

1 **Q. (Reference PUB-NP-032, Attachment A)**

2 **In regard to the NPV analysis of the three Alternatives: Gander-Twillingate**
 3 **Transmission System.**

4 **a) Footnotes 1, 3 and 5 indicate that capital costs are given in 2025 dollars**
 5 **for 2025 to 2029 and escalated afterward according to the GDP deflator.**

6 **(i) Is it not inappropriate to use a mix of real and nominal values in NPV**
 7 **analysis? (ii) Are the figures for "capital revenue requirements" and**
 8 **"operating costs" in the NPV Tables 1, 2 and 3 in nominal or real terms,**
 9 **and is the discount rate in nominal or real terms? (iii) What are the**
 10 **estimated capital costs for 2025 to 2029 in nominal dollar terms and are**
 11 **they based on detailed engineering assessments?**

12 **b) For the entire 60-year period of the analysis, it appears that a discount**
 13 **rate of 6.65% was used. (i) Please confirm that 6.65% was used. (ii)**
 14 **Please explain the rationale for the choice of 6.65% for the discount rate.**

15 **c) Please repeat the NPV analysis of Alternatives 1, 2 and 3 using a 9.0%**
 16 **discount rate with all monetary values expressed in nominal terms. Also,**
 17 **include a variation on Alternative 1 in which the rebuild of 108L does not**
 18 **begin until 2029.**

19 **d) For the last time that NP decommissioned a transmission line and built a**
 20 **replacement one for it on an alternate route, what were the budget cost**
 21 **estimates for decommissioning of the old line and construction of the new**
 22 **line and the final cost of each?**

23
 24 **A. a) Newfoundland Power has reviewed footnotes 1, 3 and 5 in Attachment A to the**
 25 **response to Request for Information PUB-NP-032 and determined that the footnotes**
 26 **were made in error. Please see the response to Request for Information PUB-NP-**
 27 **032, Attachment A (1st Revision) for the revised footnotes.**

28
 29 **b) It is confirmed. The Company used 6.65% for the discount rate as it is the weighted**
 30 **average cost of capital comprised of: (i) the Company's rate of return on equity of**
 31 **8.50% and a capital structure consisting of 45% common equity approved by the**
 32 **Board in Order No. P.U. 3 (2022); and (ii) the interest rate of 5.122% in the**
 33 **Company's most recent issue of First Mortgage Bonds approved by the Board in**
 34 **Order No. P.U. 20 (2023).¹**

35
 36 **c) See Attachment A for the revised NPV analyses using a discount rate of 9.0%, as**
 37 **well as a variation of Alternative 1 in which the rebuild of Transmission Line 108L**
 38 **does not commence until 2029.**

39
 40 **d) As a part of the Company's *Transmission Line Rebuild Strategy*, Newfoundland**
 41 **Power regularly rebuilds deteriorated transmission lines in alternate routes.**
 42 **The Company does not include decommissioning costs in its budget estimates for**
 43 **capital projects. Decommissioning costs are embedded within depreciation rates**
 44 **established through periodic depreciation studies completed by external experts and**

¹ In August 2023, Newfoundland Power issued \$90 million in Series AS First Mortgage Bonds with a term of 30 years.

1 approved by the Board.² As such, these costs are recorded throughout the life of the
2 asset through annual depreciation expenses. The revenue requirement associated
3 with depreciation expense would be considered in the net present value analysis of
4 project alternatives.
5

6 In 2021, the Company completed transmission line construction associated with the
7 *Central Newfoundland System Planning Study* which included constructing new
8 transmission line sections in new routes to the Rattling Brook and Lewisporte
9 substations. The final cost of the transmission line construction was approximately
10 \$6.2 million compared to a budget of approximately \$5.2 million.³

² Newfoundland Power's current depreciation rates were established through the *2019 Depreciation Study* completed by Gannett Fleming Valuation and Rate Consultants, LLC, based on plant in service as at December 31, 2019. The *2019 Depreciation Study* was approved by the Board in Order No. P.U. 3 (2022).

³ See the *Central Newfoundland System Planning Study* filed as part of Newfoundland Power's *2019 Capital Budget Application* and Order No. P.U. 5 (2020).

