# **Electrifying the lot**

As Canada embarks on a generational housing buildout, now is the time to support EV charging in condos. Young families are keen to go electric, and there are cost-saving ways governments can help.



March 2025



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# **Executive summary**

There are many benefits to EV ownership, but perhaps the greatest is the ability to skip the gas pump. No more eye-watering fuel prices and pesky oil changes. No more pumping gas in the freezing cold.

Except not everyone has the same kind of access to this cost-saving convenience. EV owners with charging where they usually park their car tend to be those living in detached family homes. In fact, one Canadian survey found that 81% of battery electric car drivers reside in detached houses, while only 19% live in apartments.<sup>1</sup>

For the 34% of households in Canada that live in apartments (defined as buildings with a common entrance but multiple separate units), this is a problem.<sup>2</sup> And while public charging is a necessary and helpful solution, ensuring wider EV adoption means making plugging in as convenient as possible, for as many as possible. Charging in multiunit buildings offers a host of benefits for drivers, utilities, electricity systems operators, and city planners alike.

Apartment buildings are found in the majority of communities in Canada, although they are particularly prevalent in cities. In Toronto, they make up 40% of all households, and in Vancouver, 52%.<sup>3</sup>

What's more, apartment dwelling is particularly prevalent among younger Canadians. Three out of five (60%) of people aged 20 to 44 live in apartment buildings in Metro Vancouver (which extends from Langley to Lions Bay) compared to half (49%) of those over 44. And yet, younger people are generally more interested in EVs: 77% of those aged 18 to 44 are inclined to go electric, according to a recent Clean Energy Canada survey of Metro Vancouver residents, compared to around 62% for those aged 45 or older. In short, those with the most appetite for EVs are those most likely to face the barrier of not having charging access at home.

### What is an apartment?



In this report, we use the term "apartment buildings" to include all kinds of multi-unit residential buildings—that is, a building with multiple separate units but a common entrance—including both rented and owner-occupied units. Although this definition does not include townhomes, many residents of this housing type also face home-charging barriers depending on their unit's setup and so should also be able to access policy solutions where applicable.

# What does it mean to be EV ready?

**EV** charger installed: A parking space that is already equipped with a Level 2 charger (or, in some cases, a Level 1 charger) that is electrically hardwired and ready for use.



# What is an "EV-ready" parking space?

A parking space that has a nearby wired electrical outlet (i.e. a junction box or receptacle) at which a Level 2 EV charging station can be installed in the future. Sufficient electrical capacity must also be available to the wired outlet to power the EV charger.



### What is a retrofit?

To make older buildings EV ready may require additional capacity, an energy management system, or an upgraded electrical panel as well as new wiring or the installation of outlets, depending on the building. As a result, costs can vary. In this report, we refer to these building-specific upgrades as "retrofits." Level 2 charging is always preferred, as it meets the needs of all drivers and is therefore a better longterm investment, but a simpler Level 1 system may be considered in some situations where the cost difference is great and the time horizon shorter (for example, an older building with two decades of economic life left).



Nonetheless, there are ways to overcome this issue by installing EV charging in apartment building lots. But costs, electrical infrastructure, and regulations can all pose barriers. Thankfully, these can be overcome with good policies.

Crucially, the cheapest, easiest EV charging retrofit is the one that doesn't need to happen in the first place. **Installing EV charging in new builds is three to four times cheaper than upgrading an existing building.** There are currently no federal regulations requiring EV readiness in new construction despite a new housing plan promising nearly 4 million new homes over the next decade.

Provincially, the picture isn't much better. Quebec is currently the only province with EV readiness requirements for new homes in its building code and is in the process of extending the requirements to all apartment buildings before the end of 2025.<sup>7</sup> But a number of provinces and territories, from B.C. to Quebec to the Yukon, do offer some help to retrofit older buildings to varying degrees.

