

1 Q. **Re: Distribution Line Upgrades, Vol II, Tab 12**

2 On page 7, NLH states: "Hydro performs inspections on all distribution line
3 components classifying them using the following standardized grading system:

- 4 • Grade "A" condition: Excess of 5 years of life remaining
- 5 • Grade "B" condition: 1 to 5 years of life remaining; and
- 6 • Grade "C" condition: Less than 1 year of life remaining."

7 Please fully explain how NLH makes the judgement that a distribution pole is either
8 in Grade "A", "B" or "C" condition with reference to the indicia used in making that
9 judgement.

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12 A. A visual inspection of distribution feeders is performed every eight years to
13 evaluate the condition of the line. During the inspection process, a trained Hydro
14 employee will evaluate each pole based on a variety of factors including age,
15 condition, exposure and the characteristics of the customers served from that line.

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17 Age – A typical distribution line has a useful service lifespan of 30 years. If the line is
18 properly maintained, this may be extended to approximately 40 years. This will be
19 dependant upon the condition of the individual line components.

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21 Condition – The physical condition of line components is one of the most critical
22 ranking tools used by Hydro. An experienced inspector can identify a line
23 component that is deteriorated and requires replacement. Deterioration may
24 include, but is not limited to, rotten poles and cross arms, rusted transformers,
25 fractured line components and insulators.

1 Exposure – Distribution lines are typically exposed to a wide range of weather
2 conditions depending on their geographic location. Typically, lines known to be
3 located in areas of harsh weather conditions begin to deteriorate at an accelerated
4 rate.

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6 Customer characteristics – The service required from a distribution system is
7 dependent upon the characteristics of the customers. Large urban areas with a
8 variety of essential services and an industrial customer base may require more
9 immediate consideration than a smaller community with neighboring urban regions
10 or emergency backup facilities.

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12 A classification grade is then determined based on the amount of life suspected to
13 remain. The effectiveness of this grading procedure is highly dependant upon the
14 experience of the inspector and familiarity with the distribution system.