



## Concerns of the Canadian Institute of Plumbing and Heating Regarding the Implementation of the City of Vancouver's Zero Emission Building Plan

The City of Vancouver already faces urgent electrical capacity issues that need to be dealt with prior to a complete roll out of electrification. CIPH, while staying fuel neutral, recognizes that there is a place within Vancouver's infrastructure to maintain current and future development of "gaseous fuel" piping as the current fuel gases move towards carbon neutrality and zero emissions. Infrastructure currently in place within the corporate limits for existing, and future fuel burning appliances, allows for the implementation of other alternative fuel sources such as hydrogen and renewable natural gas.

*"The Canadian Government's Hydrogen Strategy assesses that in Canada alone, the hydrogen economy has the potential to lead to more than 350,000 jobs and direct revenues of over \$50bn/year by 2050. The government believes that hydrogen is essential in the transition to a low-carbon energy economy" (H2 View, Mar 31, 2021)*

Much of the research in these areas is taking place in British Columbia.

The City of Vancouver with the introduction of new bylaws, has chosen to proceed with a plan to eliminate fuel burning appliances, except for decorative fireplaces, ranges, and barbeques. The allowance of 60,000 BTUs of decorative gas fireplaces within the new bylaw negates the fact that many new homes could be heated with this small amount of natural gas and to an efficiency 60-70% higher than that of the fireplaces. Understandably, most homeowners would not think of heating their home with a gas fireplace but given the choice of electricity currently at three times the cost of an equivalent amount of gas energy, they could well be tempted to explore more low-cost alternatives for heating their homes. We understand that the allowance for gas fireplaces within the bylaw was to aid local fireplace manufacturers, yet that same bylaw excludes at least two local boiler manufacturers which, as in the case of the fireplace manufacturers, also supply product across North America. An additional point to consider is the likelihood that Fortis BC may not supply gas piping to the new homes where there is little potential for a return on their investment.

For actions that rely on the city's regulatory authorities, the city needs to be sensitive to the fact that many residents and businesses are struggling to recover from the impacts of COVID-19. At the same time, the city needs to use these regulatory tools to meet the climate targets and ensure a resilient future for both residents and businesses. Vancouver will not be successful in long term implementation if relying solely on incentives and government stimulus investments. The assumptions are that under the current cost of construction in Vancouver, those building the higher cost housing are most able to invest in solutions, such as a new heat pump or electric vehicle.

From the city's data, *"overall, the actions with the highest levels of discomfort were the ones that introduced pricing to encourage shifts in behavior and investments, including transport pricing, the zero-emissions parking plan, and regulating carbon pollution from existing buildings. The top concerns expressed were around affordability, equity, and the process by which changes will be implemented."* (Climate Emergency Action Plan – RTS 13199)



The city has focused regulatory and pricing actions on those most able to afford them. Your wealthiest residents are typically responsible for more carbon pollution and have greater access to the solutions for transitioning from fossil fuels to renewable energy. In general, they are more likely to own larger, more carbon-intensive homes and vehicles. This is not the case for all the population; a population that is currently living in the second least affordable city in the world.

In your Climate Emergency Action Plan – RTS 13199, the city indicated that to achieve your target, you need to make your existing buildings significantly more energy efficient and switch their space heating and hot water systems to renewable energy. Meanwhile, Vancouver’s central heating plant, which is the largest consumer of natural gas in British Columbia, is reliant on mid-efficient boilers! Residential homes contribute 12% of the greenhouse gas emissions in the city. Space and water heating within those homes contribute 50% to 80% of that 12%. The program proposed by the city clearly sets its sights those least able to afford it within the second least affordable city, rather than on other industries, including the central steam facility, all of which could be leading by example.

The 2016 Census designated 22% of Vancouver’s private households as below the Low-Income Measure, 7% of households are characterized as experiencing “very high energy poverty”, and 4% in “extreme energy poverty.” This 2016 census was obviously prior to the compounding impact that COVID-19 has had on the peoples of Vancouver.

The switch to renewable energy needs to be as easy as possible. The furthering of financial incentives for retrofits of windows, adding insulation, airtightness, and installing heat recovery ventilation, heat pumps, and other emerging technologies will assist the city in reaching its goals.

*“An orderly transition to zero emissions buildings is grounded on providing early clarity and time to integrate energy improvements with other planned or required equipment replacements or building renovations.” (Climate Emergency Action Plan – RTS 13199)*

The city has committed to providing incentives to early adopters of the zero emissions building plan. It is our opinion that these incentives, and the support of the early adopters, needs to move forward and allow the opportunity to examine both the successes of the program and the shortfalls, prior to a complete rollout as to aid in providing a successful implementation. Vancouver’s current backlog in its permit processing has the definite probability of negatively impacting such a rollout. CIPH and our member companies want to help Vancouver experience the successes and provide solutions. Unfortunately, faced with the lack of consultation we have experienced, and the upcoming deadline for implementation, we have not had that opportunity.

*“Build industry capacity Industry support and broader engagement with B.C.’s network of solution providers, including contractors, energy advisors, architects, engineers, and **manufacturers/suppliers**, is critical to the success of this strategy. The City will work in partnership with industry associations and utilities to ensure that there is clarity on future regulations among building owners, contractors, trades and equipment suppliers working in all building sectors.” (Climate Emergency Action Plan – RTS 13199, emphasis added)*