Amid an inconsistent Canadian landscape, many municipalities have been leading the charge, requiring EV readiness or charger installations in new construction while also helping residents upgrade their existing buildings.

It's probably not surprising that the two urban centres with the most EV-ready municipal bylaws are the two with the highest EV adoption. In Vancouver and Montreal, EVs made up 27% and 36% of total car sales in 2024 respectively, compared to 17% nationally.<sup>8</sup>

But a piecemeal approach led by municipalities isn't the best option for anyone—residents, charging station providers, developers, or our climate. And varied and sometimes contradictory regulations add complexity and bureaucratic red tape, delaying installations. Thankfully, there are a number of actions that can and should be taken at other levels of government.

For starters, provinces must ensure 100% EV readiness in new builds via changes to building or electrical codes. This can be coupled with funding to retrofit existing buildings and legislation that makes it easier for residents to work with condo boards or stratas to install their own charger if they want one. And all of these measures should be bundled into province-wide, comprehensive charging strategies. Municipalities can also help by ensuring 100% EV readiness in new builds via bylaws or by funding retrofits.

After all, unless we knock down these barriers, those most inclined to buy EVs—young people and city dwellers, a group that could certainly use a financial break—will struggle to reap the savings and lifestyle benefits of going electric.

### **CASE STUDY**

## Never going back to gas

Retired deputy fire chief Brian Maltby loves his 2022 Volvo EV for many reasons: it's zippy, it looks nice, and its ability to be programmed means the cabin is always warm upon entry during cold Canadian winters. But the most intriguing reason—and perhaps one most EV drivers with home charging might relate to—is just how cost-effective and convenient it is to own an EV you can cheaply and reliably charge at home.

In addition to lower maintenance fees (\$0 after two years of ownership), Brian, who drives approximately 40 kilometers a day, estimates he saves \$260 a month—or more than \$3,100 annually—by charging his battery-electric crossover at home instead of paying for gas at public gas stations, as he did with his previous vehicle.

Luckily for Brian, the property manager at his 2017-built condo building already had experience getting EV charging installed at another residential building in the GTHA, so getting the EV charging infrastructure for his building as well as a metered EV charger for his own parking spot turned out to be a breeze. Even including a \$10 administrative fee, his monthly electricity costs from charging are just \$40.

After two years of driving his EV, the charger—which he paid a total of \$4,300 to have installed and registered onto the title of his property—has already paid for itself and now saves him money every month.

"I love it," Brian told us in an email.

With a supportive condo board, 17 others in his 56-unit condo have also opted to make their parking spots EV-ready.







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If you asked me 10 years ago if I would ever purchase an electric vehicle, I would have emphatically replied, 'Not on your life.' Now, 10 years later, my response is, 'I will never purchase another vehicle other than a BEV.

-Brian Maltby, EV and condo owner in Georgetown, Ontario



# **Charging challenges**

Driving an electric car isn't entirely like driving a gas vehicle. EVs are cheaper to run, faster to accelerate, and better for the planet.

They also fuel up differently. Charging an EV from 0% to 100% can take anywhere from 25 minutes to 50 hours, depending on the type of charger. But unlike pumping gas, you can charge your EV while you sleep, work, or grab a coffee.

At present, the majority of EV charging happens at home. This is often significantly cheaper than public charging and has the convenience factor of happening while your car is parked in its usual spot.<sup>6,9</sup> It is therefore unsurprising that, as of last year, 77% of Canadians who own an EV said they had access to home charging.<sup>10</sup> But this isn't the reality for everyone. And as EV adoption increases, we're going to need charging solutions that span many different kinds of homes.

