

1 Q. **Reference: Application, Five-Year Capital Plan (2025-2029), page 3.**

2 It is stated “in support of Hydro’s expansion plans, Hydro is exploring the viability of technical  
3 options including special protection schemes and dynamic line rating, which would help  
4 minimize the transmission investment required.”

5 a) Please explain “dynamic line rating”.

6 b) Is this considered a “smart grid application”?

7 c) Is AMI, or smart metering, a smart grid application?

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10 A. a) Dynamic Line Rating is the use of sensors to monitor ambient and physical conditions of the  
11 transmission line, such as conductor sag, providing a real-time capacity rating for  
12 transmission lines.

13 b) Electricity Canada defines Smart Grid Technology as “any remote sensor on the electricity  
14 grid that communicates information and allows the utility to take action based on that  
15 information.”<sup>1</sup> Under this definition, Dynamic Line Rating would be considered a smart-grid  
16 application.

17 c) Under the Electricity Canada definition provided in part b) of this response, AMI,<sup>2</sup> or smart  
18 metering, could be considered a smart-grid application depending on how it is deployed and  
19 utilized.

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<sup>1</sup> <https://www.electricity.ca/knowledge-centre/the-grid/distribution/smart-grid/>.

<sup>2</sup> Advanced metering infrastructure (“AMI”).