ATTACHMENT A:

NPV Analysis of Gander - Twillingate Transmission System Planning Study
Revised with 9.0% Discount Rate

1 Table 1 provides the revised Present Worth Analysis of Alternative 1 from 2025 to 2084.

Table 1: Present Worth Analysis of Alternative 1								
Year	Transmission	Substation	Distribution	Capital Revenue Requirement	Operating Costs	Net Benefit	Present Worth Benefit	Cumulative Present Value Benefit
	51.9 yrs 8% CCA	48.5 yrs 8% CCA	52.9 yrs 8% CCA					
2025	2,200,000	20,000	0	261,667	452,667	-714,334	-714,334	-714,334
2026	8,200,000	4,400,000	0	1,763,939	424,185	-2,188,124	-2,007,453	-2,721,787
2027	16,900,000	4,800,000	0	4,422,238	408,507	-4,830,745	-4,065,941	-6,787,728
2028	0	0	0	4,558,365	418,537	-4,976,903	-3,843,082	-10,630,810
2029	0	0	0	4,408,293	421,064	-4,829,357	-3,421,238	-14,052,048
2030	0	0	0	4,264,568	419,373	-4,683,941	-3,044,240	-17,096,288
2031	0	0	0	4,126,683	418,655	-4,545,339	-2,710,237	-19,806,525
2032	0	0	0	3,994,172	427,505	-4,421,676	-2,418,808	-22,225,334
2033	27,386,698	1,841,123	0	7,329,025	425,202	-7,754,227	-3,891,585	-26,116,919
2034	0	0	0	7,492,996	435,122	-7,928,118	-3,650,326	-29,767,244
2035	0	0	0	7,248,060	437,590	-7,685,649	-3,246,501	-33,013,746
2036	0	0	0	7,012,478	441,516	-7,453,994	-2,888,668	-35,902,413
2037	0	0	0	6,785,501	444,712	-7,230,214	-2,570,592	-38,473,006
2038	0	0	0	6,566,442	452,672	-7,019,114	-2,289,485	-40,762,491
2039	0	0	0	6,354,667	458,051	-6,812,718	-2,038,682	-42,801,172
2040	0	0	0	6,149,592	464,880	-6,614,472	-1,815,924	-44,617,097
2041	0	0	0	5,950,683	485,806	-6,436,488	-1,621,157	-46,238,254
2042	0	0	0	5,757,445	492,162	-6,249,607	-1,444,117	-47,682,370
2043	0	0	0	5,569,425	500,924	-5,569,425	-1,180,683	-48,863,053
2044	0	0	0	5,386,206	509,872	-5,386,206	-1,047,562	-49,910,615
2045	0	0	0	5,207,404	518,987	-5,207,404	-929,162	-50,839,777
2046	0	0	0	5,032,665	528,234	-5,032,665	-823,837	-51,663,614
2047	0	0	0	4,861,664	537,646	-4,861,664	-730,133	-52,393,747
2048	0	0	0	4,694,102	547,226	-4,694,102	-646,760	-53,040,507
2049	0	0	0	4,529,704	556,976	-4,529,704	-572,577	-53,613,084
