

1 Q. **Reference: Technical Note RP-TN-051: Southern Labrador - Interconnection without Regional**  
 2 **Diesel Plant**

3 Table 7, page 6 of 8, provides a cost-benefit analyses of alternatives including one that would  
 4 interconnect the communities without the construction of a central diesel generating plant and  
 5 no replacement for the Charlottetown diesel generating station. Table 8, page 7 of 8, provides a  
 6 similar analysis with a 50% reduction in the costs associated with diesel generating station  
 7 replacement. Please provide, in both tabular and graphical format, the Cumulative Net Present  
 8 Value for each alternative examined in Table 7 and Table 8 for every year of the study period.

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11 A. The Annual Cumulative Net Present Value for each alternative examined in Table 7 and Table 8  
 12 of Technical Note RP-TN-051<sup>1</sup> for every year of the study period is provided as Table 1 and Table  
 13 2, respectively, and provided in graphical format as Chart 1 and Chart 2, respectively.

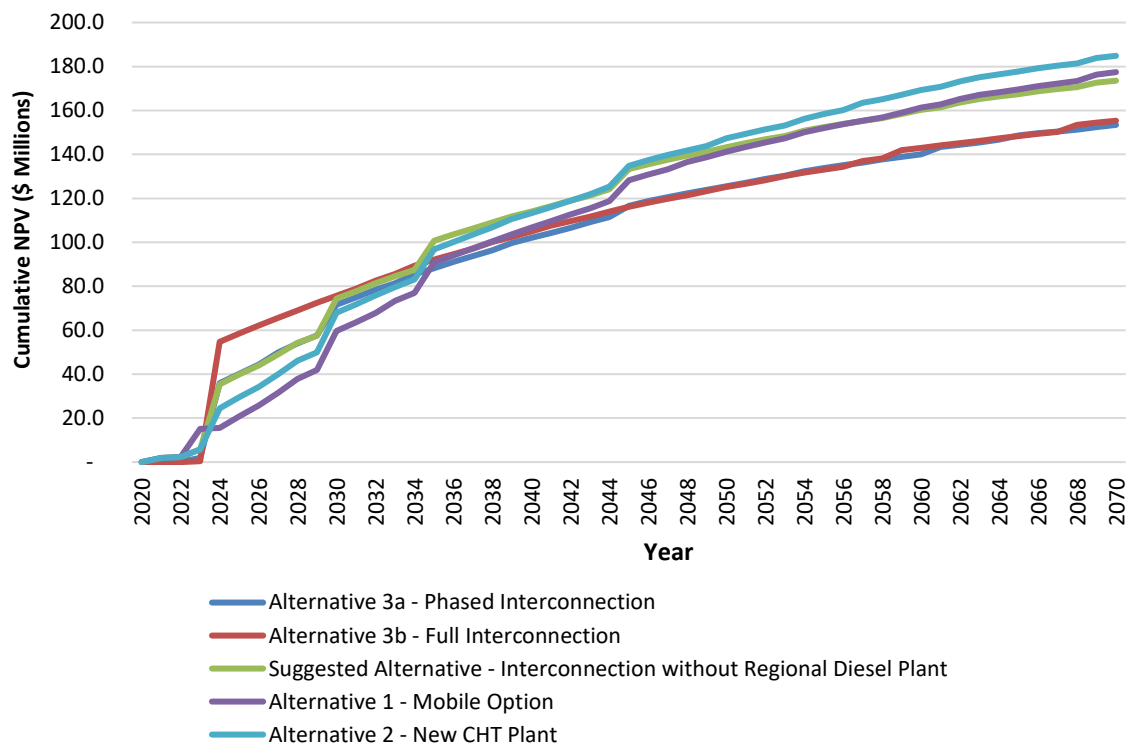
**Table 1: Annual Cumulative Net Present Value  
 CPW Analysis Results (2020-2070) – 50-Year Study  
 (\$000s – Nominal)**