Households with private driveways or garages are typically better able to plug in than apartment dwellers who usually use shared parking lots. In fact, a 2023 survey found that 38% of EV owners residing in multiunit buildings did not have access to home charging, compared to only 2% for single-family homeowners.<sup>11</sup>

In many cases, installing charging in an apartment is also considerably more costly than in a detached home. In both Canada and the U.S., studies have shown that retrofitting a Level 2 charger in apartment buildings can cost about three times as much as installing one in a single-family home. <sup>12</sup> Costs run especially high when residents are installing just one charger at a time, compared to when a building owner or condo board carries out broader retrofits to add charging capabilities to all parking spots. <sup>6</sup>

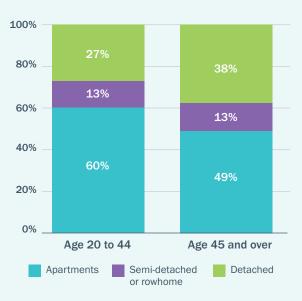
What's more, older buildings are generally more difficult to retrofit than recent builds. A different U.S. study noted that buildings constructed before the 1980s (around 43% of multi-unit residential buildings in the country) often require more significant upgrades to support the electrical needs of EV charging. <sup>13</sup>

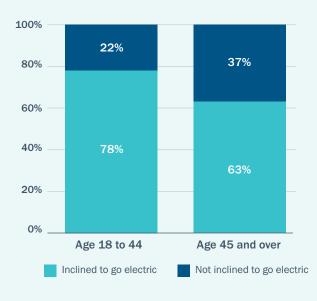
In Canada, 34% of households live in apartment buildings.<sup>2</sup> This kind of housing is most common in urban areas, although it makes up a significant proportion of housing everywhere. In Ontario, for instance, no less than 31% of households live in apartments. The share is highest in Toronto (40%), but apartments are also common in communities such as Hawkesbury and Kitchener-Cambridge-Waterloo, where they are home to over a quarter of households.

A recent Clean Energy Canada survey conducted with Abacus Data of Vancouver and Toronto area residents found that almost two-thirds considered a lack of home EV charging as a minor or major barrier, with 75% of townhome and apartment dwellers citing it as a barrier, compared to 54% of those in houses.<sup>4</sup>

It's an issue that disproportionately affects younger people. No less than 78% of people aged 18 to 44 in Metro Vancouver are inclined to buy electric in our survey, compared to around 63% for those over 45. However, 60% of people aged 20 to 44 live in apartment buildings compared to half of people over 44. The picture is similar in the GTHA with 58% of those aged 18 to 44 living in apartments compared to 45% of those over 45, while 66% of the younger group are inclined to go electric compared to 47% of the older group. In short, those with the most appetite for EVs are those most likely to face this barrier.<sup>4</sup>

# Younger residents of Metro Vancouver are more likely to live in apartments but are also more inclined to go electric





What's more, a third of Canadians rent their homes with the overwhelming majority (71%) living in large population centres. In many cases, these residents are faced with additional challenges to access athome charging. 14,15

While public charging is one way to overcome this hurdle, there are some key benefits to helping Canadians install options at home. In fact, of people in Vancouver and Toronto who said that charging was a barrier to EV adoption, 45% indicated that access to one in their apartment building would help. For one, it reduces the space and investment required for EV charging infrastructure: public charging infrastructure

tends to be more expensive than properly implemented home charging.<sup>6</sup> It also offers utilities opportunities to use smart chargers to manage EV charging loads and build a flexible, cost-effective electrical grid.<sup>6</sup>

Thankfully, there are a number of ways that governments can boost home charging in apartments, many of which are explored in the next section. As more and more Canadians realize the huge savings and lifestyle benefits of going electric, it's crucial that we cut down barriers for all Canadians, regardless of home type or location.

### Types of charging

Charger type	Approximate charging time from 0 to 100%	Range added per hour	Installation requirements	When needed
LEVEL 1	8-50+ hours	3 to 8 kilometres	Requires a standard 20-amp outlet.	This type of charging is sufficient for many EV drivers. If you typically drive less than 80 kilometres a day, your car will recharge overnight.
LEVEL 2	4-10 hours	16 to 50 kilometres	This can be installed on a regular panel in applicable homes.	For EV drivers that cover greater distances and deplete their batteries throughout the day. This kind of charger can easily recharge any car overnight or even in an afternoon.
LEVEL 3	25-30 minutes	Up to max vehicle driving range	Requires a DC outlet (not typically applicable to residential charging)	More common in public charging than at home. Typically used to re-charge en route on longer journeys.





