

1 Q. Reference: *Purchase 12MW of Diesel Generation (Revised)*, Appendix C, Page C-1
2 Lines 12-15

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4 *“An analysis was completed which indicates that there is a potential fuel savings for*
5 *the IIS if the black start diesels are part of dispatch order for Avalon reliability prior*
6 *to the start-up of the Holyrood CT. This would mean fewer starts for the CT and less*
7 *run time, as the diesels could be*
8 *started before the CT.”*

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10 Please provide a table showing the number of times the black start diesels have
11 been started prior to the start-up of the Holyrood CT or the Hardwoods GT,
12 including the estimated fuel savings for each instance.

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15 A. Table 1 on the following page shows the number of times the black start diesels and
16 the Hardwoods GT (one end) have been started prior to the start-up of the
17 Holyrood CT, and includes the estimated fuel savings for each instance.

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19 It should be noted that there has been limited opportunity to use the HRD diesels to
20 avoid HRD CT use during this winter (in particular in January and February) due to
21 the issues at the Holyrood units and the significantly increased operating
22 requirements for the HRD CT. The HRD CT was operated for considerable periods of
23 time in January (approximately 610 hours) and February (approximately 630 hours)
24 to support Avalon and system reserves and for production of energy due to Hydro’s
25 low hydrology. As indicated in Hydro’s response to DG-NP-NLH-005, the Holyrood
26 diesels were also required to operate on numerous occasions during this period for
27 Avalon reserve considerations and system energy support.

Table 1

Start Time	End Time	Duration	HWD GT Energy (kWh) ¹	HRD Diesels Energy (kWh) ²	HWD GT/HRD Diesels Cost (\$) ³	Avoided CT Energy (kWh) ⁴	Avoided CT Costs (\$) ⁵	Gross Fuel Savings (\$)
12/24/2015 16:00	12/24/2015 17:50	1.8	8,280	16,650	\$ 4,985	72,000	\$ 15,120	10,135
1/18/2016 15:40	1/18/2016 17:50	2.2	11,000	20,350	\$ 6,287	88,000	\$ 18,480	12,194
3/4/2016 16:20	3/4/2016 20:59	4.6	23,000	42,550	\$ 13,145	184,000	\$ 38,640	25,496
3/7/2016 7:10	3/7/2016 8:30	1.3	6,500	12,025	\$ 3,715	52,000	\$ 10,920	7,205
3/7/2016 19:05	3/7/2016 21:50	2.7	12,690	24,975	\$ 7,537	108,000	\$ 22,680	15,143
Gross Fuel Savings								\$ 70,172
Less Holyrood Replacement Energy Costs ⁶								\$ (30,642)
Net Savings over Period								\$ 39,530
<p>Notes:</p> <ol style="list-style-type: none"> 1. Estimated using Hydro's EMS system. 2. Assumes the units are on at 9.25 MW when dispatched (1.85 MW x 5 units). 3. Assumes \$0.22/kWh for the HWD GT and \$0.19/kWh for the HRD diesels as per Hydro's application. 4. Assumes base loading (40 MW) for the HRD CT when operating. 5. Assumes \$0.22/kWh for the HRD CT as per Hydro's application. 6. The reduction in standby energy production (325,980 kWh) at Holyrood replacement costs \$0.094/kWh). 								