<b>Year</b>	<b>Alternative 3a - Phased Interconnection</b>	<b>Alternative 3b - Full Interconnection</b>	<b>Suggested Alternative - Interconnection without Regional Diesel Plant</b>	<b>Alternative 1 - Mobile Option</b>	<b>Alternative 2 - New CHT Plant</b>
2020	-	-	-	-	-
2021	-	-	1,840,340	1,840,340	1,840,340
2022	223,717	-	2,287,774	2,287,774	2,287,774
2023	1,876,854	354,664	5,796,556	15,111,530	5,809,389
2024	35,892,605	54,717,867	35,354,835	15,569,782	24,420,888
2025	40,201,401	58,511,983	39,875,438	20,782,001	29,559,549
2026	44,401,959	62,125,182	43,950,414	25,730,272	34,243,385
2027	49,953,049	65,635,846	49,028,180	31,592,135	40,036,366
2028	53,999,600	69,020,843	54,245,092	37,818,398	46,145,435
2029	57,644,258	72,435,599	57,547,058	41,903,521	49,956,834

<sup>1</sup> “Long-Term Supply for Southern Labrador– Phase 1 - Supplemental Information,” Newfoundland and Labrador Hydro, March 17, 2022, att. 1, p. 6, table 7, and p. 7, table 8.

Year	Alternative 3a - Phased Interconnection	Alternative 3b - Full Interconnection	Suggested Alternative - Interconnection without Regional Diesel Plant	Alternative 1 - Mobile Option	Alternative 2 - New CHT Plant
2030	71,648,588	75,620,472	74,444,251	59,712,711	67,952,281
2031	74,954,926	78,952,293	77,774,162	63,597,937	71,777,192
2032	78,394,073	82,546,536	81,404,550	67,755,684	75,876,835
2033	81,395,048	85,581,164	84,504,857	73,363,457	79,580,451
2034	85,366,444	89,419,070	87,456,445	76,971,592	83,116,817
2035	88,155,640	92,083,028	100,775,722	90,760,301	96,853,176
2036	91,163,678	94,666,073	103,613,518	94,073,860	100,116,231
2037	93,749,882	97,135,611	106,270,322	97,182,233	103,495,651
2038	96,320,535	100,085,545	109,067,974	100,442,903	106,828,050
2039	99,637,137	102,493,933	111,738,301	103,707,051	110,655,195
2040	101,976,098	104,933,912	114,006,574	106,746,270	113,276,200
2041	104,281,106	107,533,324	116,387,818	109,657,112	116,019,464
2042	106,571,618	109,602,295	118,979,593	112,615,989	118,951,304
2043	109,153,895	111,713,701	121,262,438	115,378,878	121,840,279
2044	111,502,321	113,913,148	124,191,933	118,747,482	125,400,363
2045	116,644,244	116,222,991	133,354,438	128,233,181	134,861,675
2046	118,844,222	118,045,859	135,575,762	130,902,663	137,409,441
2047	120,572,734	119,774,371	137,571,575	133,220,068	139,704,109
2048	122,253,299	121,453,716	139,421,665	136,573,412	141,834,645
2049	123,940,253	123,286,177	141,183,059	138,730,693	143,864,308
2050	125,498,275	125,187,287	143,243,364	141,252,670	147,276,263
2051	127,010,702	126,698,611	145,068,587	143,368,499	149,372,366
2052	128,810,566	128,177,842	146,847,025	145,408,274	151,393,098
2053	130,280,017	130,205,763	148,379,689	147,271,032	153,159,978
2054	132,380,828	131,762,687	150,759,935	150,085,333	156,228,560
2055	133,808,721	133,071,813	152,386,369	151,950,068	158,437,459
2056	135,074,537	134,337,629	153,900,711	153,777,350	160,178,180
2057	136,301,896	136,959,038	155,197,704	155,290,740	163,537,436
2058	137,644,949	138,158,151	156,504,478	156,812,690	165,043,958
2059	138,944,237	141,908,049	158,370,438	159,029,624	167,170,096
2060	140,051,173	143,014,172	160,309,591	161,249,821	169,355,812
2061	143,429,258	144,076,474	161,501,765	162,708,878	170,730,053
2062	144,455,208	145,102,424	163,691,587	165,179,422	173,187,193
2063	145,451,194	146,167,816	165,299,516	167,080,748	175,152,916
2064	146,750,488	147,281,438	166,360,133	168,316,807	176,376,481
2065	148,681,425	148,337,463	167,450,773	169,577,020	177,690,914
2066	149,578,638	149,315,863	168,724,793	171,067,844	179,166,098

