

- 1 Q. For any ongoing and planned efficiency and productivity improvement initiatives
2 Newfoundland Hydro is undertaking or will undertake, provide:
- 3 a. The time horizon forming the basis for analyzing them (for example, a horizon of
4 5-7 years).
 - 5 b. A description of each initiative, including the drivers which will result in lower
6 costs or fewer associated FTEs.
 - 7 c. The timeline associated with implementation of each initiative (a target date
8 after which savings will reach a steady state basis)
 - 9 d. The FTE reductions (and cost reductions) associated with the achievement of
10 each initiative.
 - 11 e. The implementation costs associated with each initiative.
 - 12 f. The implementation risks associated with each initiative - those factors which
13 might prevent or delay realization of savings and/or FTE reductions beyond the
14 target date.
- 15
16
- 17 A. As part of Hydro's ongoing strategic focus on cost management and efficiency
18 improvements, a number of near-term initiatives have been identified to
19 demonstrate Hydro's continuous efforts to reduce costs and achieve efficiencies.
20 The identified initiatives are not the sole source of improvements within Hydro,
21 rather they represent currently identified initiatives on which Hydro is either
22 moving forward or intends to move forward. A portion of these initiatives were
23 derived through Hydro's innovation and productivity work, while others have been
24 born through a drive to refocus operational priorities, ensuring benefits for Hydro's
25 customers are centric to its decision-making. The identified initiatives achieve
26 improvements through cost savings or productivity efficiencies or a combination of
27 both; while it is not necessarily the case that each translates into a reduction in full-

1 time equivalents (“FTEs”), it does not diminish the value that can be achieved for
2 Hydro’s customers through the execution of such. The level of savings identified in
3 this response is conservative.

4

5 This Information Request is divided in two parts to facilitate the provision of
6 information which is confidential in nature. Part A identifies initiatives which are
7 non-confidential, while Part B provides information which is sensitive in nature and
8 is not for broad distribution at this time.

1 **PART A**

Table 1: Summary of Cost Management and Efficiency Improvements

Corporate Management	
1.	Organizational Restructuring
2.	Overtime Management
3.	Attendance Support Program
4.	Embedded Contractor Management
Operational Efficiencies	
5.	10-Minute Spinning Reserve Assistance
Capital Program Management	
6.	Capital Planning Approach
7.	Diesel Engine Overhauls versus Drop in Engine Replacement

2 Details on each of the initiatives follows.

1 **Initiative 1: Organizational Restructuring**

2 a. Time Horizon:

3 A review was completed during the period of mid-February 2019 to the end of May
4 2019.

5

6 b. Description:

7 On June 4, 2019, changes to Hydro's senior leadership organizational structure
8 were announced to reflect an enhanced focus on utility performance, regulatory
9 priorities, holistic system planning, efficient resource and asset management, and
10 advancing cost-effective technological improvements. These changes support the
11 movement toward a flatter organizational structure, with broadened spans of
12 control at the leadership level.

13

14 c. Implementation Timeline:

15 The restructuring was effective June 4, 2019.

16

17 d. FTE and/or Cost Reductions:

18 These changes resulted in the decrease of two FTEs – one Vice President role and
19 one Director level role, an approximate savings of \$0.5 million annually.

20

21 e. Implementation Costs:

22 There was a one-time severance cost for one employee in 2019 associated with this
23 organizational change. Normal human resources and communications efforts were
24 undertaken to facilitate the changes.

25

26 f. Implementation Risks:

- 1 Implementation risks are considered to be low and reflective of risk associated with
- 2 implementation of any new organizational change.

1 **Initiative 2: Overtime Management**

2 a. Time Horizon:

3 Ongoing

4

5 b. Description:

6 In demonstrating cost management diligence, Hydro has implemented new internal
7 reporting and review requirements of overtime on a departmental basis. This
8 involved the creation of improved reporting in 2017, for utilization in 2018 onward.

9

10 c. Implementation Timeline:

11 Ongoing

12

13 d. FTE and/or Cost Reductions:

14 Tables 2 and 3 provide the gross overtime expense¹ from 2017 to 2019, indicating a
15 decreasing trend in overtime expense. Table 4 provides Hydro's 2018 and 2019 Test
16 Year forecasts for context. Using 2017 as a benchmark, 2019 forecast and first
17 quarter results show continued improvement in overtime expense management as
18 compared to the respective time frames in 2017 and 2018, as well as the test year
19 forecasts. Hydro continues to actively manage and monitor overtime costs.

