EV Charging Research

October 2025

Background

Context:

The continued adoption of electric vehicles (EVs) and the ability to charge them easily and efficiently are critical to the future of New Zealand's energy system. Ensuring accessible and effective charging infrastructure is essential for supporting EV uptake and optimising energy use.

TRA has conducted EV charging research for EECA in recent years (2023, 2024), providing insights into residential and public charging behaviours. However, the EV and charging landscape is evolving rapidly, influenced by factors such as policy changes (e.g., adjustments to EV subsidies), an expanding public charging network, and the introduction of new EV models and charging technologies to the New Zealand market. These shifts may have significant implications for consumer needs, perceptions, and charging behaviours.

To gain an up-to-date understanding of the EV charging landscape, EECA commissioned TRA to conduct research into:

- Home EV charging behaviours and purchase considerations – including how EECA can support the adoption of wall chargers and encourage energy-efficient charging practices.
- Public charging behaviours, concerns, and opportunities – identifying key pain points and areas for improvement.

Research Objectives:

- Understand home charging behaviours and purchase considerations.
- Identify the types of home charging solutions currently in use and assess user satisfaction.
- Explore charging frequency, timing, and energy management practices, including off-peak charging behaviours.
- Investigate the buyer journey for home charging solutions, including decision-making factors, barriers to adoption, and key sources of information.
- Assess awareness and understanding of smart chargers and energy-efficient charging practices.
- Evaluate consumer perceptions of 3-pin plug charging versus dedicated wall chargers in terms of safety, efficiency, cost, and ease of use.
- Assess public charging behaviours, concerns, and opportunities.
- Compare findings to previous research (2023, 2024) where applicable and relevant.

Methodology

15-minute online survey.

Fieldwork conducted from 4th April to 7th May, 2025.

Total sample size of n=608, including:

- BEV / PHEV owners n=371 – drive an EV they own, have acquired vehicle in the past 2 years
- BEV / PHEV drivers n=146 – drive an EV that they do not own, have acquired vehicle in the past 2 years
- BEV / PHEV considerers n=118 – who are considering purchasing an electric vehicle in the next 12 months

The survey was distributed through various channels: market research panel, targeted social media campaign, EECA social media channels, and AA member panel.

To ensure the comparability of sample sources, data for EV owners was post-weighted to be representative of the current profile of BEV / PHEV owners by age, gender, location from a nationally representative sample. Data for drivers and considerers did not require this treatment and has not been post-weighted.

The survey covered the following topics:

- Targeted respondent profiling: Homeownership status, electricty plan
- BEV / PHEV interest, ownership and use cases: Vehicle description (e.g., newness or battery range) and driving behaviours (e.g., trip types or distance driven)
- EV charging habits: Charging frequency, locations, charger types, satisfaction with current charging solution and charging perceptions
- Home charging: Key behaviours, purchase journey and understanding/perceptions of different home charger types
- Public charging: Key behaviours and user experience

Key Findings

Home charging is the predominant method for powering EVs in New Zealand. 3-pin plug chargers remain the most widely used and considered option, however there are indications that the tide is slowly turning with uptake of dedicated home chargers having slightly increased compared to last year and usage of 3-pin plugs softening. Dedicated chargers offer improved speed, safety, and potential for smart energy use. Both current 3-pin plug users and EV considerers offer an opportunity to further grow adoption – two fifths of 3-pin plug/ caravan charger users are still considering a dedicated home charger and over half of EV considerers.

While those with dedicated home chargers report high satisfaction, so do 3-pin plug users. Many non-users of dedicated home chargers underestimate their benefits and overestimate associated costs. Whilst dedicated home chargers are recognised for faster charging, there is weak understanding of how the two methods differentiate on safety, ease, and value.

Public charging continues to play a critical complementary role, particularly for the one in five EV users who rely on it exclusively—most often younger, urban renters with limited home charging options. These users report the lowest satisfaction levels, with key barriers including long wait times, limited charger availability, and slow charging speeds. While public chargers are generally viewed as well maintained and good value, around half who use the network believe there are not enough public chargers in New Zealand.

Encouraging greater uptake of the public network differs for key user groups - those who also charge at home prioritise cost and convenience, whereas exclusive public users emphasise speed (more fast chargers 22kW or above) and proximity. However, improving distribution, increasing charger supply, and reducing queueing are seen as the most impactful ways to enhance the public charging experience for all public charging users.

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The EV ecosystem

The types of electric vehicles driven and how New Zealanders are using them.

