

1 **Re: Hardwoods Gas Turbine Plant Life Extension Upgrade**

2 Q. Why was 15 years chosen as the period to be studied by Stantec for  
3 operation of the turbines?

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6 A. A 15 year time period was chosen as a realistic study period considering the  
7 operating history of the plant, its present condition, and the projected  
8 operating requirements for the future. The Hardwoods Gas Turbine operates  
9 mainly as a synchronous condenser. In this mode of operation, there are  
10 many starts/stops which stress the insulation of the alternator's windings.  
11 This limits the anticipated service life to 15 to 20 years compared to 25 to 30  
12 years for a unit operating in a power generation mode. Also, the anticipated  
13 availability of parts and technical support from service companies is 15  
14 years.