

NEWFOUNDLAND AND LABRADOR HYDRO
Generation Expansion Analysis 2010 Interconnection Alternative
Fuel Expense Details

	Factor	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
NO. 2 FUEL:																
¢/litre (Fuel Forecast)		0.67375	0.7	0.76	0.815	0.85	0.905	0.945	0.99	1.03	1.065	1.1	1.155	1.195	1.235	1.275
\$/bbl	158.970	107.10	111.30	120.80	129.60	135.10	143.90	150.20	157.40	163.70	169.30	174.90	183.60	190.00	196.30	202.70
\$/Mbtu	5.825	18.386	19.107	20.738	22.249	23.193	24.704	25.785	27.021	28.103	29.064	30.026	31.519	32.618	33.700	34.798
Existing CT																
Production (GWh)		5.8	4.4	4.8	9.6	14.9	9.9	10.3	0.2	0.3	0.2	0.2	0.7	0.8	0.6	0.7
MBTU/MWh		12.263	12.263	12.263	12.263	12.263	12.263	12.263	12.263	12.263	12.263	12.263	12.263	12.263	12.263	12.263
Fuel cost (\$000)		1,315	1,021	1,225	2,632	4,244	3,012	3,243	82	90	82	89	256	328	267	300
Diesel																
Production (GWh)		0.3	0.3	0.3	0.5	0.6	0.4	0.4	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
MBTU/MWh		10.970	10.970	10.970	10.970	10.970	10.970	10.970	10.970	10.970	10.970	10.970	10.970	10.970	10.970	10.970
Fuel cost (\$000)		53	56	67	113	160	109	118	12	13	12	13	29	35	45	50
New CT																
Production (GWh)		0.0	0.0	0.0	0.0	1.0	10.7	11.0	0.1	0.1	0.1	0.1	0.9	1.1	1.1	1.2
MBTU/MWh		9.434	9.434	9.434	9.434	9.434	9.434	9.434	9.434	9.434	9.434	9.434	9.434	9.434	9.434	9.434
Fuel cost (\$000)		0	0	0	0	212	2,497	2,680	23	25	23	24	259	326	360	385
CCGT ⁽¹⁾																
Production (GWh)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MBTU/MWh																
Fuel cost (\$000)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NO. 6 FUEL 0.7%:																
\$/bbl (Fuel Forecast)		81.30	83.20	90.90	98.80	102.60	106.80	111.10	116.30	121.10	124.90	129.20	132.80	136.00	139.10	142.10
\$/Mbtu	6.287	12.931	13.234	14.458	15.715	16.319	16.987	17.671	18.498	19.262	19.866	20.550	21.123	21.632	22.125	22.602
Holyrood ⁽²⁾																
Production (GWh)		1,032.8	952.5	997.1	1,352.5	1,620.5	1,736.6	1,753.0	1.9	2.0	1.8	1.9	0.2	0.0	0.0	0.0
MBTU/MWh		9.956	9.963	9.963	9.982	9.954	9.928	9.927	10.006	10.006	10.006	10.006	10.006			
Fuel cost (\$000)		132,962	125,597	143,630	212,169	263,238	292,867	307,523	347	388	358	395	52	0	0	0
TOTALS:																
Production (GWh)		1,038.9	957.2	1,002.2	1,362.6	1,637.1	1,757.6	1,774.7	2.2	2.4	2.2	2.3	1.9	2.0	1.9	2.0
Fuel cost (\$000)		134,330	126,675	144,921	214,914	267,855	298,484	313,564	463	515	475	521	597	689	673	735

Notes:

- (1) CCGT efficiency is related to the amount of unit production. Average efficiencies are input to Strategist for minimum and maximum production levels, and Strategist uses this range to determine operating efficiency on an hourly basis. For CCGT units, the minimum efficiency input (MBTU/MWh) is 8.629 and the maximum efficiency input is 7.637. The values reported here are annual averages, and are within these limits.
- (2) Holyrood efficiency is related to the amount of unit production. Average efficiencies are input to Strategist for minimum and maximum production levels, and Strategist uses this range to determine operating efficiency on an hourly basis. For Holyrood units, the minimum efficiency input (MBTU/MWh) is 10.388 and the maximum efficiency input is 9.78. The values reported here are annual averages, and are within these limits.