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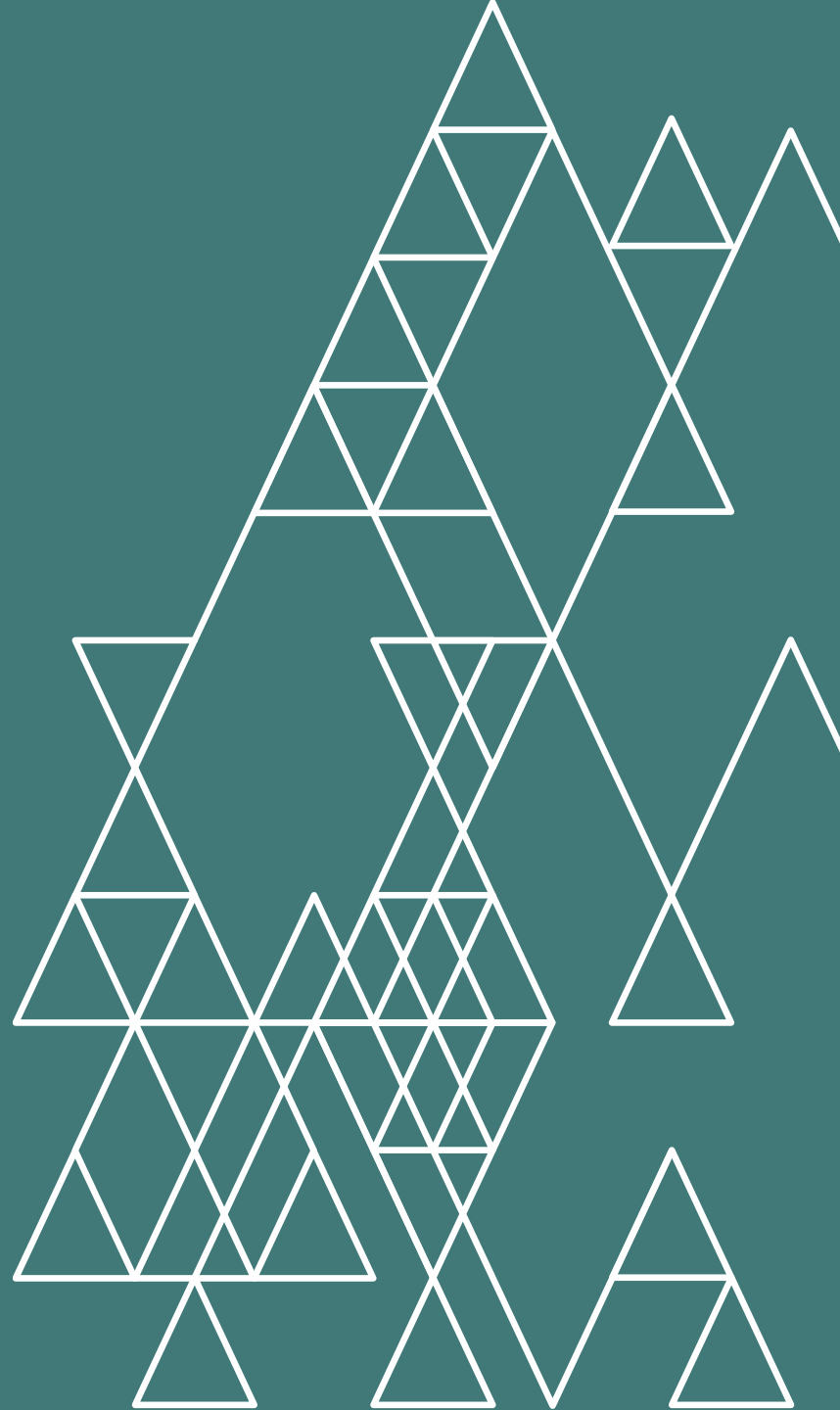
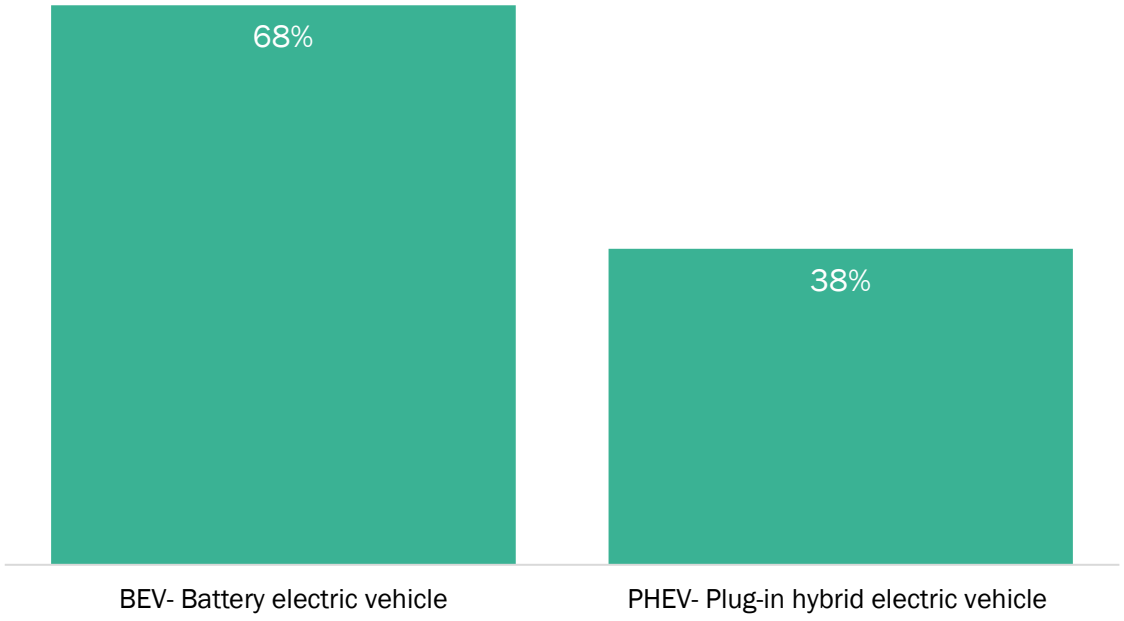
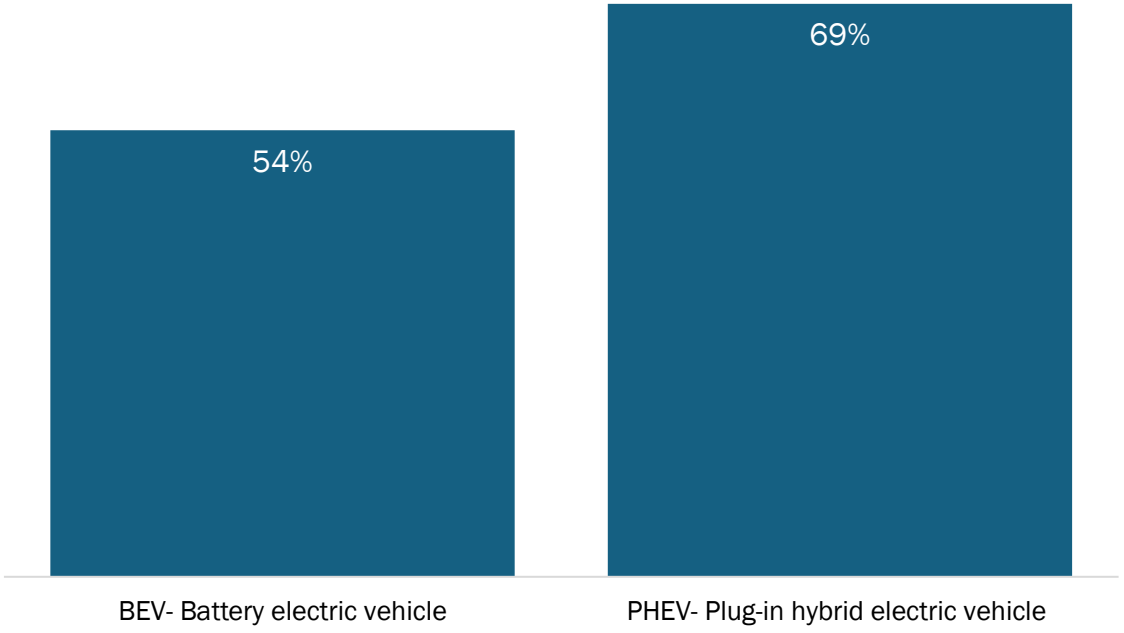


