

1 Q. (a) Provide copies of reports completed by Hydro recommending the
2 implementation of Reliability Centered Maintenance (RCM) pilot
3 projects.

4 (b) Provide information regarding the results and current status of these
5 pilot projects.

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7 A. (a) In 1997, Transmission and Rural Operations initiated a review of its
8 maintenance philosophy. Attached is an internal memo outlining the
9 findings and recommendations of the review completed by the
10 Maintenance Specialist and Senior Electrical Engineer.

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12 (b) RCM Pilot Projects
13 In 1997, Newfoundland and Labrador Hydro initiated an investigation
14 of the applicability of reliability centered maintenance in the
15 Transmission and Rural Operations Division.

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17 Phase 1 of the project included:

- 18 • An overview of the experience of other utilities with RCM and the
19 benefits achieved.
- 20 • A high level review of Transmission and Rural Operation's current
21 maintenance practices and of the maintenance support information
22 systems.
- 23 • An estimation of the internal resources required for the pilot
24 projects.
- 25 • A plan and timetables for the implementation of the three pilots.
- 26 • Criteria for pilot system selection.

- 1 • Interviews of maintenance craft personnel and maintenance
2 engineering staff.

3 Three systems, one in each of generation, transmission and
4 distribution areas of Transmission and Rural Operations, were
5 selected to be pilot projects.

6

7 The systems recommended and chosen for pilot studies were:

- 8 • Generation: Rigolet isolated diesel generating plant
9 • Distribution: L'Anse-au-Loup on the south coast of Labrador
10 • Transmission: Come by Chance terminal station and adjoining
11 transmission lines.

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13 Phase 2 of the project encompasses performance of the pilot studies:

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15 The goals of the pilot projects were:

- 16 • Prove the concept of RCM.
17 • Acquire in-house expertise and capabilities.
18 • Assess the viability of applying the RCM approach to other
19 systems in Transmission and Rural Operations.

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21 The strategies and key findings identified from the Pilot's RCM
22 analysis were used to select proposed maintenance tactics. An
23 analysis of the comparison of the current maintenance effort and the
24 proposed RCM maintenance effort identified the benefits. (It is
25 important to note that the actual benefits may somewhat differ, since
26 individual regions are not always performing maintenance using the
27 same intervals).

1 The overall results of the review indicated that the RCM concept is
2 applicable to the systems reviewed in the pilots and that this process
3 can also be applied to the other systems in Transmission and Rural
4 Operations.

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6 The pilots were started in 1997 and completed in 1998. The results of
7 the pilots suggested an implementation time frame of three to five
8 years with a payback of around 1.2 to 2.1 years.