

1 Q. What changes does Hydro plan to implement, or does Hydro project, in relation to  
2 the maintenance and operation of generation facilities other than the Hardwood  
3 gas turbine, once the installation of a new combustion turbine at Holyrood (or at  
4 another site, as the case may be) is completed? Would the changes, and the cost  
5 consequences of those changes, be the same if the new combustion turbine at  
6 Holyrood (or at another site, as the case may be) had achieved operational status in  
7 late 2014 instead of late 2015?

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10 A. As indicated in Hydro's response to PUB-NLH-002, generation expansion options are  
11 still being evaluated which include, but are not limited to, a combustion  
12 turbine. Further, as indicated in Hydro's response to PUB-NLH-004, if a combustion  
13 turbine was the chosen option, late 2015 was the earliest in-service date considered  
14 in the 2012 decision analysis due to the overall project schedule.

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16 The existing generating sources will still be required to provide the same general  
17 functionality as they do today. It is anticipated that a new combustion turbine, once  
18 operational, would enable more efficient loading and dispatch of the Holyrood  
19 Thermal Generating Station (HTGS) by being available to respond to a contingency  
20 which would otherwise have to be provided by having an additional unit operating  
21 at Holyrood at inefficient loads<sup>1</sup>. In the same manner it will also allow for more  
22 flexibility in carrying out the maintenance programs at the HTGS, as the minimum  
23 operating requirements for the Holyrood units will be reduced.

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<sup>1</sup> The Holyrood generating units cannot be quickly turned on and off like gas turbine units to respond to a system problem. Therefore, to provide the same response as a gas turbine, a Holyrood unit must be placed on line and operated at its minimum output level of 70 MW in order to be available to quickly respond to a problem. As problems are unpredictable, this would result in the Holyrood unit being on for many days at inefficient levels of generation, at a time when there would otherwise be no requirement for them to operate.

1 In a projection of Holyrood unit operating requirements for 2015, Hydro identifies  
2 that there could be fuel savings at this facility if a new combustion turbine could  
3 have achieved operational status in late 2014. The fuel savings result from avoided  
4 operation of the Holyrood units at low inefficient loads and an overall improvement  
5 in fuel conversion rate. In addition, there could have been savings due to reduced  
6 Holyrood minimum energy requirements which results in a reduction of spill from  
7 Hydro's reservoirs during the wet years of the hydrological sequences. Using  
8 forecast 2015 production requirements and No. 6 fuel prices<sup>2</sup> these savings are  
9 estimated to be in the order of \$6.8 million. Please refer to Hydro's response to IC-  
10 NLH-006 for a complete analysis of all revenue requirement impacts resulting from  
11 an earlier in-service for a combustion turbine.

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13 At this time it is difficult to determine the cost savings, if any, that a new  
14 combustion turbine will provide in allowing for more flexibility in the maintenance  
15 schedule at the HTGS.

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<sup>2</sup> Hydro's 2015 forecast for Holyrood production and No. 6 fuel prices are 1,629 GWh and \$94.40/bbl, respectively.