Among those who drive electric vehicles, BEVs are most driven but PHEVs have greatest consideration among prospective buyers.

Electric vehicle type owned, driven



Electric vehicle type(s) considered

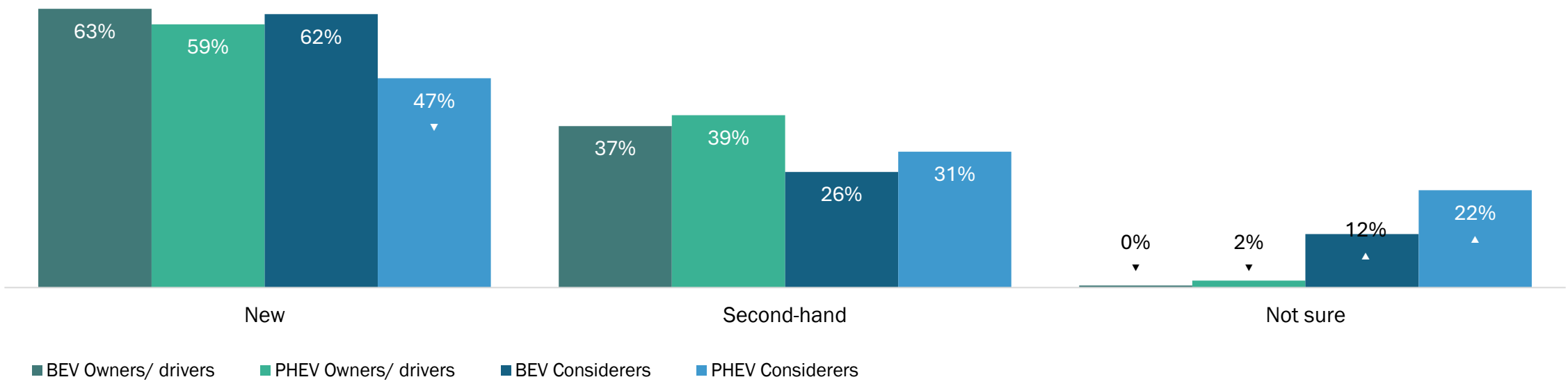


Q: What type of EV do you drive? | What type of EV are you considering?
Base: Owners/ drivers n=490, Considerers n=118

Most electric vehicles are bought new, with the second-hand market accounting for just over a third of purchases.

