

1 Q. With reference to Well's evidence page 18, lines 18 to 21, quantify the fuel
2 savings (in barrels and dollars) for each year 1992 to 2000 inclusive.

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5 A. It is difficult to quantify the savings in fuel costs as a result of effective water
6 management. However, the following describes initiatives undertaken to
7 maximize the benefits from Hydro's water resources and at the same time
8 improve Holyrood Plant efficiency.

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10 In 1991, Economic Dispatch, a software routine on Hydro's Energy
11 Management System, was implemented. Economic dispatch optimally loads
12 hydraulic generation on-line to meet system load, increasing overall hydraulic
13 efficiency and reducing operating costs.

14

15 Hydro, in 1995, implemented plans to reduce the amount of operating time
16 for Holyrood generation. This effectively increases the average load and
17 thereby the efficiency of the Holyrood units. Each summer since 1995 the
18 Holyrood plant has been shutdown for all or part of the summer period in
19 order to have higher unit loads while in operation.

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21 A unit commitment program for operating Bay d'Espoir units was developed
22 and implemented in 1999. This program lets system operators know the best
23 commitment of Bay d'Espoir units to meet the system load. This works side
24 by side with Economic Dispatch. Unit commitment determines the optimum
25 number of units to place in service while economic dispatch loads in-service
26 units optimally.

1 In 2000, the VISTA program was implemented. This long term water
2 management tool optimally decides the coming week's hydro-thermal
3 generation from historical inflow sequences and other operational inputs.
4 This is an improvement over its predecessor which essentially simulates
5 each of the hydraulic inflow sequences with no optimization and did not
6 economically integrate the operation of the Cat Arm and Hinds Lake plants
7 with the Bay d'Espoir system.

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9 All of these tools, from long term to real time, are used to optimally dispatch
10 hydraulic and thermal resources to meet Hydro's system load requirements,
11 resulting in reduced production costs.