¹ Gross overtime only; does not include overtime charged in from other related companies, overtime charged out to other related companies, or overtime charged to capital.

Table 2: Gross Overtime Expense, 2017 - 2019

2017 Actuals	2018 Actuals	2019 Forecast	Variance 2019 vs. 2017	Variance 2018 vs. 2017
\$ millions			%	
15.9	12.0	10.5	-34%	-25%

Table 3: Gross Overtime Expense, Q1 2017 – Q1 2019

2017 Q1 Actuals	Q1 2018 Actuals	Q1 2019 Actuals	Variance Q1 2019 vs. Q1 2017	Variance Q1 2018 vs. Q1 2017
\$ millions			%	
2.4	2.1	1.8	-25%	-13%

Table 4: Gross Overtime Expense, 2018 and 2019 Test Years

2018 Test Year	2019 Test Year	Q1 2018 Test Year	Q1 2019 Test Year
\$ millions			
9.9	9.9	2.1	2.1

- 1 e. Implementation Costs:
- 2 There were no direct implementation costs.
- 3
- 4 f. Implementation Risks:
- 5 There were no implementation risks associated with this initiative.

1 **Initiative 3: Attendance Support Program**

2 a. Time Horizon:

3 Ongoing to end of 2022

4

5 b. Description:

6 In April 2018, Hydro launched an Attendance Support program with the goal of
7 reducing sick leave use of .5 day/year/employee by 2022, for a total reduction of
8 2.5 days per employee by 2022. The program was supported by the development
9 of a policy and procedure document, a training program for supervisors and
10 managers, and direct meetings with employees exceeding the corporate sick leave
11 average.

12

13 c. Implementation Timeline:

14 Implemented April 2018

15

16 d. FTE and/or Cost Reductions:

17 In 2018, Hydro realized a reduction of 1.5 days of sick leave per employee as
18 compared to 2017. This is a productivity gain of \$339,499,² reflecting a reduction in
19 sick leave utilization. In addition, overtime replacement costs in the amount of
20 \$257,293 were avoided. Results from the first quarter of 2019 indicate a similar
21 level of reduction with improvements trending slightly better than 2018 results.
22 Over the five-year period, 2018 to 2022, Hydro is forecasting a productivity gain of
23 \$2.1 million and additional overtime reductions are expected to continue to be
24 achieved through the attendance management program.

² Based on base salary figures.

1 e. Implementation Costs:

2 Implementation costs primarily reflect salary costs associated with an occupational
3 health and safety nurse position. In 2018, the implementation cost was
4 approximately \$104,000, with an expected annual program maintenance cost of
5 \$65,000.

6

7 f. Implementation Risks:

8 There were no implementation risks associated with this initiative.

1 **Initiative 4: Embedded Contractor Management**

2 a. Time Horizon:

3 In 2017, Hydro completed an analysis of embedded contractor costs³ to determine
4 whether there were potential efficiencies and cost savings in reducing the reliance
5 on embedded contractors to support the execution of Hydro's capital plan.

6
7 b. Description:

8 Due to the growth in Hydro's capital program, embedded contractors were engaged
9 to supplement Hydro's workforce to execute the work plan.⁴ The completed
10 analysis identified the significant potential to save on capital costs through the
11 execution of the capital work by internal employees versus embedded contractors.
12 In addition, such a change would have the added benefit of retaining the expertise
13 gained in-house.

14
15 c. Implementation Timeline:

16 In October 2017, based on the analysis noted, a decision was made to increase the
17 number of FTEs in Hydro's Engineering Services by 11 to realize cost savings and
18 reduce the reliance on embedded contractors. The additional FTEs were recruited
19 and hired throughout early 2018 with both capital and operating savings realized
20 beginning in 2018.

21
22 Hydro has up to 20 embedded contractors continuing to assist with its capital
23 program. As Hydro works to reduce its total annual capital program, an associated
24 reduction in embedded contractors is expected; such a reduction will be balanced
25 against the requirements to ensure appropriate resources are in place to manage

³ 2016 and 2017 contractor costs.

⁴ PUB-Nalcor-007.

1 the budget. While future reviews will be approached cautiously, Hydro intends to
2 undertake further evaluation to adjust the number of full-time employees to
3 support a sustained level of work plan activity and further reduce the reliance on
4 embedded contractors.