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	Factor	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
NO. 2 FUEL:																
¢/litre (Fuel Forecast)		1.315	1.34	1.365	1.395	1.425	1.45	1.48	1.51	1.54	1.57	1.6	1.635	1.665	1.7	1.735
\$/bbl	158.970	209.00	213.00	217.00	221.80	226.50	230.50	235.30	240.00	244.80	249.60	254.40	259.90	264.70	270.20	275.80
\$/Mbtu	5.825	35.880	36.567	37.253	38.077	38.884	39.571	40.395	41.202	42.026	42.850	43.674	44.618	45.442	46.386	47.348
Existing CT																
Production (GWh)		0.5	0.5	0.6	0.7	1.0	1.1	1.3	1.5	1.7	1.8	2.0	2.1	1.8	0.4	0.4
MBTU/MWh		12.263	12.263	12.263	12.263	12.263	12.263	12.263	12.263	12.263	12.263	12.263	12.263	12.263	12.263	12.263
Fuel cost (\$000)		208	236	271	320	469	555	664	758	871	966	1,066	1,161	979	211	248
Diesel																
Production (GWh)		0.2	0.2	0.2	0.3	0.3	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MBTU/MWh		10.970	10.970	10.970	10.970	10.970	10.970	10.970	10.970	10.970	10.970	10.970	10.970	10.970	10.970	10.970
Fuel cost (\$000)		72	81	91	105	138	153	0	0	0	0	0	0	0	0	0
New CT																
Production (GWh)		1.2	1.3	1.4	1.8	3.1	3.3	3.6	4.0	4.3	4.6	4.9	5.1	4.4	0.7	0.8
MBTU/MWh		9.434	9.434	9.434	9.434	9.434	9.434	9.434	9.434	9.434	9.434	9.434	9.434	9.434	9.434	9.434
Fuel cost (\$000)		421	450	500	636	1,124	1,237	1,375	1,553	1,707	1,859	2,009	2,156	1,892	325	349
CCGT ⁽¹⁾																
Production (GWh)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	10.5	11.2
MBTU/MWh														8.387	7.970	7.937
Fuel cost (\$000)		0	0	0	0	0	0	0	0	0	0	0	0	366	3,875	4,205
NO. 6 FUEL 0.7%:																
\$/bbl (Fuel Forecast)		145.00	147.90	150.80	153.90	156.90	160.10	163.30	166.50	169.90	173.30	176.70	180.30	183.90	187.50	191.30
\$/Mbtu	6.287	23.063	23.525	23.986	24.479	24.956	25.465	25.974	26.483	27.024	27.565	28.106	28.678	29.251	29.823	30.428
Holyrood ⁽²⁾																
Production (GWh)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MBTU/MWh																
Fuel cost (\$000)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTALS:																
Production (GWh)		1.9	2.0	2.2	2.7	4.4	4.8	4.9	5.5	6.0	6.4	6.9	7.2	7.1	11.6	12.4
Fuel cost (\$000)		701	767	862	1,060	1,732	1,945	2,039	2,310	2,578	2,825	3,075	3,318	3,237	4,411	4,803

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	Factor	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054
NO. 2 FUEL:																
¢/litre (Fuel Forecast)		1.77	1.805	1.84	1.875	1.915	1.955	1.995	2.035	2.075	2.115	2.155	2.2	2.245	2.29	2.335
\$/bbl	158.970	281.40	286.90	292.50	298.10	304.40	310.80	317.10	323.50	329.90	336.20	342.60	349.70	356.90	364.00	371.20
\$/Mbtu	5.825	48.309	49.253	50.215	51.176	52.258	53.356	54.438	55.536	56.635	57.717	58.815	60.034	61.270	62.489	63.725
Existing CT																
Production (GWh)		0.8	0.9	1.0	1.1	1.2	1.4	1.4	0.8	0.8	0.9	0.9	0.6	0.6	0.6	0.7
MBTU/MWh		12.263	12.263	12.263	12.263	12.263	12.263	12.263	12.263	12.263	12.263	12.263	12.263	12.263	12.263	12.263
Fuel cost (\$000)		470	535	611	703	753	898	965	514	555	628	650	415	440	493	526
Diesel																
Production (GWh)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MBTU/MWh		10.970	10.970	10.970	10.970	10.970	10.970	10.970	10.970	10.970	10.970	10.970	10.970	10.970	10.970	10.970
Fuel cost (\$000)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
New CT																
Production (GWh)		0.0	0.0	0.0	0.0	0.0	0.0	0.1	2.3	2.5	2.8	3.2	4.2	4.5	4.8	5.3
MBTU/MWh		9.434	9.434	9.434	9.434	9.434	9.434	9.434	9.434	9.434	9.434	9.434	9.434	9.434	9.434	9.434
Fuel cost (\$000)		0	0	0	0	0	0	43	1,215	1,311	1,547	1,772	2,384	2,577	2,845	3,194
CCGT ⁽¹⁾																
Production (GWh)		11.9	12.6	13.3	14.0	14.6	15.2	15.8	15.8	16.4	16.8	17.3	17.7	18.5	19.1	23.5
MBTU/MWh		7.924	7.886	7.878	7.861	7.848	7.827	7.817	7.815	7.812	7.804	7.804	7.795	7.791	7.794	7.920
Fuel cost (\$000)		4,549	4,912	5,273	5,644	5,973	6,347	6,708	6,837	7,237	7,570	7,930	8,273	8,817	9,325	11,840
NO. 6 FUEL 0.7%:																
\$/bbl (Fuel Forecast)		195.10	199.00	203.00	207.10	211.20	215.40	219.70	224.10	228.60	233.20	237.90	242.70	247.60	252.60	257.70
\$/Mbtu	6.287	31.032	31.653	32.289	32.941	33.593	34.261	34.945	35.645	36.361	37.092	37.840	38.603	39.383	40.178	40.989
Holyrood ⁽²⁾																
Production (GWh)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MBTU/MWh																
Fuel cost (\$000)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTALS:																
Production (GWh)		12.7	13.5	14.3	15.1	15.7	16.6	17.3	18.8	19.6	20.5	21.4	22.5	23.5	24.6	29.4
Fuel cost (\$000)		5,019	5,447	5,884	6,347	6,726	7,245	7,716	8,567	9,103	9,745	10,352	11,071	11,833	12,663	15,560

