Empowering the next wave of clean technology adopters: a quick-reference guide

Key messages from *Empowering Households*

We tested interest in clean technologies in the GTHA and Metro Vancouver, which together capture over a quarter of Canadians, and we found that interest is high across the two regions. The fundamental issue isn't a lack of interest, and most people even understand these technologies will ultimately save them money. The real challenge is in the practical barriers that make adoption difficult for many.

- The overall sentiment among these folks toward clean technology is largely positive. Nearly six in 10 say they're inclined to get an EV as their next car, and the numbers are similar for heat pumps.
- We also see more than three-quarters of people have positive views on less-talked-about home technologies like smart thermostats (78%), rooftop solar panels (76%), and efficient electric water heaters (75%).
- Over half of respondents (57%) believe households using clean technologies will pay smaller monthly energy bills, and 64% think they will spend less overall after a decade.

Governments play a crucial role in removing these barriers, and people expect them to take action to make cost-saving technologies more accessible.

- A majority (76%) of residents believe governments should offer incentives to make clean technologies more accessible. 67% support market regulations to promote clean technologies. Crucially, 73% want to spend less than $40,000 on a new EV.
- Many renters are inclined to adopt, but need government assistance to address their barriers to access. Three-quarters (75%) of those living in apartments and townhomes say that access to charging is a barrier to EV adoption, while 68% say they do not have the ability to install a heat pump (compared to 44% of those in detached homes). Efficiency and cooling requirements for rental units and making sure new buildings are built with clean technology infrastructure can help.

Some families already have a lot of motivation, knowledge, and resources to adopt clean technologies. In our market segmentation analysis, we identified this group as "Net-Zero Dads & Moms". **But unlocking the next wave of adopters means designing policies beyond them, we need to be getting to the other target audiences with the right policy solutions and messages.**

- Of the five adopter segments identified in this study, only one adopter segment (22% of the population) was unmotivated to adopt clean energy technologies, but most identified barriers from upfront cost to low levels of information that government policies can specifically address to help increase uptake.
- Younger people deserve special attention. They're more inclined to adopt clean technologies—71% of those under 30 want an EV—but are more likely to rent or live in apartments, limiting their ability to make home upgrades. It's time we recognize these very real barriers and through targeted investments, incentives, and building codes, we do something about them.
- For older respondents, many live in homes they own and could theoretically make upgrades, but they have more concerns about the technology. Education and simplification can make an impact: for example, given they typically drive less than other drivers, most only require Level 1 charging, eliminating the need for electrical upgrades.

Who needs support?

The household opportunity

Canadian households directly account for at least 17% of national emissions (and up to 30% in provinces like Ontario without oil and gas production)—mainly from heating and personal vehicles, but households are also helping drive solutions. As technologies become increasingly affordable and accessible, households in advanced economies have driven nearly 60% of energy-investment growth since 2016. Provincial, federal, and local governments each have critical policy levers to incentivize uptake.

Who are the "next adopters"?

To better understand who's ready to adopt clean technologies—and what's holding them back—Clean Energy Canada and Abacus Data surveyed 3,000 residents of the GTHA and Metro Vancouver. Using demographic and behavioral data (e.g. age, income, housing type, tech attitudes), five distinct adopter segments were identified. These insights can help tailor policies to accelerate adoption among the Canadians who are most likely to make the switch next.

Net-Zero Dads & Moms

KEY BARRIERS

- Upfront cost
- Knowledge gaps
- Housing type
- Infrastructure/ electrical concerns

KEY MOTIVATORS

- Lower carbon footprint
- Long-term cost-savings
- Enhancing home comfort

14% of population

Highly motivated

Generation Green

KEY BARRIERS

- Upfront cost
- Knowledge gaps
- Housing type
- Infrastructure/ electrical concerns

KEY MOTIVATORS

- Lower carbon footprint
- Long-term cost-savings
- Financial incentives

19% of population

Highly motivated

Retired Homeowners

KEY BARRIERS

- Upfront cost
- Knowledge gaps
- Housing type
- Infrastructure/ electrical concerns

KEY MOTIVATORS

- Comfort, practicality, and reduced costs
- Simple and straightforward communication from trusted sources
- Financial incentives

