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Object: Comments from Hydro-Québec on ENERGY STAR® Smart Thermostats Version 2.0 Specification and Test Method Discussion Guide - June 2021

Hydro-Québec has always actively participated in promoting Energy Star® on its website and energy efficiency programs. In addition, we won the Public Service of the Year Award — Provincial Stage from 2011 to 2015 as well as the Promotional Campaign of the Year for three consecutive years (from 2012 to 2014).

On July 26th, 2021, Hydro-Québec participated in the webinar held by The Environmental Protection Agency (EPA) about the Smart Thermostats specification review process. After the presentation of the ENERGY STAR® Version 2.0 Smart Thermostats Discussion Guide, we were asked to send our comments to the EPA by August 9th, 2021.

After reviewing the documents and participating in the webinar, our comments on specific points that should be taken into consideration when developing ENERGY STAR® Smart Thermostats Version 2.0 Specification and Test Method Guide are as follows.

2.3 – Weighted Savings

8) How do stakeholder use and think about the metric? Would one weighting serve your purposes better than another? If a more even weighting serves your purposes better, but not an exactly even weighting, what would be a fair basis for weighting the zones?

A more even weighting would reduce our confidence that the heating results can be transposable in our climate. With a more even weighting, would the same metric limits still make sense for both the United States and Canada?

More broadly, how can we make sure the metric limits are valid for our service territory (in Canada) or alternatively, that data from thermostats installed in Canada are considered in the metric?

Hydro-Québec sees favorably the inclusion of more climates zones in order to better reflect the Canadian climate and its impact on heating performance. It would be of general interest if EPA and NRCan could work together to discuss the best metrics for both countries. This was done for EnergyStar windows and doors as is showcased here: <https://oee.nrcan.gc.ca/residentiel/entreprises/energystar/pdf/Windows-Doors-and-Skylights-factsheet-fra.pdf>

3.1 – Updating Demand Response Requirements

9) *Is it appropriate for EPA to require OpenADR 2.0 or SEP 2.0 for cases where the CT service provider is acting as a DR aggregator?*

Hydro-Québec sees favorably the inclusions of OpenADR 2.0 and SEP 2.0 as guidelines but believes it's too early to specify these two protocols as the only mandatory options to get this certification. Some utilities haven't made their final decision regarding the definite communication protocols and this limitation could interfere with future Demand response programs.

11) *Would it be clearer to stakeholders if EPA mentioned OpenADR and SEP 2.0 as a part of prescriptive requirements?*

The actual version of this requirement is preferred: *CT products that enable direct, on-premises, open-standards based interconnection are preferred, but alternative approaches, where open-standards connectivity is enabled only with use of off-premise services, are also acceptable.*

4.1 – Smart Line-Voltage Thermostats (LVTs)

16) *Do you offer LVTs, and would you be willing to participate in the development of the metric for these products?*

Hydro-Québec sees favorably the inclusion of LVTs in the scope of the specification. The CSA-C828 Standard, which has been around for more than 20 years results in reliable energy savings even in the absence of any communication link. This standard should be the baseline to build upon for adding the savings coming from usage feedback and setpoint setbacks. From an energy saving perspective, it would be a significant step back to disregard the requirements of CSA-C828.

Transposability of the specification requirements to LVTs should also be carefully assessed. Hypotheses should be stated and validated with Hydro-Québec offering their support to participate in the development of the metric for LVTs.

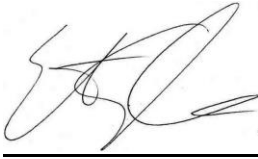
4.3 –Mini-Split System Controllers

24) *Do you offer mini-split controllers and have ideas about appropriate metrics for these products? Would you be willing to invest in making it possible for them to be certified?*

We think it's interesting to explore this subject since we believe that it has the potential to generate energy savings by combining communicating controls for mini-split (in heating mode) with those of LVTs. However, we understand that there remains R&D to be done in order to quantify its importance and define the technological means to ensure that it is carried out.

In summary, we believe that our comments are important for the development of ENERGY STAR® Smart Thermostats Version 2.0 Specification and Test Method Guide. In Quebec, 80% of homes use electricity as a primary source of energy. From these homes, 77% use LVTs as their primary control for their heating systems. Therefore, a large share of our customers could very well benefit from EnergyStar certified LVTs.

Best regards,

A handwritten signature in black ink, appearing to read 'Etienne St-Cyr', is positioned above a solid horizontal line.

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