However, PHEV considerers are comparatively less sure about whether they will buy new or not, keeping their options open.

Newness of electric vehicle owned, driven or considered



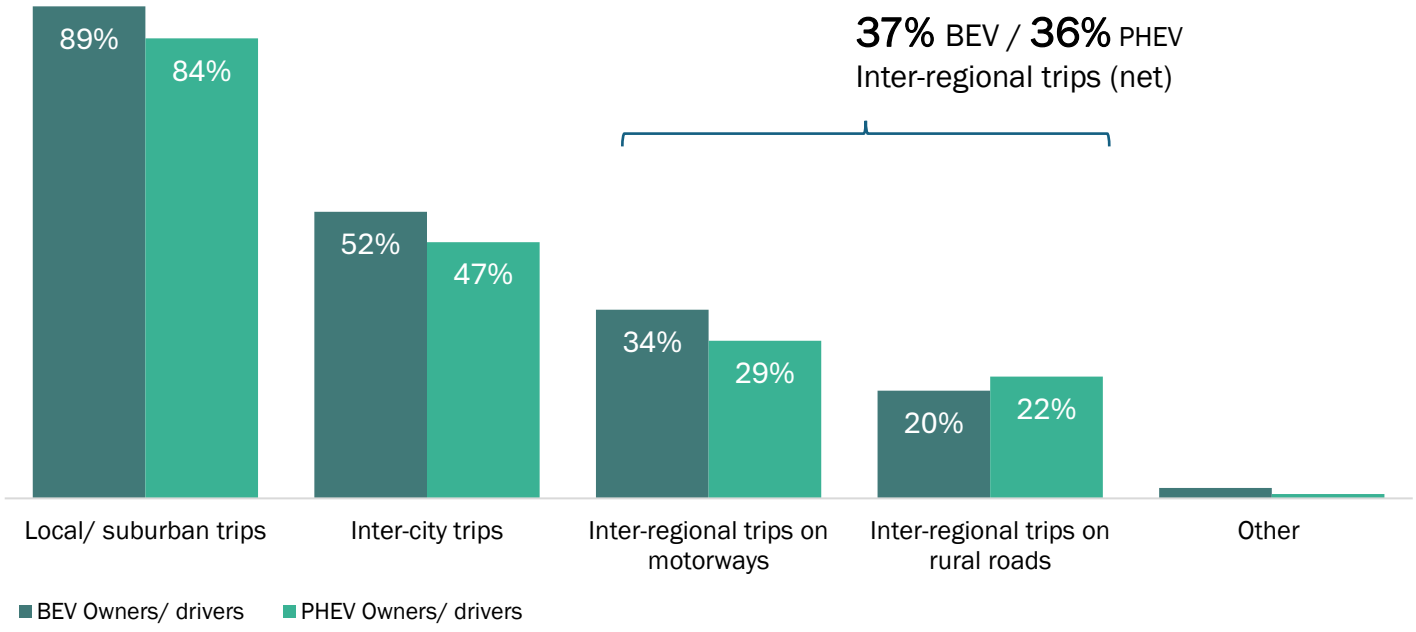
Q: Is the EV/ PHEV you drive...? | Do you intend to purchase your EV/ PHEV...?
Base: BEV Owners/ Drivers n=362, PHEV Owners/ Drivers n=149, BEV Considerers n=68, PHEV Considerers n=81

▲▼ Significantly higher/ lower than other groups

The majority are driving locally in their electric vehicles. Over a third are travelling inter-regionally.

Around 2 in 5 only use their electric vehicles for local suburban trips (36% BEV, 42% PHEV).
Distances travelled and types of trips do not differ significantly for BEVs and PHEVs.