5

6 d. FTE and/or Cost Reductions:

7 In 2018, there was approximately \$525,000 in capital cost savings realized. This is
8 reflective of the employees being hired throughout the year as opposed to the start
9 of the year. This compares to an annual 2019 forecast indicating an approximate
10 savings of \$700,000 in capital costs. These savings are expected to continue
11 commensurate with a similar level of annual capital budgeting.

12

13 e. Implementation Costs:

14 There were no direct implementation costs. Normal recruitment efforts were
15 undertaken to hire the additional FTEs.

16

17 f. Implementation Risks:

18 There were no implementation risks associated with this initiative.

1 **Initiative 5: 10-Minute Spinning Reserve Assistance**

2

3 a. Time Horizon:

4 The Amended and Restated Capacity Assistance Agreement between Hydro and Corner
5 Brook Pulp and Paper (“CBPP”) was approved by the Board of Commissioners of Public
6 Utilities on November 22, 2018. It provides Hydro with cost-effective flexibility to assist
7 in the management of unanticipated generation or load events. Hydro includes a
8 portion of this interruptible load in its 10-minute reserve.⁵ During the winter of 2019,⁶
9 Hydro included 40 MW of the available capacity assistance in its 10-minute reserve,
10 which could be achieved at no additional cost. Hydro intends to continue with this
11 initiative.

12

13 b. Description:

14 Utilization of this capacity in Hydro’s 10-minute reserve provides for cost savings
15 through reduced requirements for gas turbine usage. Hydro estimates that this
16 resulted in avoided costs of approximately \$450,000 for its customers, from the time of
17 implementation through to the end of the winter months (i.e., March 31, 2019). Hydro
18 notes that had customer demand requirements been higher or had there been
19 instances of higher than anticipated generating unit unavailability, these avoided costs
20 could have been higher, particularly in instances where the dispatch of the Holyrood
21 gas turbine is avoided.

⁵ Hydro carries 10-minute reserve, a portion of which is spinning, to cover the largest generating unit contingency. In this manner, the system is able to be returned to balance and Hydro is able to return frequency response power from Nova Scotia Power Incorporated to zero within its reliability standards obligations without interrupting its customers following a contingency event.

⁶ This commenced on January 31, 2019.

1 c. Implementation Timeline:

2 Based on 2019 performance, Hydro proposes to increase the amount of CBPP
3 capacity assistance to be included in its 10-minute reserve to 60 MW for the winter
4 of 2019/2020. While the annual savings going forward may vary from those
5 experienced during this past winter, depending particularly on the availability of the
6 Lower Churchill Project assets and the performance of on-Island generation, Hydro
7 anticipates that the use of this agreement in this manner will continue to provide
8 the benefit of reduced standby operation.

9

10 d. FTE and/or Cost Reductions:

11 As per section (b) of this initiative, there were avoided costs of approximately
12 \$450,000 for Hydro's customers. There are currently no FTEs contemplated as
13 reduced, however, Hydro anticipates staffing costs at gas turbines may be reduced
14 in the next winter period as confidence has now been gained in this 10-minute
15 reserve provision approach. Hydro will continue discussions with CBPP to
16 determine if additional cost-effective operating reserve support is available.

17

18 e. Implementation Costs:

19 There were no implementation costs associated with this initiative.

20

21 f. Implementation Risks:

22 Hydro is not anticipating any risks with implementation as this initiative is already
23 underway.

1 **Initiative 6: Capital Planning Approach**

2 a. Time Horizon:

3 Ongoing

4

5 b. Description:

6 Hydro recognizes the need to balance system investment to maintain reliability
7 with the management of cost to minimize upward pressure on customer rates. As
8 part of a customer engagement initiative that Hydro undertook for the Reliability
9 and Resource Adequacy Study,⁷ Hydro sought input and feedback from electricity
10 customers on a number of issues, including their opinions regarding the appropriate
11 balance between reliability and the cost of investments for customers. When
12 presented with three options related to reliability and cost, 59% of respondents
13 indicated a preference for good reliability with a lower impact on electricity cost,
14 34% of respondents selected better reliability with moderate impact on cost, and
15 6% of respondents selected best reliability with a higher impact on cost. Hydro
16 sought this information, as well as other feedback, to inform, but not decide, its
17 approach on capital investment.

18

19 In an effort to reduce the cost impact for customers, while maintaining reliable
20 service, Hydro has adjusted its approach to reviewing its capital budget project
21 plans. To ensure the right cost and reliability balance, Hydro reviewed the
22 investment forecasted for the coming years, with the goal of reducing capital where
23 prudent and where Hydro would not be placing the system at inappropriate risk.

