

1 Q. Describe the function of the Holyrood unit #3 as a synchronous condenser  
2 including what effect, if any, such use has on fuel consumption.

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5 A. The synchronous condenser operation of Holyrood unit #3 is primarily  
6 designed to support transmission system voltages east of the Sunnyside  
7 terminal station without requiring that a prime mover be engaged on the unit.  
8 By operating unit #3 as a synchronous condenser, it is possible to reduce or  
9 eliminate generation from the Holyrood plant during certain periods of the  
10 year. This offers two benefits. First, by improving the flexibility of the thermal  
11 dispatch on the Island Interconnected system, it is possible to avail of  
12 opportunities to better use stored water in the event of high storage  
13 conditions. Second, by improving the flexibility of the thermal dispatch, it is  
14 possible to avail of opportunities to shut down one or more units earlier in the  
15 year, and similarly start units later in the year. This has the effect of  
16 increasing average unit loading, and hence improving the thermal efficiency  
17 of the plant versus the case if no synchronous condenser were available.

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19 The Holyrood unit #3 synchronous condenser does not directly use fuel to  
20 operate. Therefore, it primarily impacts fuel consumed by allowing more  
21 efficient use of the fuel as described above.