Types of trip taken



Kilometers driven in a typical week

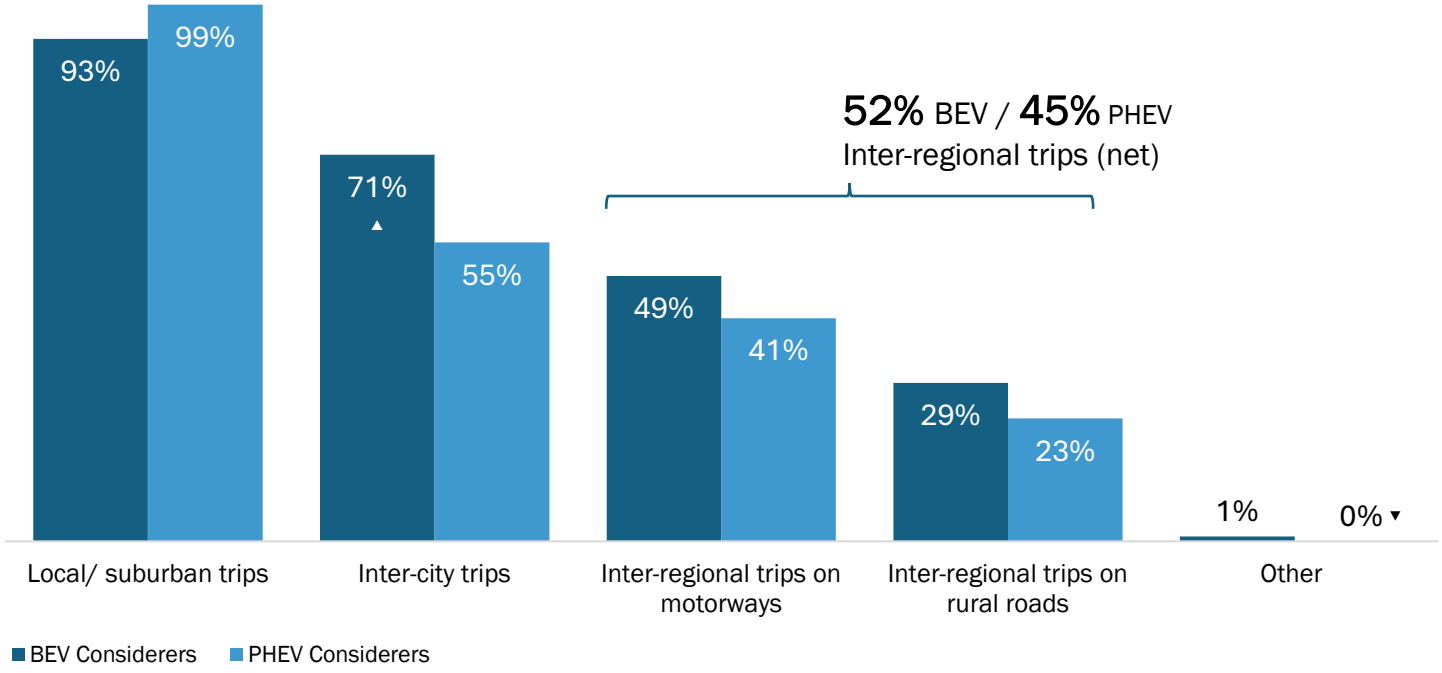
Q: How many kilometers would you drive your EV/ PHEV in a normal week?| Where do you drive your EV/ PHEV?
Base: BEV Owners/ Drivers n=362, PHEV Owners/ Drivers n=149

▲▼ Significantly higher/ lower than PHEV owner/driver

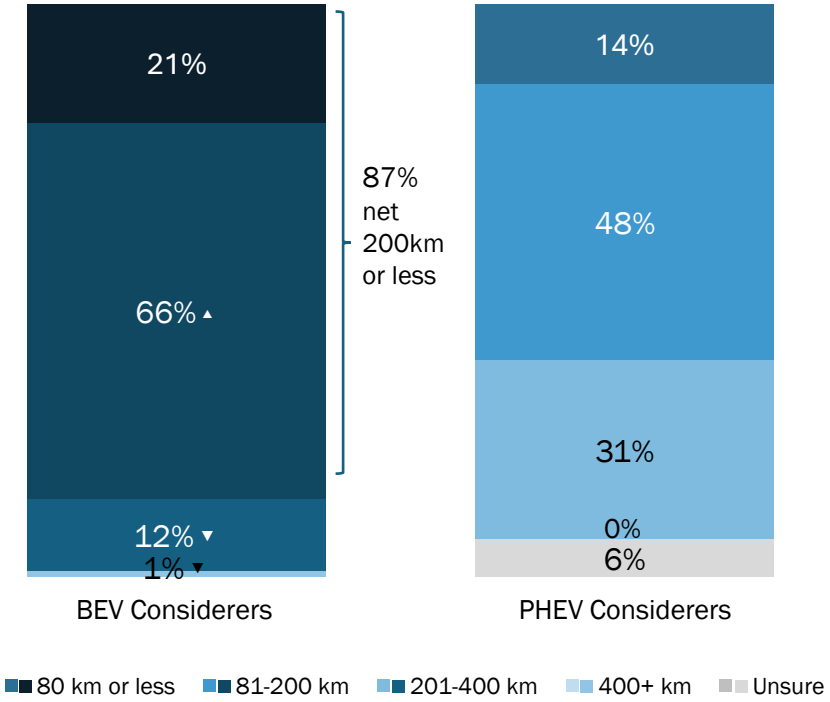
Considerers expect to use their vehicles across different trip types, and around half anticipate travelling inter-regionally.

Whilst the majority plan to drive their vehicle locally, 75% BEV and 67% PHEV considerers intend to use their vehicle for multiple types of trip. Those considering a BEV are more likely than current drivers to expect to use it for shorter distances (87% of considerers expect to drive 200km or less in a week, compared to 58% of drivers who actually do).

