. Consistent with  
16 previous responses, Hydro does not generally track productivity improvements associated  
17 with individual programs or projects. Similarly, reliability performance is generally  
18 monitored at a broader system, asset-class or feeder level rather than attributing a  
19 subsequent change in reliability performance to an individual capital investment. For  
20 distribution assets, for example, Hydro monitors service-continuity SAIDI and SAIFI and  
21 establishes annual targets based on historical performance.

22 Asset performance continues to be monitored through Hydro's normal operating,  
23 inspection, maintenance, condition-assessment and reliability processes. Where asset or  
24 system performance is not consistent with expectations, Hydro would investigate the cause  
25 and determine whether further action is required. Such an investigation may include

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<sup>1</sup> System Average Interruption Duration Index.

<sup>2</sup> System Average Interruption Frequency Index.

<sup>3</sup> Customer Hours Interrupted.

<sup>4</sup> Customer Hours Interrupted per Kilometre.

<sup>5</sup> Customer Interruptions per Kilometre.

1 consideration of the effectiveness, scope or pacing of relevant capital programs and  
2 whether additional capital work is warranted

3 **c)** Please refer to part b) of this response.

4 **d)** Please refer to Hydro's response to CA-NLH-022 of this proceeding.

5 **e)** Please refer to part b) of this response.

**Table 1: Selected Completed Capital Investments with Identified Customer Benefits**

Costs shown in \$ millions. Hydro does not generally attribute post-completion reliability, productivity or O&M outcomes to individual capital projects; asset performance is monitored through normal operating, maintenance, condition-assessment and reliability processes.

| Project / Program                                                                                                               | Approved Cost (\$ million) | Actual Cost (\$ million) | Forecast In-Service / Completion | Actual In-Service / Completion | Material Benefits Identified in Support of Approval                                                                                                      | Benefits Realized to Date                                                                                                                                                                          |
|---------------------------------------------------------------------------------------------------------------------------------|----------------------------|--------------------------|----------------------------------|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Replace Metering System (2022–2024)                                                                                             | 5.9                        | 9.3                      | 2024                             | 2025                           | Reduced meter-reading and administrative effort; lower-cost metering solution through AMR.                                                               | AMR system placed in service. Project-specific O&M savings are not separately tracked; updated analysis confirmed AMR remained the least-cost alternative.                                         |
| Wood Pole Line Management (2025)                                                                                                | 4.3                        | 5.9                      | 2025                             | 2025                           | Extend transmission-line life, reduce failure risk and unplanned repairs, and lower lifecycle cost through condition-based inspection and refurbishment. | Annual program completed. Line condition and reliability are monitored at the asset/program level; avoided failures, life extension and cost savings are not attributed to the 2025 program alone. |
| Distribution System In-Service Failures, Miscellaneous Upgrades and Street Lights (2025) – Street-Light Modernization Component | 6.4                        | 5.6                      | 2025                             | 2025                           | Lower maintenance and energy costs, with improved lighting reliability through LED conversion.                                                           | 2025 LED conversion work completed under the annual program. Savings from individual conversions are not separately tracked.                                                                       |
| Upgrade Worst-Performing Distribution Feeders (2022–2023)                                                                       | 2.8                        | 3.1                      | 2023                             | 2023                           | Improve feeder reliability by addressing historically poor reliability performance and identified asset-condition deficiencies.                          | Project completed. Feeder SAIDI and SAIFI continue to be monitored; changes are not attributed solely to the capital project.                                                                      |
| Upgrade Worst-Performing Distribution Feeders (2023–2024)                                                                       | 1.4                        | 2.1                      | 2024                             | 2024                           | Improve feeder reliability by addressing historically poor reliability performance and identified asset-condition deficiencies.                          | Project completed. Feeder SAIDI and SAIFI continue to be monitored; changes are not attributed solely to the capital project.                                                                      |
| Upgrade Worst-Performing Distribution Feeders (2024–2025)                                                                       | 3.3                        | 5.5                      | 2025                             | 2025                           | Improve feeder reliability by addressing historically poor reliability performance and identified asset-condition deficiencies.                          | Project completed. Feeder SAIDI and SAIFI continue to be monitored; changes are not attributed solely to the capital project.                                                                      |
| Winterize Unit 2102 and Install Mobile – Charlottetown                                                                          | 1.3                        | 1.8                      | 2023                             | 2024                           | Improve reliability of supply to Charlottetown and Pinsent's Arm using the least-cost alternative.                                                       | Work completed and placed in service. Reliability is monitored through normal system and asset-performance processes; project-specific benefit is not separately quantified.                       |
| Purchase 85' Material Handler Aerial Device on Track Unit                                                                       | 1.4                        | 1.2                      | 2024                             | 2024                           | Improve work efficiency and response capability, expand live-line work, and reduce customer outage impacts.                                              | Equipment placed in service. Productivity gains and avoided outage hours are not separately tracked for the individual unit.                                                                       |
| Purchase 46' Material Handler Aerial Device on Track Unit                                                                       | 0.8                        | 0.7                      | 2024                             | 2024                           | Improve remote-site access and work efficiency, expand live-line work, and reduce planned outage impacts.                                                | Equipment placed in service. Productivity gains and avoided outage hours are not separately tracked for the individual unit.                                                                       |

Note: For the street-light modernization row, approved and actual costs shown are for the full annual Distribution System In-Service Failures, Miscellaneous Upgrades and Street Lights program; Hydro does not separately account for the LED modernization component on the basis requested.