

1 **Q. Provide a breakdown of the net present value and the estimated rate mitigation**  
2 **benefits for the electrification proposals separately for the commercial EV and**  
3 **charging infrastructure incentives, the residential EV and charging infrastructure**  
4 **incentives, the Custom Electrification Program incentives and the DCFC and Level**  
5 **2 chargers.**  
6

7 A. The electrification initiatives, and associated incremental sales estimates, set out in the  
8 *Electrification, Conservation and Demand Management Plan: 2021-2025* are  
9 interdependent. For example, residential electric vehicle (“EV”) purchase incentives will  
10 not be effective without sufficient public charging infrastructure in place to remove the  
11 barrier of range anxiety and charger accessibility. Therefore, the Company cannot  
12 provide rate mitigation impacts separately for EV charging infrastructure.  
13

14 For the purpose of this analysis, costs associated with EV charging infrastructure, the  
15 make ready model, pilot initiatives and deferred planning costs are included with the  
16 Residential EV & Charging Infrastructure Program.  
17

18 Tables 1 and 2 outline the *pro forma* revenue requirement analysis and rate mitigation  
19 impacts of the Residential EV & Charging Infrastructure Program.  
20

21 Tables 3 and 4 outline the *pro forma* revenue requirement analysis and rate mitigation  
22 impacts of the Commercial EV & Charging Infrastructure Program.  
23

24 Tables 5 and 6 outline the *pro forma* revenue requirement analysis and rate mitigation  
25 impacts of the Custom Electrification Program.

1 Table 1 outlines the *pro forma* revenue requirement for Newfoundland Power's  
2 Residential EV & Charging Infrastructure Program.

**Table 1:**  
**Newfoundland Power Inc.**  
***Pro Forma* Revenue Requirement Analysis**  
**Residential EV & Charging Infrastructure with Utility Owned Charging Network**  
**2021 to 2034**  
**(\$000s)**

Year	Investment		Pro Forma Revenue Requirement Impacts					
	Capital Costs A	Program Costs B	Incremental Revenues C	Incremental System Costs D	Capital Cost Recovery E	Program Cost Recovery F	Net Revenues G	Cumulative NPV H
2021	1,538	626	31	18	115	16	(119)	(112)
2022	1,530	1,705	178	103	340	138	(404)	(473)
2023	460	2,285	520	271	477	405	(633)	(1,007)
2024	460	2,380	1,162	594	530	737	(699)	(1,565)
2025	311	3,024	2,193	1,108	570	1,085	(570)	(1,994)
2026	0	1,028	5,040	2,622	571	1,449	397	(1,711)
2027	0	1,622	9,029	4,715	548	1,566	2,200	(230)
2028	0	2,234	14,073	7,527	525	1,767	4,254	2,478
2029	0	2,805	19,934	11,086	502	2,050	6,296	6,266
2030	0	3,417	26,652	14,771	480	2,407	8,995	11,379
2031	0	4,051	34,187	18,885	382	2,843	12,077	17,868
2032	0	4,721	42,441	23,369	214	3,295	15,563	25,770
2033	0	5,388	51,254	28,131	107	3,724	19,292	35,029
2034	0	6,159	61,377	33,658	56	4,184	23,480	45,678

#### Notes

- 3 A Includes all EV charging infrastructure costs, including the costs associated with connecting the EV charging  
4 infrastructure to Newfoundland Power's distribution system.
- 5 B Includes all Electrification Program costs associated with Newfoundland Power's residential customers, costs to  
6 operate the EV charging stations, Make Ready Program, Pilot initiatives and Deferred Planning costs.
- 7 C Projected incremental revenues from additional energy sales as a result of the initiatives set out in the  
8 Electrification Plan. The revenue figures reflect annual increases in electricity rates of 2.25%.
- 9 D Projected incremental system costs (energy and capacity costs) as a result of the initiatives set out in the  
10 Electrification Plan. The system cost figures primarily reflect the marginal cost information received from  
11 Hydro in April 2020.
- 12 E Includes forecast depreciation, financing costs and associated income taxes related to the EV charging  
13 infrastructure investment. Based on an estimated 10 year service life, the Company's incremental weighted  
14 average cost of capital ("WACC") of 5.81% and an income tax rate of 30%.
- 15 F Includes forecast amortization, financing costs and associated income taxes related to Electrification Program  
16 costs. Based on an estimated amortization period of 10 years (equal to the estimated life of an electric vehicle).  
17 The Company's incremental WACC of 5.81% and an income tax rate of 30%.
- 18 G Calculated as C - D - E - F.
- 19 H The net present value ("NPV") as of the end of each period using the Company's incremental WACC of 5.81%.