Source: Natural Resources Canada, EV Charging Basics. 16

### Landlords can benefit too

The benefits of EV charging to apartment dwellers are undeniable. But decisions about installation are often made by others, even in a supportive policy environment. Landlords and developers are a key piece of the puzzle, and EV charging can offer benefits for them too.

Toronto-based property management company Hazelview Properties has installed Level 2 EV charging in 32 of its rental buildings across the country, ranging from 100-year-old properties to brand new developments. Trevor McLeod, sustainability manager of Hazelview Properties, says that offering EV charging has helped attract potential tenants, giving the company an edge in the rental market. And the installed charging stations are seeing more and more action, with EV usage in January 2025 increasing 50% over the previous three months.

The company has also opted to make its parking lots EV ready in some of its new or renovated properties as a way of "future-proofing" its buildings. Adding EV readiness now will likely save the company money down the road, he says, with increased EV adoption and a growing number of municipal bylaws requiring more EV charging access. Indeed, policy certainty is a key component in helping landlords and developers make the right investments and decisions now, McLeod adds, highlighting the importance of clear and consistent policies.



# The lay of the land

Given the challenges, some proactive Canadian governments are helping apartment dwellers install charging.

Typically, this has taken the form of retrofit programs, where governments provide support for installing EV charging in an existing lot. Some governments have also introduced "right-to-charge" requirements, which make it easier for residents to install chargers in an apartment at their own cost. But the type and quality of these policies and programs vary—as does their presence.

What's more, in many instances, the cheapest retrofit of all is overlooked: one that doesn't need to happen in the first place. Research has shown that equipping a new parking space with an EV charger is three to four times cheaper than upgrading an existing one.<sup>6</sup> And yet, EV readiness requirements (where the electrical infrastructure to support a subsequent charger installation must be put in place during construction) are almost non-existent at the federal and provincial level.

### The federal landscape

Canada-wide, the federal Zero Emission Vehicle Infrastructure Program has offered government funding to support EV chargers in a variety of locations such as such as on-street, apartment buildings, workplaces and for vehicle fleets. <sup>17</sup> The program has successfully supported tens of thousands of charge points (a portion of which were in apartment buildings) but is now closed with uncertain prospects for future funding. <sup>18,19</sup>

The Canada Infrastructure Bank also dedicated \$500 million under its Charging and Hydrogen Refuelling Infrastructure Initiative, \$435 million of which has already been allocated, to support the deployment of 4,000 public charge points across the country. Recently, the bank announced a new \$194 million loan to support 1,500 more curbside chargers in Canada's largest seven cities (that will offer up to 50 km of fast, free charging per EV per day). However, this financing stream has focused on public fast-charging infrastructure. In the case of the country of the case of the cas

What's more, there is currently no federal requirement to make new buildings EV ready, despite the fact that such requirements could be codified in the National Building Code or the Canadian Electrical Code, which are usually updated every three to five years.<sup>22,23</sup> In addition, none of the measures in Canada's National Housing Strategy require or incentivize EV readiness in new or retrofitted buildings.<sup>24</sup>



As Canada embarks on a generational housing buildout—with the federal government's new housing plan looking to support nearly four million new homes over the next decade—EV charging needs to be a priority.

### The provincial landscape

Where you live in Canada impacts how easy it is to charge your car. If you live in British Columbia or Quebec, you will have a lot more options.