2050	0	0	0	4,368,217	566,901	-4,368,217	-506,573	-54,119,657
2051	0	0	0	4,209,408	577,002	-4,209,408	-447,849	-54,567,506
2052	0	0	0	4,053,062	587,283	-4,053,062	-395,611	-54,963,116
2053	0	0	0	3,898,984	597,747	-3,898,984	-349,148	-55,312,264
2054	0	0	0	3,746,990	608,398	-3,746,990	-307,832	-55,620,097
2055	0	0	0	3,596,916	619,238	-3,596,916	-271,104	-55,891,200
2056	0	0	0	3,448,606	630,272	-3,448,606	-238,464	-56,129,664
2057	0	0	0	3,301,920	641,502	-3,301,920	-209,468	-56,339,132
2058	0	0	0	3,156,728	652,932	-3,156,728	-183,723	-56,522,855
2059	0	0	0	3,012,910	664,566	-3,012,910	-160,874	-56,683,729
2060	0	0	0	2,870,357	676,407	-2,870,357	-140,607	-56,824,336
2061	0	0	0	2,728,967	688,459	-2,728,967	-122,643	-56,946,980
2062	0	0	0	2,588,647	700,726	-2,588,647	-106,731	-57,053,711
2063	0	0	0	2,449,312	713,212	-2,449,312	-92,648	-57,146,359
2064	0	0	0	2,310,883	725,920	-2,310,883	-80,194	-57,226,554
2065	0	0	0	2,173,287	738,854	-2,173,287	-69,192	-57,295,746
2066	0	0	0	2,036,458	752,019	-2,036,458	-59,482	-57,355,229
2067	0	0	0	1,900,334	765,419	-1,900,334	-50,923	-57,406,152
2068	0	0	0	1,764,859	779,057	-1,764,859	-43,388	-57,449,540
2069	0	0	0	1,629,982	792,938	-1,629,982	-36,763	-57,486,304
2070	0	0	0	1,495,653	807,067	-1,495,653	-30,948	-57,517,252
2071	0	0	0	1,361,830	821,447	-1,361,830	-25,853	-57,543,105
2072	0	0	0	1,228,471	836,084	-1,228,471	-21,395	-57,564,500
2073	0	0	0	1,096,473	850,981	-1,096,473	-17,520	-57,582,020
2074	0	0	0	1,167,814	866,144	-1,167,814	-17,119	-57,599,139
2075	0	0	0	1,012,801	881,577	-1,012,801	-13,621	-57,612,759
2076	0	0	0	825,614	897,285	-825,614	-10,187	-57,622,946
2077	0	0	0	1,273,433	913,272	-1,273,433	-14,414	-57,637,360
2078	0	0	0	1,983,876	929,545	-1,983,876	-20,602	-57,657,962
2079	0	0	0	331,433	946,108	-331,433	-3,158	-57,661,120
2080	0	0	0	272,528	962,966	-272,528	-2,382	-57,663,502
2081	0	0	0	299,774	980,124	-299,774	-2,404	-57,665,906
2082	0	0	0	137,684	997,588	-137,684	-1,013	-57,666,919
2083	0	0	0	82,610	1,015,363	-82,610	-558	-57,667,476
2084	0	0	0	2,585,454	1,033,454	-2,585,454	-16,009	-57,683,486

