

1           **QUESTIONS BY MR. ROSS**

2           MR. ROSS: I need some clarification on the prefiled  
3 evidence, because I don't have the benefit of an expert. I  
4 need to understand exactly what we're talking about.

5           Mr. Pappas actually asked a question that I found  
6 quite intriguing, but I didn't understand the answer,  
7 necessarily. There are thermal limits on lines for  
8 transmission, I understand you to have said. There is a  
9 newish 500 kV line that came about in the 1990s.

10          Is it utilizing the most current and up-to-date  
11 technology as regards thermal resistance and thermal  
12 capability?

13          MR. CHOW: My understanding is it is the standard new  
14 design at that time for Ontario Hydro.

15          MR. ROSS: I appreciate that. Is there anything that  
16 has advanced beyond that today that has a greater thermal  
17 capacity?

18          MR. CHOW: It is a very big line even for those days.  
19 It will carry up to 4000 megawatts, which is very large  
20 capacity.

21          MR. ROSS: Is there anything available that can carry  
22 greater capacity in terms of a line?

23          MR. SCHNEIDER: We don't have it with us, but I  
24 imagine if you are going to larger and larger conductor  
25 sizes, you may have to change towers, as well, because of  
26 the weight being carried by the tower. So you're not just  
27 talking about the line, you're talking about all of the  
28 structures and everything associated with it, if that's

1 what you're getting at.

2 MR. ROSS: It is. You don't know for sure whether  
3 there is maybe a higher gauge line that could carry more  
4 juice without running into the thermal-capacity issues?

5 MR. SCHNEIDER: The information I have, and I don't  
6 have the information to fully answer your question, but if  
7 you went to a higher conductor size, a difference in  
8 megawatt capability isn't material, in terms of the need  
9 that we're up against here.

10 MR. ROSS: I need to understand the high-voltage  
11 direct-current option that was looked at. I appreciate  
12 that it is more expensive. Correct me if I am wrong: the  
13 expense is really in converting AC to DC, and then at the  
14 end of the line converting DC to AC?

15 MR. SCHNEIDER: Yes.

16 MR. ROSS: Would there only be two spots on the line  
17 where that would be required, or are there other jump-ons  
18 and -offs that would necessitate that conversion?

19 MR. CHOW: This would be viewed as an express line  
20 from Bruce to Milton. There wouldn't be expectation that  
21 you need somewhere in the middle to tap off for other use.

22 MR. ROSS: As opposed to the existing 500 kilovolt  
23 line where there are four lines required, there are only  
24 two lines required with the high-voltage direct current,  
25 correct, positive, negative?

26 MR. CHOW: I don't quite understand.

27 MR. ROSS: Again, I am in over my head technically  
28 speaking, but --