Quebec is putting EV charging in apartments high on the agenda. Its Electric Vehicle Charging Strategy sets a target of 35% of parking spaces in apartment buildings to be EV ready by 2030. Quebec is also the only province with EV readiness requirements in its building code (which currently apply to new single-family, duplex, triplex, and quadruplex homes with requirements for other multi-unit buildings expected by the end of 2025).<sup>25</sup> Additionally, the province has a program (currently suspended until March 31, 2025) that offers \$500 per connection plus 50% of the installation costs (including advice, electrical planning and associated infrastructure) depending on the building size.<sup>26</sup>

B.C., meanwhile, does not have a province-wide EV readiness requirement for new homes but has "right to charge" provisions in place to ensure that occupants of apartments have the legal right to install EV charging at their own cost.<sup>27</sup>

The province also offers rebates for EV charging in multi-unit buildings administered through provincial utilities, including significant financial help toward EV planning, electrical upgrades, and charger purchase and installation (up to 50% of the cost of the latter two, with some financial limits).<sup>28</sup>

Other provinces and territories have some provisions for apartment dwellers. The Yukon funds EV charging in qualifying apartment buildings up to \$7,500 per charger for a maximum of 20 chargers per building.<sup>29</sup> Nova Scotia offers rebates for both existing buildings and new constructions, including up to \$3,000 per charger (up to \$15,000 per building) and up to \$4,000 for the development of a charging plan.<sup>30</sup> Meanwhile, Manitoba's new energy strategy commits to introducing EV-ready requirements for multi-unit residential buildings in the provincial building code and relevant standards to facilitate the installation of EV chargers in new constructions and major renovation projects.<sup>31</sup>

Ontario has also introduced right-to-charge legislation that makes it easier for condo owners to get approval from their condo corporations to install EV charging and, more recently, has issued "streamlined procedures" for installing new charging in apartment buildings. <sup>32,33</sup>

Many other provinces—like Alberta and Saskatchewan—offer no support at all.



### The true cost

Electric vehicles help Canadians save thousands of dollars, even accounting for their upfront costs. When considering the full cost of ownership over a decade, from a car's purchase to fuel and maintenance, a typical EV saves drivers thousands of dollars a year.<sup>34</sup> This calculation assumes that 88% of charging is done at home (something that is only possible for those with at-home charging options).





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### Cleaner air in our communities

Replacing gas cars has benefits beyond the pocketbook. In fact, helping more Canadians access EVs is especially key in high-traffic areas, particularly major cities, where fossil-fuelled vehicle pollution is costing lives. A recent Health Canada study of air pollution-related health impacts found road transportation contributed to 1,200 premature deaths annually across the country. Regionally, the highest number of these premature deaths (500 per year) occurred in Ontario, with 470 of them in Southern Ontario alone (in B.C. that number was 160).<sup>35</sup> Meanwhile, a shift to 100% passenger EVs on the road in the Greater Toronto Hamilton Area would help prevent over 300 premature deaths in the region per year.<sup>36</sup> A 2023 poll found that 86% of respondents felt that air quality should be a priority when it comes to addressing climate change, and 79% were concerned about how traffic emissions are affecting air quality.<sup>37</sup>



### Metro life EV readiness requirements Number of municipalities with EV-ready bylaws EV market share in 2024 Yukon **15**% Northwest **Territories** Newfoundland and Labrador **Nunavut Prince Edward** Island 21% 5% 33% 6% **British** Columbia 5% **Alberta** 8 Saskatchewan Manitoba **Nova Scotia Ontario New Brunswick** Quebec

\*Includes boroughs of the municipality of Montreal (which have individual jurisdiction over their own MURB charging bylaws) Source: <u>Electric Autonomy's EV-ready bylaw tracker</u> and S&P Global Q4 2024 market update.

### Buy the cars you make

Toronto's (and indeed Ontario's) comparatively low EV uptake can be largely attributed to a lack of provincial policy. After all, the two provinces with the highest EV adoption—Quebec and B.C.—are those with the most supportive policies, from EV supply standards to rebates. This lack of action does not tally with Ontario's own approach to EV manufacturing. The province has invested more than \$20 billion in EV-making facilities but has yet to help Ontarians access the very cars they are invested in making.<sup>43</sup> Introducing EV-ready requirements for new condos alongside support for charging in existing buildings is an essential combo if the province wishes to help its residents save money on gas and support one of its most important industries.