- 1 Table 2 provides the Present Worth Analysis of the requested variation of Alternative 1 from
- 2 2025 to 2084, with the rebuild of Transmission Line 108L commencing in 2029.

Table 2: Present Worth Analysis of Alternative 1 with 108L Rebuild Commencing in 2029								
Year	Transmission	Substation	Distribution	Capital	Operating	Net	Present	Cumulative
	51.9 yrs 8% CCA	48.5 yrs 8% CCA	52.9 yrs 8% CCA	Revenue Requirement	Costs	Benefit	Worth Benefit	Present Value Benefit
2025	0	20,000	0	2,341	452,667	-455,008	-455,008	-455,008
2026	0	4,400,000	0	517,624	424,185	-941,809	-864,045	-1,319,053
2027	8,800,000	4,800,000	0	2,154,344	408,507	-2,562,851	-2,157,100	-3,476,153
2028	0	0	0	2,258,850	418,537	-2,677,388	-2,067,434	-5,543,588
2029	2,356,100	0	0	2,463,912	421,064	-2,884,976	-2,043,789	-7,587,377
2030	8,798,800	0	0	3,458,956	419,373	-3,878,329	-2,520,648	-10,108,025
2031	8,696,089	0	0	4,498,140	418,655	-4,916,795	-2,931,724	-13,039,749
2032	0	0	0	4,470,815	427,505	-4,898,320	-2,679,549	-15,719,298
2033	27,386,698	1,841,123	0	7,787,080	425,202	-8,212,281	-4,121,467	-19,840,765
2034	0	0	0	7,933,737	435,122	-8,368,859	-3,853,255	-23,694,020
2035	0	0	0	7,672,659	437,590	-8,110,248	-3,425,857	-27,119,877
2036	0	0	0	7,422,014	441,516	-7,863,530	-3,047,376	-30,167,253
2037	0	0	0	7,180,966	444,712	-7,625,679	-2,711,194	-32,878,447
2038	0	0	0	6,948,749	452,672	-7,401,421	-2,414,186	-35,292,632
2039	0	0	0	6,724,656	458,051	-7,182,707	-2,149,400	-37,442,032
2040	0	0	0	6,508,036	464,880	-6,972,916	-1,914,331	-39,356,363
2041	0	0	0	6,298,292	485,806	-6,784,098	-1,708,709	-41,065,072
2042	0	0	0	6,094,875	492,162	-6,587,037	-1,522,087	-42,587,159
2043	0	0	0	5,897,277	500,924	-5,897,277	-1,250,186	-43,837,345
2044	0	0	0	5,705,033	509,872	-5,705,033	-1,109,570	-44,946,915
2045	0	0	0	5,517,715	518,987	-5,517,715	-984,531	-45,931,446
2046	0	0	0	5,334,928	528,234	-5,334,928	-873,317	-46,804,763
2047	0	0	0	5,156,311	537,646	-5,156,311	-774,384	-47,579,147
2048	0	0	0	4,981,530	547,226	-4,981,530	-686,362	-48,265,509
2049	0	0	0	4,810,277	556,976	-4,810,277	-608,043	-48,873,552
2050	0	0	0	4,642,272	566,901	-4,642,272	-538,354	-49,411,906
2051	0	0	0	4,477,252	577,002	-4,477,252	-476,346	-49,888,252
2052	0	0	0	4,314,981	587,283	-4,314,981	-421,176	-50,309,428
2053	0	0	0	4,155,238	597,747	-4,155,238	-372,095	-50,681,523
2054	0	0	0	3,997,821	608,398	-3,997,821	-328,439	-51,009,962
2055	0	0	0	3,842,543	619,238	-3,842,543	-289,617	-51,299,579
2056	0	0	0	3,689,234	630,272	-3,689,234	-255,103	-51,554,681
2057	0	0	0	3,537,736	641,502	-3,537,736	-224,428	-51,779,110
2058	0	0	0	3,387,904	652,932	-3,387,904	-197,177	-51,976,287
2059	0	0	0	3,239,605	664,566	-3,239,605	-172,978	-52,149,265
2060	0	0	0	3,092,716	676,407	-3,092,716	-151,500	-52,300,765
2061	0	0	0	2,947,125	688,459	-2,947,125	-132,448	-52,433,213
2062	0	0	0	2,802,727	700,726	-2,802,727	-115,558	-52,548,771
2063	0	0	0	2,659,428	713,212	-2,659,428	-100,596	-52,649,367
2064	0	0	0	2,517,138	725,920	-2,517,138	-87,352	-52,736,719
2065	0	0	0	2,375,779	738,854	-2,375,779	-75,639	-52,812,358
2066	0	0	0	2,235,274	752,019	-2,235,274	-65,290	-52,877,648
2067	0	0	0	2,095,556	765,419	-2,095,556	-56,155	-52,933,803
2068	0	0	0	1,956,562	779,057	-1,956,562	-48,101	-52,981,904
2069	0	0	0	1,818,234	792,938	-1,818,234	-41,009	-53,022,913
2070	0	0	0	1,680,518	807,067	-1,680,518	-34,774	-53,057,687
2071	0	0	0	1,543,366	821,447	-1,543,366	-29,299	-53,086,985
2072	0	0	0	1,406,733	836,084	-1,406,733	-24,500	-53,111,485
2073	0	0	0	1,271,508	850,981	-1,271,508	-20,316	-53,131,802
2074	0	0	0	1,339,669	866,144	-1,339,669	-19,638	-53,151,440
2075	0	0	0	1,181,517	881,577	-1,181,517	-15,890	-53,167,330
2076	0	0	0	785,983	897,285	-785,983	-9,698	-53,177,027
2077	0	0	0	668,745	913,272	-668,745	-7,570	-53,184,597
2078	0	0	0	1,372,778	929,545	-1,372,778	-14,256	-53,198,853
2079	0	0	0	444,014	946,108	-444,014	-4,230	-53,203,083
2080	0	0	0	565,217	962,966	-565,217	-4,940	-53,208,024
2081	0	0	0	1,156,660	980,124	-1,156,660	-9,275	-53,217,299
2082	0	0	0	958,643	997,588	-958,643	-7,053	-53,224,351
2083	0	0	0	82,610	1,015,363	-82,610	-558	-53,224,909
2084	0	0	0	2,585,454	1,033,454	-2,585,454	-16,009	-53,240,918