30% of population

Moderately motivated

Practical Families

KEY BARRIERS

- Upfront cost
- Knowledge gaps
- Housing type
- Infrastructure/ electrical concerns

KEY MOTIVATORS

- Reduced monthly costs
- Clear, reliable evidence of long-term benefits
- Financial incentives

15% of population

Moderately motivated

Frugal Skeptics

KEY BARRIERS

- Upfront cost
- Knowledge gaps
- Housing type
- Infrastructure/ electrical concerns

KEY MOTIVATORS

- Affordability and practicality
- Immediate financial benefits
- Renter-targeted incentives and solutions

22% of population

Mostly unmotivated

LEGEND:

- Minor concern
- Moderate concern
- Major concern

Policy design that works

What can different levels of government and other actors do to solve these challenges?

Municipal

Local governments have a pivotal role to play in accelerating household adoption of clean technologies. With jurisdiction over local planning, permitting, and infrastructure, municipalities are well-positioned to reduce adoption barriers—particularly for renters and those in multi-unit housing—by implementing EV-ready building requirements, streamlining retrofit approvals, supporting condo electrification, and delivering trusted, community-based information.

Provincial

Provincial governments have helped spur adoption of clean technologies through rebate programs, helping facilitate on-bill financing and other means to allow for payment over time. With closer regional ties, they are ideally positioned to help create programming that is well-adapted to local needs and ensure information is spread through trusted messengers.

Federal

The federal government has an important role to provide direct financing and rebates to help more interested Canadians adopt household clean technologies. By leveraging its infrastructure spending programs and model code development, the federal government could help ensure that going forward, buildings in Canada are built for the needs of the future.

Other actors (industry, financial sector, non-profit, etc.)

Even without specific policy authority, financial institutions, retailers, and other community messengers play a critical role in sharing accurate and relevant information with households, and many are creating innovative ways to help address barriers, like bulk purchase.

For each of the main barriers, there are numerous solutions each level of government can implement. Below are a few examples.

1 Upfront cost

Top barrier across all groups. Even among those who know an EV is cheaper long-term, 73% want a purchase price under $40,000.

Municipal

- Implement PACE-style financing/building retrofit programs (e.g. Toronto's Home Energy Loan Program, Saint John's home retrofit program, Halifax's Solar City Program).
- Provide local top-ups to provincial or federal rebates (such as many B.C. municipalities did under the CleanBC Better Homes program).

Provincial

- Deliver point-of-sale rebates or other incentives for EVs, heat pumps and other clean household technologies.
- Provide low- or no-interest loans or leasing programs.
- Maintain or implement zero-emissions vehicle availability standards to incentivize automakers to bring more affordable models on the market for Canadians.

Federal

- Provide federal incentives (e.g. iZEV for EVs, Greener Homes for retrofits).
- Provide low- or no-interest loans or leasing programs.
- Maintain the zero-emissions vehicle availability standard to incentivize automakers to bring more affordable models on the market for Canadians.
- Increase access to affordable EV models through alignment of standards with other jurisdictions (e.g. mutual recognition of EU safety and emission standards) or reducing tariffs (e.g. revisiting tariffs on affordable Chinese EVs).

Other actors (industry, financial sector, non-profit, etc.)

- Banks and companies can introduce affordable financing programs for clean technologies (e.g. CIBC's residential charger program, RBC's EV financing program, the Best Buy bulk buy program).
- Lenders can offer lines of credits for energy retrofits as part of a "green mortgage" so costs are repaid gradually through predictable monthly payments.
- Utilities can offer on-bill financing solutions (e.g. Manitoba Hydro's on-bill financing).

2 Housing type

68% of apartment dwellers lack the ability to install heat pumps; 75% say no access to home charging is a barrier.

Municipal

- Require all new buildings to be EV-ready (have the electrical infrastructure to easily install charging in the future).
- Financially support condo/strata retrofits to install EV chargers and clean heating, cooling, and water heating technologies.

