Cool Way to Heat Homes

Manufacturer and Distributor Feedback

September 22nd, 2023

Introduction

Last summer, the Building Decarbonization Alliance (BDA), in collaboration with Efficiency Canada, the Canadian Climate Institute, and the Greenhouse Institute, released a report entitled the Cool Way to Heat Homes. The report outlines the potential benefits of implementing a policy which would require all newly installed central air conditioners (ACs) in Canada to be central heat pumps (HPs) instead. Benefits include operational cost savings and emission reductions (from displacing heating using fossil fuels).

While the proposed policy was well received, stakeholders have raised concerns about the degree to which Distributors and Manufacturers of central air conditioners can ramp up the availability of heat pumps.

To supplement our report, we reached out to manufacturers and distributors of central air conditioners and ducted heat pumps to gather their feedback on a **policy that would substitute heat pumps for new central air conditioners in residential homes**. We asked about:

- A realistic timeline for implementing a policy to require heat pumps in place of central air conditioners;
- The lead time they would require, from policy announcement to policy implementation, to supply enough heat pumps to fully replace central air conditioner demand in Canada;
- Their thoughts on extending the policy to mini split units; and,
- The risks they foresee with such a policy's adoption, as well as any mitigation opportunities.

While we submitted our request for feedback on a tight timeline (i.e., a 3-day turnaround), we received responses from **four manufacturers** and **seven distributors**.

Findings

We summarize the manufacturers and distributors responses that are relevant to the policy in question. **In general, manufacturers and distributors believe a Jan 1, 2026, policy implementation date is feasible, provided an 18- to 24-month lead time between policy announcement and policy implementation**.

Manufacturers and distributors can be ready for an implementation on Jan 1, 2026

There is consensus among **manufacturers** that they would be ready for policy implementation on Jan 1, **2025**. In general, manufacturers can quickly ramp up heat pump production. Their production facilities in the US and abroad have the capacity to support the increase in heat pump sales in Canada. There are no anticipated logistics delays. They did, however, identify a "sell through period" being helpful to allow time to adjust their supply chain.

Six of seven **distributors** indicated they would be ready by Jan 1, **2026**, with the other recommending 2028. Preference for this later date was justified due to concerns that their suppliers will be challenged to produce enough equipment prior to the deadline (though manufacturer responses indicate this is not a concern) and the need for sufficient lead time to sell existing air conditioner stock.

Distributors were largely aligned that 24 months is sufficient lead time

In general, an 18-to-24-month gap between policy announcement and implementation seems reasonable to allow sufficient time for distributors to prepare for the cooling season.

Of the five distributors who noted a specific response to this question:

- One had already began transitioning to heat pumps,
- One required six to eight months,
- Two required two years or less, and
- One required five years.

Sufficient lead time is critical to ensure that air conditioners ordered in the fall do not become obsolete during the next summer's sales cycle.

We noted in our report that the City of Vancouver gave its distributors seven-and-a-half months to transition, which allowed them to turn over their existing stock of central air conditioners.

Mini splits should be included in the policy

There is general support to include mini splits in the policy, since most mini splits are currently heat pumps (approximately 90% of sales). Indeed, one distributor noted "most mini split manufacturers have eliminated or reduced the availability of 'cooling only' versions over the past number of years; I would only expect that to continue".

However, it was noted that there are cooling-only applications (e.g., cooling for server rooms or mechanical rooms, spot cooling in residential homes with central heating / cooling and insufficient ductwork). For that reason, one manufacturer noted the policy not needing to apply to mini splits. Another distributor flagged that such a policy could compound their stocking / inventory issue.

Mitigation activities to reduce risks associated with mass heat pump adoption

While four mitigation activities are outlined below, in our opinion, the risk of misalignment with US refrigerant requirements is the most significant risk to our policy's adoption.

Improve alignment with refrigerant requirements in the US

The US are transitioning to lower Global Warming Potential (GWP) refrigerants for heat pumps. The currently popular R410 refrigerants will likely be replaced by A2Ls, which refer to a class of refrigerants that have lower flammability, lower toxicity, and lower GWP levels. In 2020, the US announced it would be phasing out R410 refrigerants beginning in 2025. Canada neither has a phase out mandate for R410s, nor does it permit the use of A2Ls (which is more problematic). Without permitting A2Ls, **Canada will be limited in its ability to import products** from the US or products from around the world that normally travel through the US to Canada.

Support the development of skilled contractor capacity

There is a concern that the current workforce of heat pump installers is limited. **Increasing trades training** would help keep up with increased demand. Without proper training, likelihood of poor installations increases, reducing the performance, energy savings, and emission reduction of each unit. Items to include in training include appropriate sizing, control wiring changes, the correct thermostats and thermostat settings for the best implementation, the additional steps to setting up dual-fuel or hybrid systems (even though it is only 5-10 minutes of extra work), and the service approaches for maintaining the units in the long term.

We acknowledge and support the need additional training. We note however that the very opportunity in this policy is to ramp-up such training interventions gradually using existing market demand for air conditioners as a driver, ahead of any future policy for heating applications.

Homeowners would also benefit from educational training to understand the changes and advantages of installing and operating a heat pump. This policy will lead to increased homeowner knowledge of heat pumps, which can serve as a steppingstone to broader heating-based policy at a later time.

Support the additional upfront cost requirements for homeowners

Respondents noted that heat pumps typically cost more than air conditioners (i.e., for manufacturing, installation, and for the high-end thermostat for staging). However, as we identified in our report, **this additional upfront cost would be mitigated by operational savings** in scenarios with a like-for-like replacement. Nevertheless, several respondents recommended financial support be provided to homeowners, with opportunities ranging from an **instant rebate, tax credit, or not applying GST on heat pump sales**.

Our report supports the concept of upstream manufacturer and distributor incentives to influence the supply chain and reduce the overall incentive budgets required,

Refine standards to ensure adequate performance and long-term operability.

Additional concerns which are outside of the scope of our policy consideration were also raised. One manufacturer noted a lack of minimum standard on the ratings of heat pump capacity in cold climates is a serious flaw for the long-term impact of electrification on the grid.

Another respondent noted concerns that a significant increase in heat pump demand will continue to increase the number of heat pump brands (as they noted has occurred with mini splits since the introduction of the Canada Greener Homes Grant), with some new entrants potentially lacking the capacity to continue to service their products for their usual 10-year warranty period. As such, it would be helpful to develop a framework that establishes how these new brands will be serviced in the future.