1 Table 3 provides the Present Worth Analysis of Alternative 2 from 2025 to 2084.
2

Table 3: Present Worth Analysis of Alternative 2								
Year	Transmission	Substation	Distribution	Capital	Operating	Net	Present	Cumulative
	51.9 yrs 8% CCA	48.5 yrs 8% CCA	52.9 yrs 8% CCA	Revenue Requirement	Costs	Benefit	Worth Benefit	Present Value Benefit
2025	1,900,000	20,000	0	226,304	414,982	-641,286	-641,286	-641,286
2026	9,300,000	4,400,000	0	1,855,456	388,871	-2,244,327	-2,059,015	-2,700,302
2027	11,100,000	7,900,000	1,200,000	4,345,379	374,499	-4,719,878	-3,972,627	-6,672,929
2028	0	0	0	4,461,355	383,694	-4,845,049	-3,741,267	-10,414,196
2029	0	0	0	4,314,804	386,010	-4,700,814	-3,330,175	-13,744,371
2030	0	0	0	4,174,466	384,460	-4,558,927	-2,962,989	-16,707,360
2031	0	0	0	4,039,846	383,802	-4,423,648	-2,637,677	-19,345,037
2032	0	0	0	3,910,485	391,915	-4,302,400	-2,353,560	-21,698,597
2033	26,811,347	0	0	6,963,480	394,923	-7,358,403	-3,692,934	-25,391,532
2034	0	0	0	7,107,928	404,137	-7,512,065	-3,458,763	-28,850,295
2035	0	0	0	6,876,070	406,429	-7,282,498	-3,076,206	-31,926,501
2036	0	0	0	6,653,029	410,076	-7,063,104	-2,737,185	-34,663,686
2037	0	0	0	6,438,100	413,044	-6,851,145	-2,435,820	-37,099,506
2038	0	0	0	6,230,635	420,437	-6,651,072	-2,169,438	-39,268,944
2039	0	0	0	6,030,036	425,433	-6,455,469	-1,931,776	-41,200,720
2040	0	0	0	5,835,753	431,776	-6,267,529	-1,720,675	-42,921,395
2041	0	0	0	5,647,283	451,211	-6,098,494	-1,536,026	-44,457,421
2042	0	0	0	5,464,159	457,115	-5,921,273	-1,368,247	-45,825,669
2043	0	0	0	5,285,953	465,253	-5,285,953	-1,120,589	-46,946,258
2044	0	0	0	5,112,273	473,564	-4,942,757	-881,940	-47,940,542
2045	0	0	0	4,942,757	482,029	-4,777,070	-781,997	-48,822,482
2046	0	0	0	4,777,070	490,618	-4,614,908	-693,075	-50,297,554
2047	0	0	0	4,614,908	499,360	-4,455,987	-613,952	-50,911,506
2048	0	0	0	4,455,987	508,258	-4,300,049	-543,547	-51,455,054
2049	0	0	0	4,300,049	517,314	-4,146,855	-480,902	-51,935,956
2050	0	0	0	4,146,855	526,531	-3,996,186	-425,164	-52,361,120
2051	0	0	0	3,996,186	535,913	-3,847,838	-375,579	-52,736,699
2052	0	0	0	3,847,838	545,462	-3,701,628	-331,475	-53,068,174
2053	0	0	0	3,701,628	555,181	-3,557,384	-292,255	-53,360,429
2054	0	0	0	3,557,384	565,073	-3,414,947	-257,388	-53,617,818
2055	0	0	0	3,414,947	575,142	-3,274,175	-226,402	-53,844,220
2056	0	0	0	3,274,175	585,390	-3,134,934	-198,875	-54,043,095
2057	0	0	0	3,134,934	595,820	-2,997,100	-174,432	-54,217,527
2058	0	0	0	2,997,100	606,436	-2,860,563	-152,739	-54,370,266
2059	0	0	0	2,860,563	617,242	-2,725,217	-133,498	-54,503,764
2060	0	0	0	2,725,217	628,240	-2,590,968	-116,442	-54,620,206
2061	0	0	0	2,590,968	639,434	-2,457,727	-101,334	-54,721,539
2062	0	0	0	2,457,727	650,827	-2,325,415	-87,962	-54,809,501
2063	0	0	0	2,325,415	662,424	-2,193,957	-76,137	-54,885,638
2064	0	0	0	2,193,957	674,227	-2,063,284	-65,690	-54,951,328
2065	0	0	0	2,063,284	686,240	-1,933,334	-56,470	-55,007,798
2066	0	0	0	1,933,334	698,468	-1,804,049	-48,343	-55,056,141
2067	0	0	0	1,804,049	710,913	-1,675,376	-41,188	-55,097,329
2068	0	0	0	1,675,376	723,580	-1,547,266	-34,898	-55,132,227
2069	0	0	0	1,547,266	736,473	-1,419,673	-29,376	-55,161,603
2070	0	0	0	1,419,673	749,595	-1,292,557	-24,538	-55,186,141
2071	0	0	0	1,292,557	762,951	-1,165,879	-20,305	-55,206,446
2072	0	0	0	1,165,879	776,546	-1,040,535	-16,626	-55,223,072
2073	0	0	0	1,040,535	790,382	-1,118,510	-16,396	-55,239,468
2074	0	0	0	1,118,510	804,465	-1,114,541	-14,989	-55,254,457
2075	0	0	0	1,114,541	818,799	-732,281	-9,035	-55,263,492
2076	0	0	0	732,281	833,389	-1,322,825	-14,974	-55,278,466
2077	0	0	0	1,322,825	848,238	-1,402,446	-14,564	-55,293,030
2078	0	0	0	1,402,446	863,352	-404,421	-3,853	-55,296,883
2079	0	0	0	404,421	878,735	-242,936	-2,123	-55,299,006
2080	0	0	0	242,936	894,392	-188,809	-1,514	-55,300,520
2081	0	0	0	188,809	910,329	-134,792	-992	-55,301,512
2082	0	0	0	134,792	926,549	80,875	-546	-55,302,058
2083	0	0	0	80,875	943,058	-2,531,137	-15,673	-55,317,731
2084	0	0	0	2,531,137	959,861			