Provincial

- Enact or expand right-to-charge legislation.
- Require all new buildings to be EV-ready (have the electrical infrastructure to easily install charging in the future).
- Implement minimum energy efficiency standards for rental buildings.
- Provide financial support for retrofits in rental housing (with conditions for renter protection, e.g. Efficiency Nova Scotia's Affordable Multifamily Housing Program).
- Establish legislated or regulatory maximum temperature limits for rental homes.

Federal

- Expand retrofit funding to rental and co-op housing.
- Include for-profit landlords in federal low-interest financing programs (with conditions for renter protection).
- Require all new central air condition systems to be heat pumps through energy efficiency legislation.

Other actors (industry, financial sector, non-profit, etc.)

In addition to the above upfront cost examples:

- Retailers should expand availability of clean technology solutions specifically for multi-unit buildings, such as window heat pumps or shared EV charging infrastructure.
- Non-profits can act as trusted intermediaries between residents, building owners, and contractors, providing education and technical assistance to condo boards and landlords on navigating provincial incentives, right-to-charge laws, and retrofit planning. Companies or non-profit organizations can deliver group-buy programs that secure lower costs for condos, co-ops, or neighbourhoods adopting clean tech together.

3 Knowledge gaps

68% are unaware heat pumps work in cold weather. Misinformation is widespread, especially online.

Municipal

- Host EV test drives and heat pump info events (e.g. Energy Neighbour and Plug'n Drive).
- Provide vetted contractor lists, energy coaches, and simple guides (e.g. Better Homes Kingston program, BetterHomesTO, City of Nelson EcoSave Program, and Durham Greener Homes Energy coaching service).

Provincial

- Fund province-wide education and assessment tools (e.g. B.C.'s Home Energy Planner, cost calculators, etc.).
- Support installer training and certification (including micro credentialing) to support workforce development and support right-sizing of projects.

Federal

- Fund national education programs and assessment tools (e.g. B.C.'s Home Energy Planner, cost calculators, etc.).

Other actors (industry, financial sector, non-profit, etc.)

- Non-profits can launch programs to help individuals or underserved communities navigate cleantech installation processes (e.g. Toronto's Energy Neighbour and EmpowerMe).
- Non-profits or companies can host educational events (e.g. Plug'n Drive's EV discovery centre);
- Companies and industry associations can launch vendor training programs (e.g. Electric Mobility Canada's EV sales training program, and the Heating, Refrigeration and Air Conditioning Institute of Canada's heat pump training program).

4 Infrastructure and electrical concerns

Concerns—real or perceived—about panel upgrades, charging capacity, and installation complexity delay action.

Municipal

- Require all new buildings to be EV-ready (have the electrical infrastructure to easily install charging in the future).
- Promote Level 1 charging as a viable option for many drivers.
- Educate consumers and installers about simpler solutions (e.g. viability of Level 1 charging to meet most EV charging needs, or home energy management systems in place of panel upgrades).
- Run neighbourhood pilot projects that showcase homes using clean tech without full electrical overhauls.

Provincial

- Require all new buildings to be EV-ready (have the electrical infrastructure to easily install charging in the future).
- Ensure electrical panel upgrades are eligible for relevant rebates.
- In the electrical code, allow Home Energy Management Systems to be used to reduce the required panel size for new and existing homes.
- Fund utility and grid modernization efforts to support integration of clean energy solutions in households.
- Provide funding to deploy EV charging in multi-unit residential buildings.

Federal

- Require all new buildings to be EV-ready (have the electrical infrastructure to easily install charging in the future).
- Invest in public EV charging both along highways and in dense urban areas.
- Include electric panel upgrades in federal retrofit programs.
- Fund utility and grid modernization efforts to support integration of clean energy solutions in households.

Other actors (industry, financial sector, non-profit, etc.)

- Private sector can invest in public EV charging, both along highways and in dense urban areas.
- Financial institutions can offer low- or zero-interest loans for electrical panel upgrades, smart energy management systems, and home wiring improvements.
- Industry associations and unions should train electricians and installers to identify cost-effective upgrade paths and communicate them clearly to homeowners.

The bottom line

Adoption of clean technologies like EVs, heat pumps, and smart energy systems is not a demand problem—Canadians are broadly supportive. Instead, the challenge is turning high interest into high uptake, especially among the next wave of potential adopters.

Read the full report