Types of trip intended



Expected kilometers driven in a typical week



!: How many kilometers would you drive the EV/ PHEV you are considering in a normal week? | Where do you intend to drive your EV/ PHEV?
Base: BEV Considerers n=68, PHEV Considerers n=82

▲▼ Significantly higher/ lower than PHEV Considerer

Summary & implications

Types of trip taken and kilometers travelled are similar regardless of electric vehicle owned.

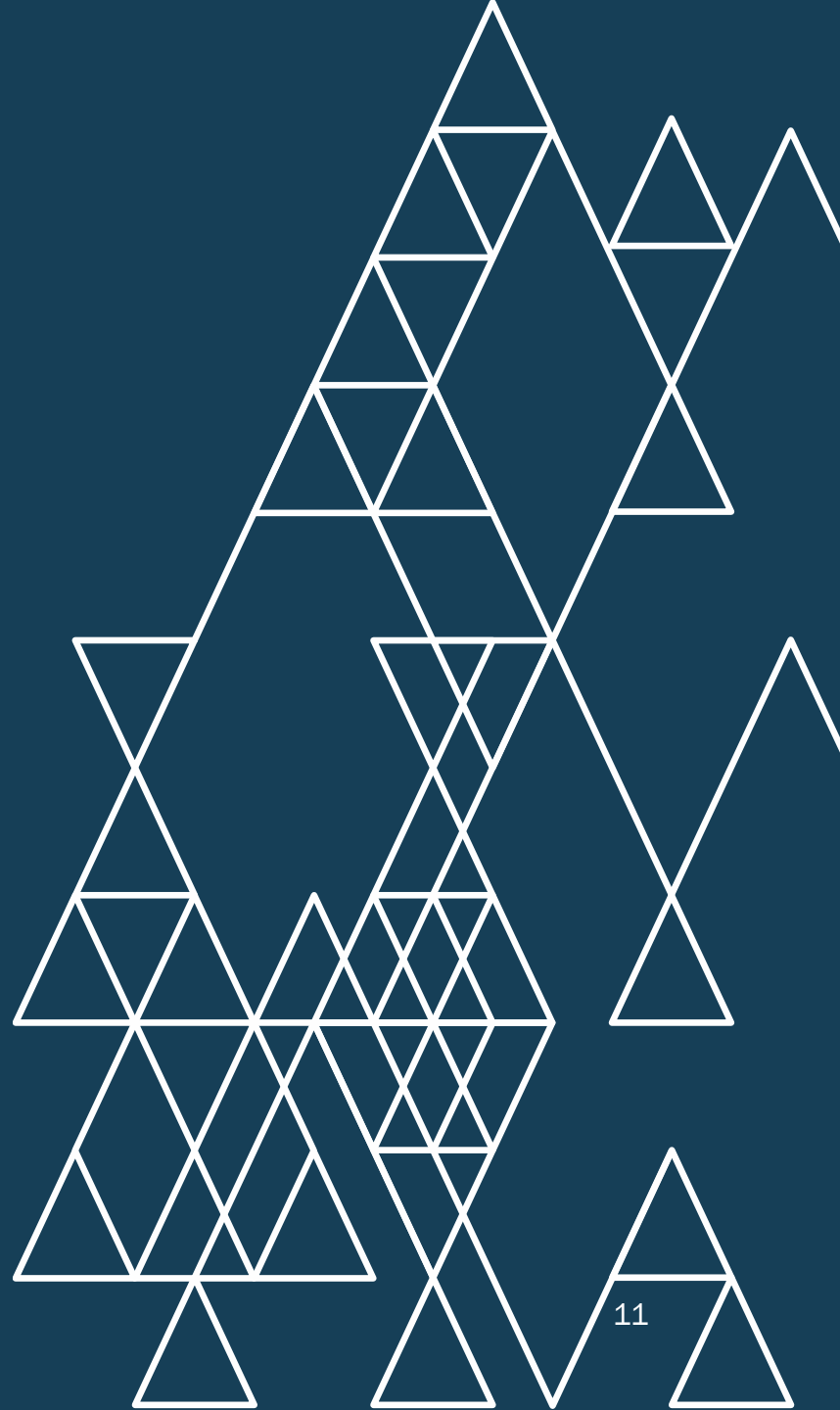
BEVs are the most common electric vehicle driven, however PHEVs receive significant interest from Considerers.

While BEVs and PHEVs are mainly used for suburban and short-to-moderate-distance trips, usage spans across all journey types. This highlights the importance of a charging network that supports everyday driving and extends beyond urban centres to support diverse travel needs.

Differences in types of electric vehicle driven but similar types of trip suggest that vehicle's capacity (to charge and run on battery) will be a key factor that impacts people's charging preferences and needs.