While federal, provincial, and territorial governments have taken steps to help apartment dwellers, it's arguably municipalities that are taking the lead.<sup>38</sup> The following are some examples from Canada's three most populous metro regions.



Metro Vancouver is an undisputed leader when it comes to EV uptake. A full 27% of EV sales in the city were electric in 2024, the second-highest adoption in Canada after Montreal.<sup>8</sup> Meanwhile, 52% of people in the region live in apartments—significantly above the national average of 34%.<sup>3</sup>

Our survey found that 63% of Metro Vancouver respondents say they do not have a driveway, garage or other reliable place to charge an EV at home and that it represented a barrier to adoption. Despite that, 69% in the metro region are inclined to go electric for their next vehicle.

To pair with the provincial support for installing charging in multi-unit residential buildings, many municipalities in the region offer targeted regulations and support. In fact, B.C. is home to 34 municipalities that have adopted EV readiness requirements for new buildings in their bylaws, accounting for 20% of all municipalities and 70% of the provincial population.<sup>39</sup> In Metro Vancouver, 14 of the region's 21 municipalities (excluding First Nations) have EV readiness requirements for condo, strata and multi-unit building charging in Canada.<sup>6,40</sup>

Perhaps unsurprisingly, the three municipalities with the highest EV adoption in the region are also the only three that did not list any apartments buildings on the 2021 census.

### 2024 EV market share of new vehicle sales by municipality

Source: <u>Transport Canada</u>

1. Belcarra	50.0%	10. White Rock	30.1%	19. Surrey	24.9%
2. Lions Bay	45.0%	11. New Westminster	30.0%	20. Maple Ridge	23.9%
3. Anmore	43.0%	12. Port Coquitlam	30.0%	21. Richmond	22.3%
4. Tsawwassen	42.3%	13. Port Moody	29.6%	22. Burrard Inlet 3	22.1%
5. Bowen Island	38.5%	14. Musqueam 2	29.0%	23. Pitt Meadows	21.8%
6. West Vancouver	38.1%	15. Vancouver	27.7%	24. Capilano 5	18.3%
7. Coquitlam	32.7%	16. Langley	27.6%	25. Seymour Creek 2	12.5%
8. Delta	30.5%	17. Metro Vancouver A	27.1%	26. Mission 1	9.5%
9. North Vancouver	30.3%	18. Burnaby	27.1%		



While Toronto generally has lagged on EV adoption (its EV market share in 2024 was 10%, well below the national average of 15%), most residents of the Greater Toronto and Hamilton Area are nonetheless interested in the idea.8 In fact, 55% of respondents to a recent Clean Energy Canada survey say they are inclined to buy an EV as their next vehicle. However, 63% also say that a lack of driveway, garage or other reliable place to charge an EV at home is a barrier for them.4

At the municipal level, nearly 15 local governments in the Greater Toronto and Hamilton Area have adopted Green Building Standards that include some form of EV-readiness provisions. Many of these are less ambitious than the provisions common in B.C. (for instance, they require only 20-50% of residential parking spots to be EV ready compared to 100%, or the provisions are voluntary versus required). The City of Toronto is one of the few governments of the region's 25 municipalities with a 100% EV-readiness requirement in its Green Building Standard, which is also enforced through a zoning bylaw. There are also low-interest loans available to home and building owners to install charging.