1 Table 4 provides the Present Worth Analysis of Alternative 3 from 2025 to 2084.

Table 4: Present Worth Analysis of Alternative 3								
Year	Transmission	Substation	Distribution	Capital	Operating	Net	Present	Cumulative
	51.9 yrs 8% CCA	48.5 yrs 8% CCA	52.9 yrs 8% CCA	Revenue Requirement	Costs	Benefit	Worth Benefit	Present Value Benefit
2025	2,200,000	20,000	0	261,667	452,667	-714,334	-714,334	-714,334
2026	8,200,000	3,900,000	0	1,705,404	424,185	-2,129,588	-1,953,751	-2,668,085
2027	8,100,000	23,300,000	0	5,487,943	408,507	-5,896,450	-4,962,924	-7,631,009
2028	0	0	0	5,702,391	418,537	-6,120,928	-4,726,480	-12,357,488
2029	0	0	0	5,515,607	421,064	-5,936,671	-4,205,688	-16,563,176
2030	0	0	0	5,336,839	419,373	-5,756,212	-3,741,143	-20,304,319
2031	0	0	0	5,165,446	418,655	-5,584,101	-3,329,617	-23,633,936
2032	0	0	0	5,000,837	427,505	-5,428,342	-2,969,489	-26,603,425
2033	27,386,698	1,841,123	0	8,304,891	425,202	-8,730,093	-4,381,339	-30,984,764
2034	0	0	0	8,439,258	435,122	-8,874,381	-4,086,011	-35,070,776
2035	0	0	0	8,165,818	437,590	-8,603,407	-3,634,172	-38,704,948
2036	0	0	0	7,902,742	441,516	-8,344,258	-3,233,674	-41,938,622
2037	0	0	0	7,649,203	444,712	-8,093,915	-2,877,668	-44,816,290
2038	0	0	0	7,404,436	452,672	-7,857,108	-2,562,821	-47,379,111
2039	0	0	0	7,167,741	458,051	-7,625,792	-2,281,991	-49,661,102
2040	0	0	0	6,938,471	464,880	-7,403,351	-2,032,501	-51,693,604
2041	0	0	0	6,716,033	485,806	-7,201,838	-1,813,925	-53,507,529
2042	0	31,007,545	0	10,149,762	492,162	-10,641,924	-2,459,063	-55,966,592
2043	0	0	0	10,222,296	500,924	-10,222,296	-2,167,063	-58,133,655
2044	0	0	0	9,887,084	509,872	-9,887,084	-1,922,936	-60,056,591
2045	0	0	0	9,562,606	518,987	-9,562,606	-1,706,264	-61,762,855
2046	0	0	0	9,248,003	528,234	-9,248,003	-1,513,880	-63,276,735
2047	0	0	0	8,942,486	537,646	-8,942,486	-1,342,998	-64,619,733
2048	0	0	0	8,645,327	547,226	-8,645,327	-1,191,165	-65,810,898
2049	0	0	0	8,355,858	556,976	-8,355,858	-1,056,222	-66,867,120
2050	0	0	0	8,073,463	566,901	-8,073,463	-936,262	-67,803,382
2051	0	0	0	7,797,577	577,002	-7,797,577	-829,604	-68,632,986
2052	0	0	0	7,527,679	587,283	-7,527,679	-734,760	-69,367,746
2053	0	0	0	7,263,289	597,747	-7,263,289	-650,416	-70,018,162
2054	0	0	0	7,003,968	608,398	-7,003,968	-575,408	-70,593,570
2055	0	0	0	6,749,309	619,238	-6,749,309	-508,703	-71,102,273
2056	0	0	0	6,498,941	630,272	-6,498,941	-449,388	-71,551,661
2057	0	40,416,358	0	11,009,907	641,502	-11,009,907	-698,451	-72,250,111
2058	0	0	0	11,135,865	652,932	-11,135,865	-648,111	-72,898,222
2059	0	0	0	10,726,758	664,566	-10,726,758	-572,753	-73,470,976
2060	0	0	0	10,328,336	676,407	-10,328,336	-505,945	-73,976,920
2061	0	0	0	9,939,745	688,459	-9,939,745	-446,706	-74,423,626
