

1 Q. Table 22 at p. 1069 of the Submission lists Holyrood's upgrades for M\$582 in 2015,
2 M\$100 in 2016, M\$20 in 2017. New CCCT based on Exhibit 5 at 1,611\$/kW for
3 465.5 MW = 750 M\$ in 2010, without any benefits for scale. Please show a side by
4 side project unit cost of energy for a Green Field CCCT and Holyrood Energy with
5 the upgrades.

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8 A. As indicated in the question, the in-service cost for a new CCCT to replace Holyrood
9 is greater than the upgrades for the Holyrood facility. Also, Nalcor's response to
10 PUB-Nalcor-158 provides a comparison of the heat rate for Holyrood and that of a
11 CCCT unit. Although a CCCT unit would have greater thermal efficiency than
12 Holyrood, the improved efficiency is offset by a higher forecasted fuel cost.

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14 With higher in-service capital costs and higher fuel costs, there is no economic basis
15 for the early replacement of Holyrood with a CCCT plant.

Comparison of the Cost of Electricity Produced From A Diesel Fired CCCT versus #6 Fired Holyrood

	CCCT					Holyrood			
				Cost of Electricity Produced					Cost of Electricity Produced
				@ Minimum	@ Maximum				@ Minimum @ Maximum
				Efficiency	Efficiency				Efficiency Efficiency
				8.63	7.64				10.39 9.78
	Diesel	Diesel	Diesel	MMBTU	MMBTU	#6 2.2% s	#6 2.2% s	per MWh	per MWh
	(\$/litre)	(\$/bbl)	(\$/MMBTU)	per MWh	per MWh	(\$/bbl)	(\$/MMBTU)	(\$/MWh)	(\$/MWh)
2010	0.674	107.12	18.39	158.70	140.49	79.60	12.66	131.55	123.83
2011	0.700	111.29	19.11	164.88	145.97	80.50	12.80	133.04	125.23
2012	0.760	120.83	20.74	179.02	158.48	88.00	14.00	145.43	136.89
2013	0.815	129.57	22.24	191.97	169.95	95.50	15.19	157.82	148.56
2014	0.850	135.14	23.20	200.21	177.25	99.00	15.75	163.61	154.00
2015	0.905	143.88	24.70	213.17	188.72	103.00	16.38	170.22	160.23
2016	0.945	150.24	25.79	222.59	197.06	107.00	17.02	176.83	166.45
2017	0.990	157.40	27.02	233.19	206.44	111.50	17.74	184.27	173.45
2018	1.030	163.76	28.11	242.61	214.78	115.60	18.39	191.04	179.83
2019	1.065	169.32	29.07	250.86	222.08	118.60	18.86	196.00	184.49
2020	1.100	174.89	30.02	259.10	229.38	120.30	19.13	198.81	187.14
2021	1.155	183.63	31.52	272.06	240.85	123.10	19.58	203.44	191.49
2022	1.195	189.99	32.62	281.48	249.19	125.80	20.01	207.90	195.69
2023	1.235	196.35	33.71	290.90	257.53	128.50	20.44	212.36	199.89
2024	1.275	202.71	34.80	300.32	265.87	131.10	20.85	216.66	203.94
2025	1.315	209.07	35.89	309.74	274.21	133.70	21.27	220.95	207.98
2026	1.340	213.04	36.57	315.63	279.42	136.40	21.70	225.42	212.18
2027	1.365	217.02	37.26	321.52	284.64	139.10	22.13	229.88	216.38
2028	1.395	221.79	38.07	328.59	290.89	141.90	22.57	234.51	220.74
2029	1.425	226.56	38.89	335.65	297.15	144.80	23.03	239.30	225.25
2030	1.450	230.53	39.58	341.54	302.36	147.70	23.49	244.09	229.76
2031	1.480	235.30	40.39	348.61	308.62	150.60	23.95	248.88	234.27
2032	1.510	240.07	41.21	355.68	314.87	153.60	24.43	253.84	238.94
2033	1.540	244.84	42.03	362.74	321.13	156.70	24.92	258.97	243.76
2034	1.570	249.61	42.85	369.81	327.38	159.80	25.42	264.09	248.58
2035	1.600	254.38	43.67	376.87	333.64	163.00	25.93	269.38	253.56
2036	1.635	259.94	44.63	385.12	340.94	166.30	26.45	274.83	258.69
2037	1.665	264.71	45.44	392.18	347.19	169.60	26.98	280.28	263.83
2038	1.700	270.28	46.40	400.43	354.49	173.00	27.52	285.90	269.12
2039	1.735	275.84	47.35	408.67	361.79	176.40	28.06	291.52	274.41
2040	1.770	281.41	48.31	416.92	369.09	180.00	28.63	297.47	280.01
2041	1.805	286.97	49.27	425.16	376.39	183.60	29.20	303.42	285.61
2042	1.840	292.54	50.22	433.41	383.69	187.20	29.78	309.37	291.21
2043	1.875	298.10	51.18	441.65	390.99	191.00	30.38	315.65	297.12

- Notes
- (1) Diesel is fuel source for CCCT
 - (2) 158.987 litres / bbl
 - (3) 1 barrel of diesel equivalent to 5.825 MMBTU
 - (4) 1 barrel of #6 equivalent to 6.287 MMBTU
 - (5) Forecasted fuel prices are reproduced from Exhibit 4