Year	Alternative 3a - Phased Interconnection	Alternative 3b - Full Interconnection	Suggested Alternative - Interconnection without Regional Diesel Plant	Alternative 1 - Mobile Option	Alternative 2 - New CHT Plant
2067	150,440,663	150,177,888	169,718,525	172,224,239	180,311,251
2068	151,274,184	153,438,624	170,680,000	173,399,095	181,419,281
2069	152,356,742	154,520,583	172,651,453	176,243,599	183,827,148
2070	153,416,744	155,310,330	173,535,832	177,432,303	184,847,070

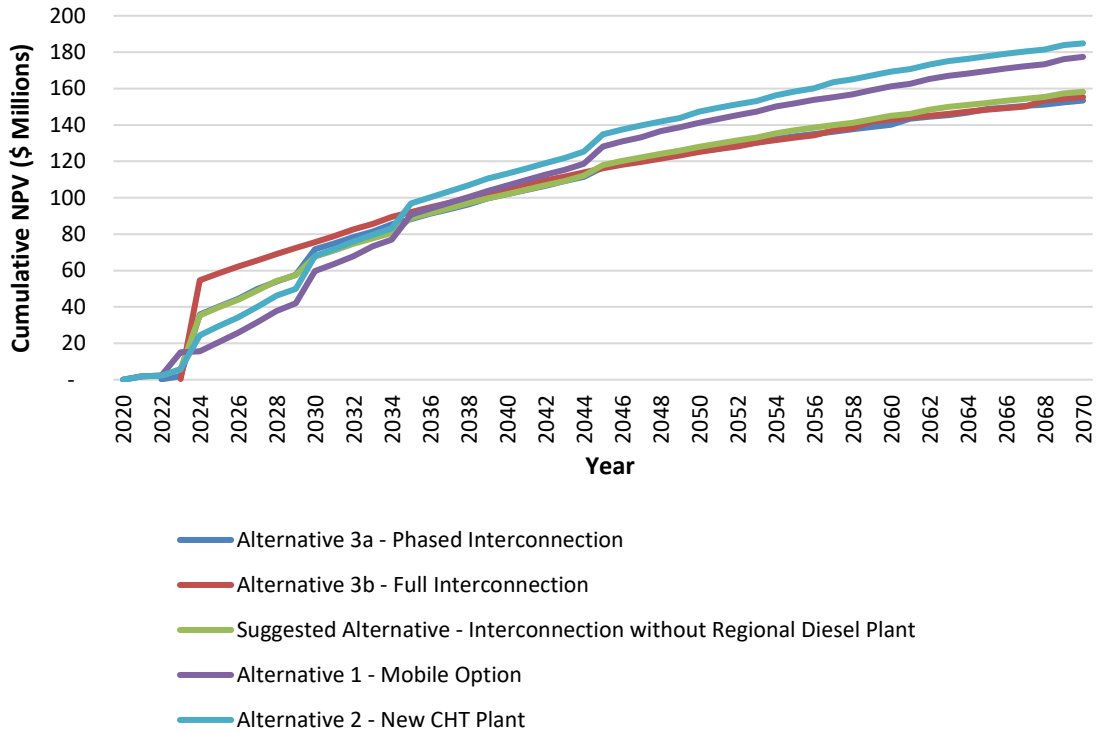


**Chart 1: Annual Cumulative Net Present Value  
 Southern Labrador Interconnection  
 (Without Diesel Plant)**

**Table 2: Annual Cumulative Net Present Value**  
**CPW Analysis Results - Sensitivity Analysis (Reduced Diesel Plant Replacement Costs)**  
 (\$000s – Nominal)

