

Date: February 14, 2018

Mr. Jamie Hulan

Director, Equipment Division
Office of Energy Efficiency
Natural Resources Canada
930 Carling Avenue
Ottawa, Ontario

Jamie,

CGA and its member utilities thank you for allowing us the time to present our concerns on Amendment 15. We attach for you the presentations made by CGA members. CGA members are committed to supporting higher energy efficiency in Canada. Over the last decade, natural gas utilities have invested over \$1 billion in their demand side management programs, including for commercial buildings.

However, as the natural gas distribution industry serving over 550,000 commercial buildings in Canada, we have concerns as to how the implementation of this regulation will affect our customers and their ability to adhere to the proposed regulations in a cost effective manner. In particular, our concerns are primarily around the cost and feasibility of the replacement of natural gas boilers to condensing levels in commercial retrofit applications. As presented on January 24, 2019, some of our concerns are as follows:

- Cost increases to building owners:
 - Venting and location of existing boilers that do not have direct access to wall or roof.
 - Manufacturer limits on the vent length will not make it possible to vertically vent in tall buildings.
 - Buildings with multiple non-condensing boilers and the significant costs associated to the venting upgrades if one boiler fails:
 - Venting and the orphaning of existing common vents that would then be oversized for the remaining boilers.
 - May lead to the replacement of all boilers on the manifold causing significant added cost.
 - Also may lead to the risk of acidic condensation to the remaining boilers.
 - Condensate removal and the cost to do so in retrofit scenarios.
- Minimal efficiency gains (savings) realized when compared to mid-efficient equipment in situations where the hot water distribution temperature is higher than the temperature required for natural gas fired condensing equipment to actually condense (greater than 130 F).

As indicated (see attached Appendix from Enbridge Gas Inc.), we would like to have a better understanding around the assumptions that were used in the Cost Benefit Analysis to support the

proposed Amendment. Our concern is that the data shown is too high level for us to effectively compare against what we see in the field. Some examples include:

- the building types modeled do not reflect a significant portion of existing building stock (e.g., hydronic baseboard heating);
- the three archetypes modelled are too limited given the variety of different commercial buildings in Canada;
- the combustion venting replacement solutions appear to understate complexity and cost of central basement boiler conversions; and,
- boiler reset temperatures modelled do not reflect cost effective non-condensing boiler equipment installations.

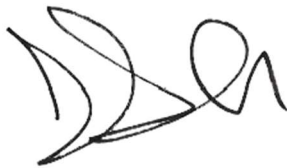
We understand that NRCan is currently reaching out to gas utilities via Caneta Research Inc. and they are looking for more detailed data on the cost to replace these systems. CGA would like to offer our help in finding this important data that will help us better understand the potential costs associated with these proposed changes.

A noted challenge in attempting to collect this data and information is the fact that when a commercial replacement to condensing boilers faces a significant physical or cost constraint, the building operator simply does not carry out the replacement to a condensing product. Therefore, the cost data for 'challenging retrofits' is simply not available to CGA members. That information may be situated with the mechanical contracting industry as they are the point of sale. We are currently working through the CGA members to solicit some of this data from mechanical contractors.

Given the above, we recommend NRCan withhold from advancing commercial boiler retrofits as part of Amendment 15. We are committed to working with NRCan to obtain the necessary data and information to support a transition of Canada's commercial building sector to higher energy efficiency. However, the uncertainty around data, cost and feasibility remains an issue that requires further discussion and common understanding between NRCan and the natural gas utility industry.

If you require further information, please contact Kevin Larmer 613 748 0057 ext. 314 at the CGA.

Sincerely,



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