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### 2024 EV market share of new vehicle sales by municipality

Source: <u>Transport Canada</u>

1.	Oakville	16.1%
2.	Richmond Hill	15.7%
3.	Aurora	14.3%
4.	East Gwillimbury	14.2%
5.	Whitchurch-Stouffville	14.2%
6.	Milton	14.1%
7.	Markham	12.9%
8.	King	11.9%

9. Ajax	11.5%
10. Newmarket	11.1%
11. Pickering	10.8%
12. Caledon	10.6%
13. Vaughan	10.5%
14. Brampton	10.4%
15. Bradford West Gwillimbury	10.3%

16. Mississauga	9.8%
17. Mono	9.5%
18. Georgina	9.5%
19. Uxbridge	9.0%
20. Halton Hills	8.8%
21. Toronto	7.6%
22. New Tecumseth	7.2%
23. Orangeville	6.4%



Montreal is another Canadian leader on EV adoption. The city saw EVs make up a huge 36% of all vehicle sales in 2024—the highest of any metro area in Canada.8 While a 2023 study indicates that adoption tends to be higher among those living in detached houses, the city has also taken action for apartment dwellers.42 The region is divided into 19 boroughs with 11 applying EV-ready bylaws, making it one of the most proactive cities when it comes to EV charging.40

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### 2024 EV market share of new vehicle sales by municipality\*

Source: Transport Canada

1.	L'Île-Cadieux**	100.0%
2.	Saint-Placide	51.9%
3.	Carignan	51.2%
4.	Léry	50.3%
5.	Mont-Saint-Hilaire	50.1%
6.	Saint-Philippe	49.1%
7.	Saint-Mathias-sur- Richelieu	48.8%
8.	Coteau-du-Lac	47.7%
9.	Verchères	47.5%
10	. La Prairie	47.3%
11	. Richelieu	47.1%
12	. Saint-Lambert	46.4%
13	. Saint-Roch-de-l'Achigan	46.3%
14	. Saint-Bruno-de- Montarville	46.0%
15	. Lorraine	45.9%
16	. Pointe-des-Cascades	45.7%

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aint-Basile-le-Grand 42.2%	42.3%
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es Coteaux 42.2%	42.2%
	42.2%
	42.2

34. Gore	42.1%
35. Beaconsfield	42.0%
36. Mercier	42.0%
37. Sainte-Marthe-sur-le-Lac	41.7%
38. Saint-Mathieu-de-Beloeil	41.4%
39. Les Cèdres	41.1%
40. Notre-Dame-de-l'Île- Perrot	40.5%
41. Montréal-Ouest	40.2%
42. Saint-Zotique	40.2%
43. Saint-Jean-sur- Richelieu	40.2%
44. Mascouche	40.1%
45. Saint-Lin-Laurentides	40.1%
46. Lavaltrie	40.0%
47. Repentigny	39.9%
48. Saint-Amable	39.8%

<sup>\*</sup>Top 48 boroughs only.

<sup>\*\*</sup>Has a population of 120 people so likely accounts for a very small number of overall vehicle sales.



# **Solutions**

There are a number of actions governments at all levels can take (and in many cases are already taking) to smooth the road ahead for Canadians without easy access to home charging. By doing so, Canada would be following in the footsteps of jurisdictions across North America, from California to Massachusetts to Delaware.

While all levels of government can and should take action, higher levels of government (at the provincial or even federal level) have a key role in standardizing charging requirements, particularly in new builds. Piecemeal adoption with different standards, sometimes across the same metropolitan area, can be avoided if universal charging requirements are applied by provincial or federal governments, streamlining the process for utilities, developers and residents alike.