1 Table 2 provides *pro forma* annual rate mitigating impacts of Newfoundland Power's  
2 Residential EV & Charging Infrastructure Program.

**Table 2:**  
***Pro Forma* Rate Mitigation Impact Analysis**  
**Residential EV & Charging Infrastructure**  
**2021 to 2034**  
**(¢/kWh)**

<b>Year</b>	<b>Rate Mitigation Impact</b>
2021	(0.002)
2022	(0.007)
2023	(0.011)
2024	(0.012)
2025	(0.010)
2026	0.007
2027	0.037
2028	0.071
2029	0.105
2030	0.147
2031	0.195
2032	0.247
2033	0.301
2034	0.360

1 Table 3 outlines the *pro forma* revenue requirement for Newfoundland Power's  
2 Commercial EV & Charging Infrastructure Program.

**Table 3:**  
**Newfoundland Power Inc.**  
***Pro Forma* Revenue Requirement Analysis**  
**Commercial EV & Charging Infrastructure**  
**2021 to 2034**  
**(\$000s)**

Year	Investment		Pro Forma Revenue Requirement Impacts					
	Capital Costs	Program Costs	Incremental Revenues	Incremental System Costs	Capital Cost Recovery	Program Cost Recovery	Net Revenues	Cumulative NPV
	A	B	C	D	E	F	G	H
2021	0	561	10	9	0	15	(14)	(13)
2022	0	1,039	50	51	0	111	(112)	(113)
2023	0	1,434	131	120	0	274	(263)	(335)
2024	0	1,784	306	263	0	489	(446)	(691)
2025	0	1,039	899	671	0	720	(493)	(1,063)
2026	0	47	2,029	1,467	0	825	(263)	(1,250)
2027	0	84	3,776	2,684	0	802	289	(1,055)
2028	0	130	6,186	4,454	0	785	946	(453)
2029	0	176	9,296	6,902	0	775	1,620	521
2030	0	235	13,360	9,851	0	770	2,739	2,079
2031	0	283	18,280	13,405	0	774	4,100	4,282
2032	0	340	24,302	17,728	0	729	5,845	7,249
2033	0	400	31,461	22,837	0	648	7,976	11,077
2034	0	454	39,490	28,530	0	540	10,420	15,803

**Notes**

- 3 B Includes all Electrification Program costs associated with Newfoundland Power's Commercial EV & Charging  
4 Infrastructure Program.
- 5 C Projected incremental revenues from additional energy sales as a result of the initiatives set out in the  
6 Electrification Plan. The revenue figures reflect annual increases in electricity rates of 2.25%.
- 7 D Projected incremental system costs (energy and capacity costs) as a result of the initiatives set out in the  
8 Electrification Plan. The system cost figures primarily reflect the marginal cost information received from  
9 Hydro in April 2020.
- 10 F Includes forecast amortization, financing costs and associated income taxes related to Electrification Program  
11 costs. Based on an estimated amortization period of 10 years (equal to the estimated life of an electric vehicle),  
12 the Company's incremental WACC of 5.81% and an income tax rate of 30%.
- 13 G Calculated as C - D - E - F.
- 14 H The NPV as of the end of each period using the Company's incremental WACC of 5.81%.