Year	Alternative 3a - Phased Interconnection	Alternative 3b - Full Interconnection	Suggested Alternative - Interconnection without Regional Diesel Plant	Alternative 1 - Mobile Option	Alternative 2 - New CHT Plant
2020	-	-	-	-	-
2021	-	-	1,840,340	1,840,340	1,840,340
2022	223,717	-	2,287,774	2,287,774	2,287,774
2023	1,876,854	354,664	5,796,556	15,111,530	5,809,389
2024	35,892,605	54,717,867	35,354,835	15,569,782	24,420,888
2025	40,201,401	58,511,983	39,875,438	20,782,001	29,559,549
2026	44,401,959	62,125,182	43,950,414	25,730,272	34,243,385
2027	49,953,049	65,635,846	49,028,180	31,592,135	40,036,366
2028	53,999,600	69,020,843	54,245,092	37,818,398	46,145,435
2029	57,644,258	72,435,599	57,547,058	41,903,521	49,956,834
2030	71,648,588	75,620,472	67,696,590	59,712,711	67,952,281
2031	74,954,926	78,952,293	71,026,501	63,597,937	71,777,192
2032	78,394,073	82,546,536	74,656,889	67,755,684	75,876,835
2033	81,395,048	85,581,164	77,757,196	73,363,457	79,580,451
2034	85,366,444	89,419,070	80,708,785	76,971,592	83,116,817
2035	88,155,640	92,083,028	88,756,312	90,760,301	96,853,176
2036	91,163,678	94,666,073	91,594,109	94,073,860	100,116,231
2037	93,749,882	97,135,611	94,250,912	97,182,233	103,495,651
2038	96,320,535	100,085,545	97,048,564	100,442,903	106,828,050
2039	99,637,137	102,493,933	99,718,891	103,707,051	110,655,195
2040	101,976,098	104,933,912	101,987,164	106,746,270	113,276,200
2041	104,281,106	107,533,324	104,368,408	109,657,112	116,019,464
2042	106,571,618	109,602,295	106,960,183	112,615,989	118,951,304
2043	109,153,895	111,713,701	109,243,028	115,378,878	121,840,279
2044	111,502,321	113,913,148	112,172,524	118,747,482	125,400,363
2045	116,644,244	116,222,991	118,024,545	128,233,181	134,861,675
2046	118,844,222	118,045,859	120,245,869	130,902,663	137,409,441
2047	120,572,734	119,774,371	122,241,682	133,220,068	139,704,109
2048	122,253,299	121,453,716	124,091,773	136,573,412	141,834,645
2049	123,940,253	123,286,177	125,853,167	138,730,693	143,864,308
2050	125,498,275	125,187,287	127,913,471	141,252,670	147,276,263
2051	127,010,702	126,698,611	129,738,694	143,368,499	149,372,366
2052	128,810,566	128,177,842	131,517,132	145,408,274	151,393,098

<b>Year</b>	<b>Alternative 3a - Phased Interconnection</b>	<b>Alternative 3b - Full Interconnection</b>	<b>Suggested Alternative - Interconnection without Regional Diesel Plant</b>	<b>Alternative 1 - Mobile Option</b>	<b>Alternative 2 - New CHT Plant</b>
2053	130,280,017	130,205,763	133,049,796	147,271,032	153,159,978
2054	132,380,828	131,762,687	135,430,042	150,085,333	156,228,560
2055	133,808,721	133,071,813	137,056,476	151,950,068	158,437,459
2056	135,074,537	134,337,629	138,570,818	153,777,350	160,178,180
2057	136,301,896	136,959,038	139,867,811	155,290,740	163,537,436
2058	137,644,949	138,158,151	141,174,585	156,812,690	165,043,958
2059	138,944,237	141,908,049	143,040,545	159,029,624	167,170,096
2060	140,051,173	143,014,172	144,979,699	161,249,821	169,355,812
2061	143,429,258	144,076,474	146,171,872	162,708,878	170,730,053
2062	144,455,208	145,102,424	148,361,695	165,179,422	173,187,193
2063	145,451,194	146,167,816	149,969,623	167,080,748	175,152,916
2064	146,750,488	147,281,438	151,030,240	168,316,807	176,376,481
2065	148,681,425	148,337,463	152,120,880	169,577,020	177,690,914
2066	149,578,638	149,315,863	153,394,900	171,067,844	179,166,098
2067	150,440,663	150,177,888	154,388,632	172,224,239	180,311,251
2068	151,274,184	153,438,624	155,350,108	173,399,095	181,419,281
2069	152,356,742	154,520,583	157,321,561	176,243,599	183,827,148
2070	153,416,744	155,310,330	158,205,939	177,432,303	184,847,070



**Chart 2: Annual Cumulative Net Present Value  
Southern Labrador Interconnection  
(Reduced Diesel Plant Replacement Costs)**