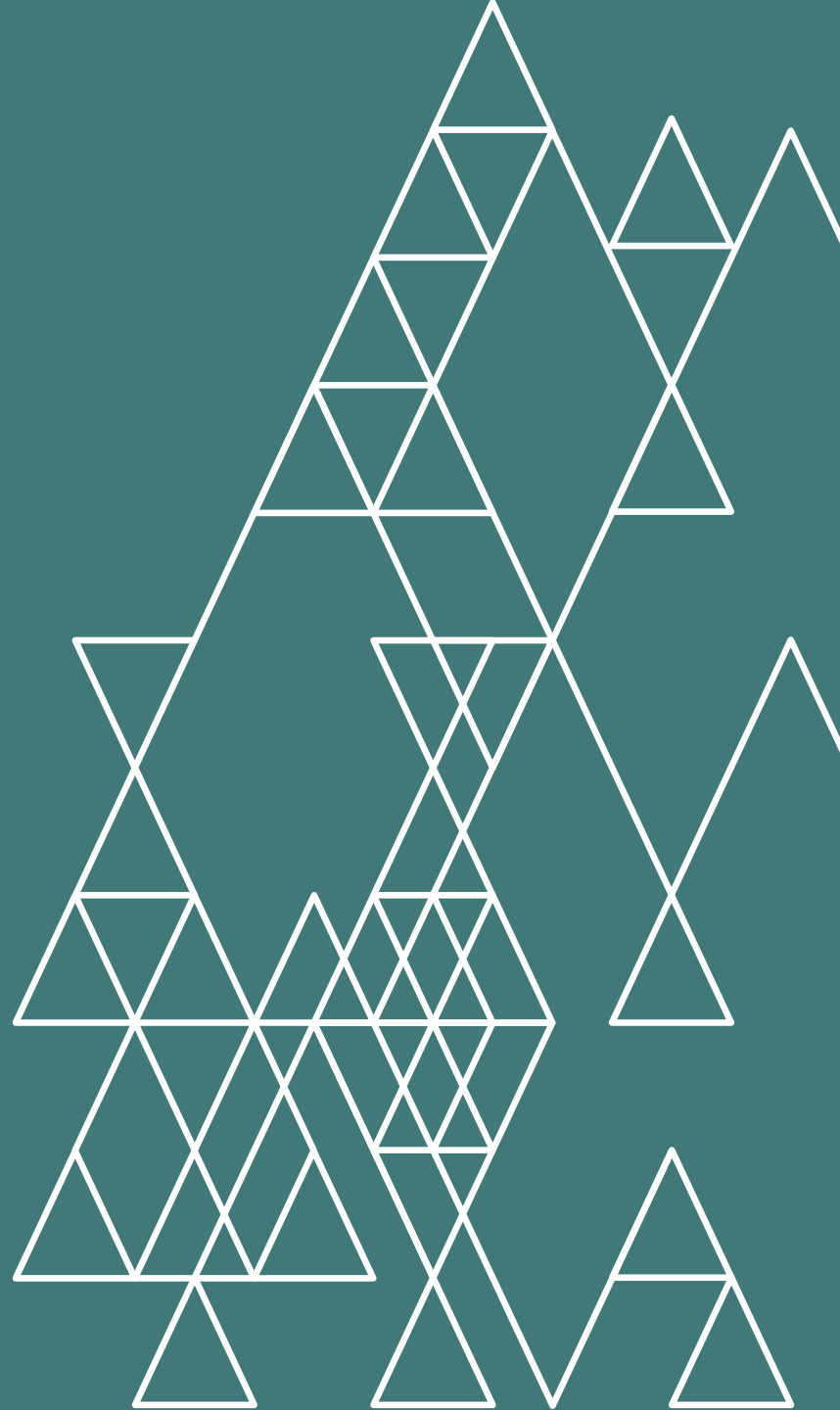
Opportunity to shape Considerers' decisions

Purchase decisions of many EV considerers are still forming and a considerable proportion remains undecided about key aspects, including the vehicle type (i.e. EV or PHEV), whether to buy new or used, and which make and model to opt for. In particular, BEV considerers over index on expecting to do shorter trips (200km or under) which differs from those who actually drive this type of vehicle.