1 Table 4 provides *pro forma* annual rate mitigating impacts of Newfoundland Power's  
2 Commercial EV & Charging Infrastructure Program.

**Table 4:**  
***Pro Forma* Rate Mitigation Impact Analysis**  
**Commercial EV & Charging Infrastructure**  
**2021 to 2034**  
**(¢/kWh)**

<b>Year</b>	<b>Rate Mitigation Impact</b>
2021	0.000
2022	(0.002)
2023	(0.005)
2024	(0.008)
2025	(0.009)
2026	(0.005)
2027	0.005
2028	0.016
2029	0.027
2030	0.045
2031	0.067
2032	0.093
2033	0.124
2034	0.160

1 Table 5 outlines the *pro forma* revenue requirement for Newfoundland Power's Custom  
2 Electrification Program.

**Table 5:**  
**Newfoundland Power Inc.**  
***Pro Forma* Revenue Requirement Analysis**  
**Custom Electrification Program<sup>1</sup>**  
**2021 to 2034**  
**(\$000s)**

Year	Investment		Pro Forma Revenue Requirement Impacts					
	Capital Costs	Program Costs	Incremental Revenues	Incremental System Costs	Capital Cost Recovery	Program Cost Recovery	Net Revenues	Cumulative NPV
	A	B	C	D	E	F	G	H
2021	0	148	8	4	0	4	(0)	(0)
2022	0	273	55	29	0	29	(3)	(3)
2023	0	221	121	56	0	68	(3)	(5)
2024	0	333	208	96	0	102	10	3
2025	0	322	322	148	0	148	26	23
2026	0	0	330	158	0	183	(11)	15
2027	0	0	337	164	0	176	(2)	13
2028	0	0	345	174	0	169	2	15
2029	0	0	352	188	0	162	3	16
2030	0	0	360	191	0	156	14	24
2031	0	0	359	190	0	149	20	35
2032	0	0	308	163	0	128	18	44
2033	0	0	234	123	0	95	16	51
2034	0	0	134	70	0	69	(5)	49

#### Notes

- 3 B Includes all Custom Electrification Program costs associated with Newfoundland Power's customers.  
4 C Projected incremental revenues from additional energy sales as a result of the initiatives set out in the  
5 Electrification Plan. The revenue figures reflect annual increases in electricity rates of 2.25%.  
6 D Projected incremental system costs (energy and capacity costs) as a result of the initiatives set out in the  
7 Electrification Plan. The system cost figures primarily reflect the marginal cost information received from  
8 Hydro in April 2020.  
9 F Includes forecast amortization, financing costs and associated income taxes related to Electrification Program  
10 costs. Based on an estimated amortization period of 10 years (equal to the estimated life of an electric vehicle),  
11 the Company's incremental WACC of 5.81% and an income tax rate of 30%.  
12 G Calculated as C - D - E - F.  
13 H The NPV as of the end of each period using the Company's incremental WACC of 5.81%.

<sup>1</sup> Minor participation forecast adjustments have been made to the Custom Commercial Electrification program since the Application was filed in December 2020. As a result, there are minor differences in the Net Revenues and Cumulative NPVs from the table found in the *2021 Electrification, Conservation and Demand Management Application*, Volume 1, Exhibit 2, Appendix A.

1 Table 6 provides *pro forma* annual rate mitigating impacts of Newfoundland Power's  
2 Custom Electrification Program.

**Table 6:**  
***Pro Forma* Rate Mitigation Impact Analysis**  
**Custom Electrification Program**  
**2021 to 2034**  
**(¢/kWh)**

<b>Year</b>	<b>Rate Mitigation Impact</b>
2021	0.000
2022	0.000
2023	0.000
2024	0.000
2025	0.000
2026	0.000
2027	0.000
2028	0.000
2029	0.000
2030	0.000
2031	0.000
2032	0.000
2033	0.000
2034	0.000

3 Overall rate impacts of this program are expected to be negligible due to expected limited  
4 program participation. For more information on the benefits of this program, see  
5 response to Request for Information PUB-NP-043.