2062	0	0	0	9,560,197	700,726	-9,560,197	-394,173	-74,817,798
2063	0	0	0	9,188,970	713,212	-9,188,970	-347,584	-75,165,382
2064	0	0	0	8,825,397	725,920	-8,825,397	-306,267	-75,471,650
2065	0	0	0	8,468,867	738,854	-8,468,867	-269,628	-75,741,278
2066	0	0	0	8,118,816	752,019	-8,118,816	-237,141	-75,978,419
2067	0	0	0	7,774,725	765,419	-7,774,725	-208,340	-76,186,759
2068	0	0	0	7,436,119	779,057	-7,436,119	-182,813	-76,369,572
2069	0	0	0	7,102,557	792,938	-7,102,557	-160,195	-76,529,767
2070	0	0	0	6,773,637	807,067	-6,773,637	-140,162	-76,669,928
2071	0	0	0	6,448,986	821,447	-6,448,986	-122,426	-76,792,354
2072	0	0	0	6,128,265	836,084	-6,128,265	-106,731	-76,899,085
2073	0	0	0	5,812,089	850,981	-5,812,089	-92,867	-76,991,952
2074	0	0	0	5,678,891	866,144	-5,678,891	-83,246	-77,075,198
2075	0	0	0	6,235,271	881,577	-6,235,271	-83,855	-77,159,054
2076	0	0	0	4,834,607	897,285	-4,834,607	-59,650	-77,218,704
2077	0	0	0	5,142,568	913,272	-5,142,568	-58,211	-77,276,914
2078	0	0	0	4,894,206	929,545	-4,894,206	-50,825	-77,327,739
2079	0	0	0	3,917,897	946,108	-3,917,897	-37,327	-77,365,066
2080	0	0	0	3,707,179	962,966	-3,707,179	-32,403	-77,397,469
2081	0	0	0	3,584,224	980,124	-3,584,224	-28,742	-77,426,211
2082	0	0	0	3,273,416	997,588	-3,273,416	-24,082	-77,450,293
2083	0	0	0	3,070,987	1,015,363	-3,070,987	-20,727	-77,471,020
2084	0	0	0	5,427,731	1,033,454	-5,427,731	-33,609	-77,504,629

Requests for Information

1 Of the viable alternatives assessed in Report 3.1 *Gander – Twillingate Transmission System*
2 *Planning Study*, when considering a hypothetical discount rate of 9.0%, Alternative 2 remains
3 least cost.
4

5 When considering a variation of Alternative 1 that involves deferring the rebuild of Transmission
6 Line 108L to 2029, the results are within 5% of the net-present value ("NPV") of Alternative 2.¹
7 As demonstrated in section 4.3 of Report 3.1 *Gander – Twillingate Transmission System*
8 *Planning Study*, Alternative 2 is expected to be significantly more reliable than Alternative 1. By
9 deferring the rebuild of Transmission Line 108L to commence in 2029, with an expected in-
10 service year of 2031, overall reliability to the area would be increasingly negatively impacted,
11 resulting in an unacceptable risk to customer outages. As a result, this variation of Alternative 1
12 would not be considered, and Alternative 2 remains as the preferred solution.

¹ As per Tables 2 and 3, the NPV of the variation of Alternative 1 with the rebuild of Transmission Line 108L deferred to 2029 is \$53.2 Million, and the NPV of Alternative 2 is \$55.3 Million. As a result, the difference in alternatives is $(55.3 - 53.2 / 53.2) = 3.9\%$.