24 No priority work activities or projects were deferred.

⁷ Submitted to the Board on November 16, 2018.

1 Through its review, Hydro realigned projects based on condition of assets, enabling
 2 Hydro to adjust the time frames associated with project execution such that the
 3 projects are included at later times than previously assessed (e.g. power
 4 transformers, building refurbishments, light duty equipment, fire suppression,
 5 access road refurbishments, mechanical governors and turbine refurbishments),
 6 thus better balancing capital investment with customer expectations for cost
 7 management and reliability.

8
 9 Considering the five-year plan submitted in the 2018 and 2019 Capital Budget
 10 Applications and the proposed five-year plan for 2020,⁸ Hydro has forecasted the
 11 capital investment plan for the five-year period starting in 2020 to be \$508 million,
 12 which compares to a five-year plan submitted for the 2018-2022 period totaling
 13 \$760 million as outlined in Table 5.

Table 5: Five-year Sustaining Capital Budget Plan Comparison (\$000)

	2018 ⁹	2019 ¹⁰	2020	2021	2022	2023	2024	Total
2018 CBA	158,484	145,895	165,028	143,346	147,652	-	-	760,405
2019 CBA	-	117,415 ¹¹	133,622	132,723	121,696	123,885	-	629,340
Proposed 2020 CBA	-	-	103,126 ¹²	100,185	101,046	102,316	101,895	508,568

⁸ To be submitted to the Board by August 1, 2019.

⁹ Totals are comprised of Board approved capital amounts for the year requested, budgeted supplemental amounts, less growth projects (such as TL 266, TL 267 and Muskrat Falls to Happy Valley Interconnection Project). Supplemental totals are net of Contribution in aid of Construction amounts.

¹⁰ Ibid.

¹¹ Includes the Hinds Lake Unit Major Overhaul and Level II Penstock Assessments of Bay d'Espoir Penstock 4, Granite Canal Penstock, and Hinds Lake Penstock Supplemental Capital Budget Application, filed with the Board on May 22, 2019.

¹² Hydro's current forecasted 2020 capital at the time of this RFI filing. Hydro will submit the finalized forecast in its 2020 Capital Budget Application due to the Board on August 1, 2019.

1 c. Implementation Timeline:
2 2019 to 2024 in line with five-year capital plan timelines and approvals.

3
4 d. FTE and/or Cost Reductions:
5 The forecast reductions in the five-year plan, detailed in Table 5, reflect Hydro's
6 commitment to continuous improvement in its capital budget planning to invest according
7 to customer expectations. An improvement in the forecast capital plan approach will
8 facilitate an improvement in planning for employee resource requirements.

9
10 e. Implementation Costs:
11 There are no known implementation costs.

12
13 f. Implementation Risks:
14 There are no identified implementation risks.

1 **Initiative 7:** Diesel Engine Overhauls versus Drop in Engine Replacement

2

3 a. Time Horizon:

4 Ongoing

5

6 b. Description:

7 Hydro anticipates continued cost savings in its diesel unit engine overhaul program.

8 As diesel engines are identified for overhaul, Hydro undertakes a cost benefit

9 analysis to determine whether the engine should be overhauled or replaced with a

10 new drop-in engine, when available.¹³ Experience has demonstrated that there is

11 opportunity for cost savings, in some circumstances, of up to approximately

12 \$150,000 for the larger units. Over the next five years, Hydro estimates potential

13 cost savings of approximately \$500,000 through implementation of this approach.

14

15 In addition to the above, Hydro continues to seek cost savings and efficiency

16 opportunities by challenging its existing condition maintenance schedules and

17 working with community partners on developing alternative sources of energy for

18 its rural operations, amongst other things.

19

20 Hydro remains committed to reducing reliance on diesel generation in the isolated

21 diesel communities it serves. Hydro is working with the provincial government on

22 an expression of interest and with independent power producers to develop

23 alternative sources of energy to reduce reliance on diesel generation in isolated

24 diesel communities. This may lead to reduced operating costs in these areas.

¹³ Drop in engine replacements are not available for all sizes and models of units.

1 c. Implementation Timeline:

2 Ongoing

3

4 d. FTE and/or Cost Reductions:

5 As identified in the section (b) for this initiative.

6

7 e. Implementation Costs:

8 There were no direct implementation costs associated with this initiative.

9

10 f. Implementation Risks:

11 There were no implementation risks identified for this specific initiative as the items

12 identified are based on changes in capital and operational philosophies.