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	Factor	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067
NO. 2 FUEL:														
¢/litre (Fuel Forecast)		2.38	2.43	2.48	2.53	2.58	2.63	2.685	2.74	2.795	2.85	2.905	2.965	3.025
\$/bbl	158.970	378.30	386.30	394.20	402.20	410.10	418.10	426.80	435.60	444.30	453.10	461.80	471.30	480.90
\$/Mbtu	5.825	64.944	66.318	67.674	69.047	70.403	71.777	73.270	74.781	76.275	77.785	79.279	80.910	82.558
Existing CT														
Production (GWh)		0.5	0.5	0.6	0.6	0.5	0.5	0.5	0.6	0.6	0.5	0.5	0.5	0.6
MBTU/MWh		12.263	12.263	12.263	12.263	12.263	12.263	12.263	12.263	12.263	12.263	12.263	12.263	12.263
Fuel cost (\$000)		368	404	466	515	390	421	481	529	555	432	476	523	584
Diesel														
Production (GWh)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MBTU/MWh		10.970	10.970	10.970	10.970	10.970	10.970	10.970	10.970	10.970	10.970	10.970	10.970	10.970
Fuel cost (\$000)		0	0	0	0	0	0	0	0	0	0	0	0	0
New CT														
Production (GWh)		6.3	6.7	7.4	8.1	9.1	9.6	10.5	11.2	12.0	13.0	14.7	16.0	20.8
MBTU/MWh		9.434	9.434	9.434	9.434	9.434	9.434	9.434	9.434	9.434	9.434	9.434	9.434	9.434
Fuel cost (\$000)		3,867	4,220	4,739	5,300	6,049	6,529	7,270	7,933	8,660	9,535	11,009	12,190	16,235
CCGT ⁽¹⁾														
Production (GWh)		27.6	31.9	36.2	40.7	45.0	49.2	54.0	58.4	62.9	67.1	75.1	86.8	98.1
MBTU/MWh		8.007	8.069	8.122	8.158	8.191	8.216	8.238	8.255	8.270	8.281	8.305	8.337	8.389
Fuel cost (\$000)		14,367	17,063	19,880	22,951	25,971	29,037	32,581	36,051	39,666	43,253	49,445	58,558	67,908
NO. 6 FUEL 0.7%:														
\$/bbl (Fuel Forecast)		262.90	268.20	273.60	279.10	284.70	290.40	296.20	302.10	308.10	314.30	320.60	327.00	333.50
\$/Mbtu	6.287	41.816	42.659	43.518	44.393	45.284	46.191	47.113	48.052	49.006	49.992	50.994	52.012	53.046
Holyrood ⁽²⁾														
Production (GWh)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MBTU/MWh														
Fuel cost (\$000)		0	0	0	0	0	0	0	0	0	0	0	0	0
TOTALS:														
Production (GWh)		34.4	39.1	44.2	49.5	54.6	59.4	65.0	70.2	75.5	80.6	90.3	103.3	119.5
Fuel cost (\$000)		18,603	21,687	25,085	28,766	32,410	35,987	40,332	44,513	48,881	53,220	60,929	71,271	84,727