The following are key policy recommendations that should be adopted by the federal, provincial and municipal governments to support EV charging in apartments:

### **Federal and Provincial**

### **POLICY SOLUTION**

### **BEST-IN-CLASS EXAMPLE**



Requirements (in building, construction or electrical codes) to ensure 100% EV readiness in new multi-unit residential buildings with a focus on Level 2 chargers

**The U.K.'s building regulations** require EV charging to be offered at all parking spaces in new buildings, unless the average costs exceed £3,600 per parking space, in which case an electrical conduit making it easy to add a charger in the future must be installed.<sup>52,53</sup>

New draft regulations under **Quebec's Construction Code** would require new multi-unit residential buildings to be 100% EV-ready, that is, equipped with sufficient capacity for a 40-amp Level 2 charger at each parking spot while permitting electric vehicle energy management systems.<sup>44</sup>



Right-to-charge legislation that makes it easier for residents who want EV charging to get strata/condo board support to install it on their own

**Norway's right-to-plug law** ensures that tenants or owners are able to electrify all parking spaces as long as a comprehensive plan is provided, including details of who will pay for the upgrades along with safety measures.<sup>54</sup>

**B.C.'s Strata Property Act** sets out a process for stratas to follow when an owner makes a request for EV charging, including a timeline for when the decision must be made, lower voting thresholds to get the request approved, and a requirement that the strata cannot unreasonably deny the request if conditions are met. It also requires that electrical planning reports be completed to understand how to use limited electrical capacity for future EV charging and building electrification.

### **Federal and Provincial**

### **POLICY SOLUTION**

### **BEST-IN-CLASS EXAMPLE**



Funding for existing multi-unit residential buildings to carry out comprehensive EV-readiness retrofits

**CleanBC's Go Electric EV Charger Rebate Program** offers up to \$3,000 in funding to develop an EV charging plan, \$600 per parking space (up to \$120,000 per building) to make every parking space in a multifamily building "EV ready" and incentives for purchasing EV chargers. <sup>45</sup> Support is only available for Level 2 charger installation.



A comprehensive charging strategy that sets targets for charge points in multi-unit residential buildings and is backed by sufficient funding The U.K. electric vehicle infrastructure strategy includes clear targets, detailed timelines, roles and responsibilities, and funding to support EV deployment. The strategy specifically commits to reorienting the government's main home charging funding envelope toward "supporting people living in flats and rented accommodation to access the benefits of home charging." It also notes the U.K.'s requirements that all new homes, including those undergoing major renovation, have charge points installed at the point of construction. <sup>55</sup>

**Quebec's Electric Vehicle Charging Strategy** sets a target of 35% of parking spaces in apartment buildings to be EV ready by 2030, accounting for roughly 600,000 parking spaces, allocating \$514 million over the 2023-2028 period for implementation.<sup>46</sup>

### Municipal

### **POLICY SOLUTION**

### **BEST-IN-CLASS EXAMPLE**



Requirements (in bylaws or green development standards) to ensure 100% EV readiness in new multiunit residential buildings Fifteen BC municipalities—including the cities of Vancouver, Surrey, Burnaby, Victoria—require that 100% of residential parking and 10-45% of non-residential parking in new developments be EV Ready for Level 2.<sup>39</sup>

**The City of Toronto's Green Building Standard** (and associated zoning bylaw amendments) requires that 100% of the parking spaces in multi-unit residential buildings include an energized outlet capable of providing Level 2 charging or higher to the parking space.<sup>47</sup>

The City of Hamilton's Green Building Standard requires that 100% of multi-unit residential parking spaces are EV ready (i.e. has roughin conduits and associated power supply to support Level 2 charging or greater, with an electrical box or enclosure located near each required space).<sup>48</sup>



Funding to add EV charging to existing multi-unit residential buildings

**The City of Calgary's ChargeYYC pilot program** offers building owners and residents incentives of up to \$4,000 to develop a plan to install EV chargers in their buildings. Future funding will be offered to install charging at selected sites.<sup>49</sup>

**The District of Saanich** is one of multiple local B.C. governments that offers top-ups to the province's Go Electric EV Charger Rebate program, providing support to make each parking space EV Ready.<sup>50</sup>

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# 다 CLEAN ENERGY CANADA

Clean Energy Canada
Morris J. Wosk Centre for Dialogue
Simon Fraser University | Harbour Centre
3311-515 West Hastings Street
Vancouver, B.C., V6B 5K3