The current charging set-up

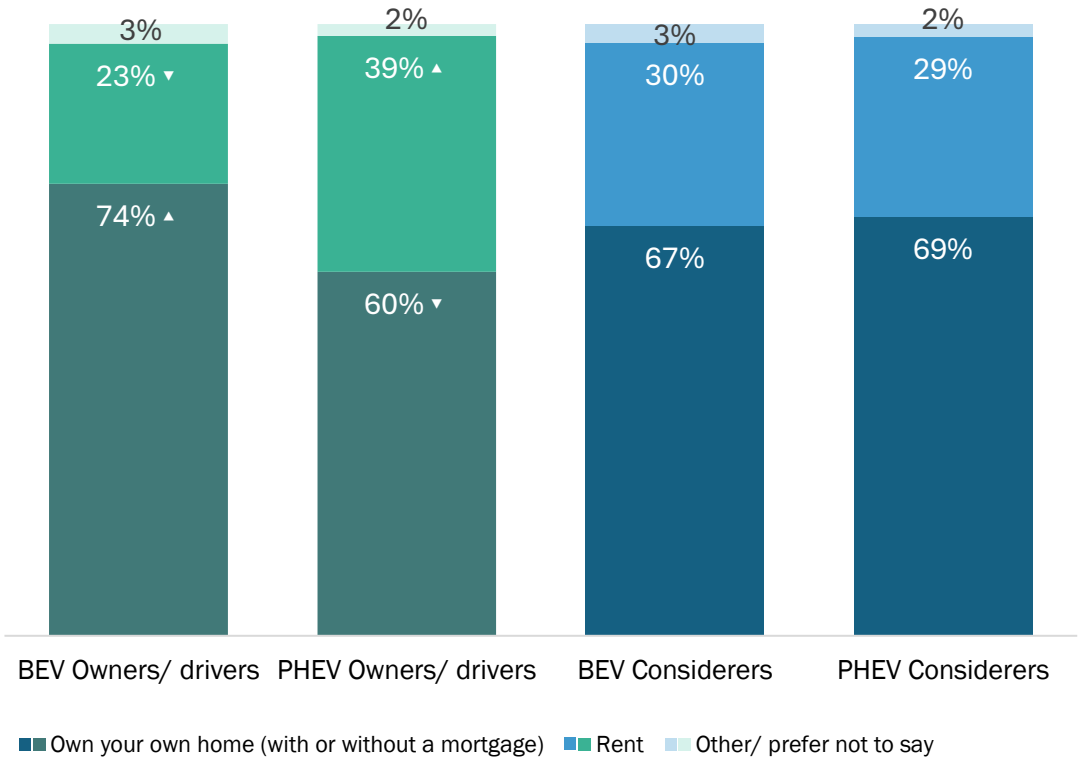
How New Zealanders are charging their electric vehicles, their experience with their current charging solution, and how they find out information about charging.



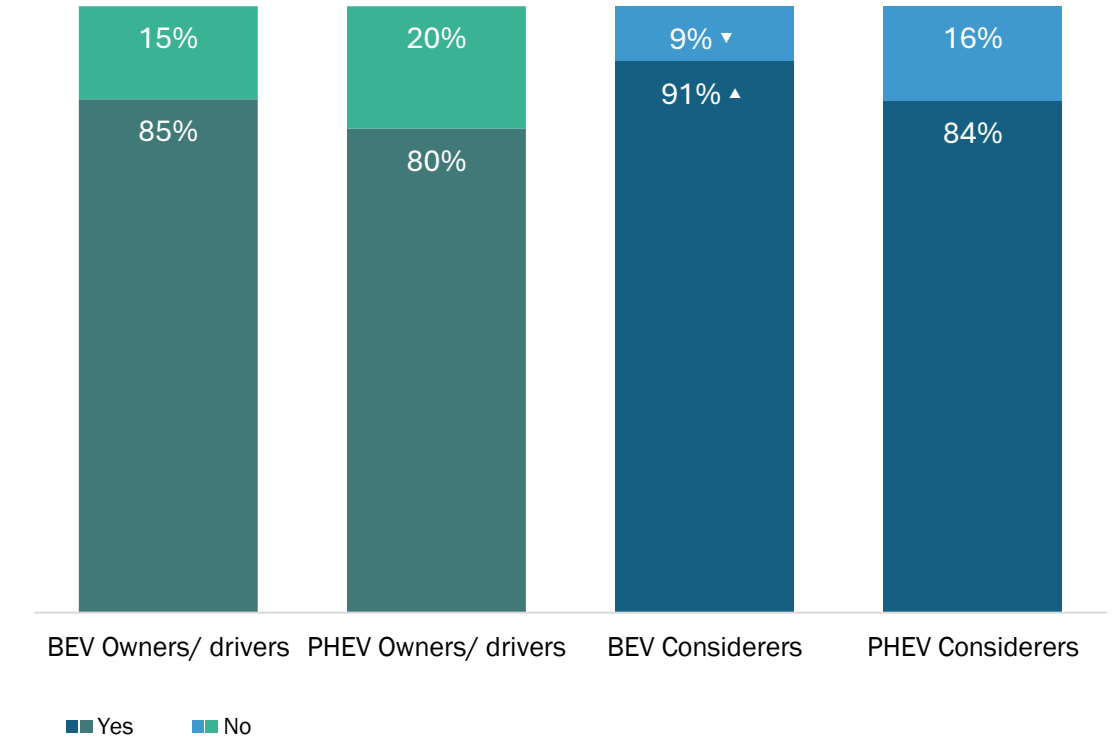
A majority of current and prospective electric vehicle users are set-up for home charging.

Most EV owners, drivers and considerers own their home, allowing for charger installation. However, PHEV owners are significantly more likely to be renters.
A majority of those who don't currently have a dedicated home charger do have the space for one, highlighting that it is a viable option for most.

Living situation



Space for dedicated home charger (among those that currently don't use it)



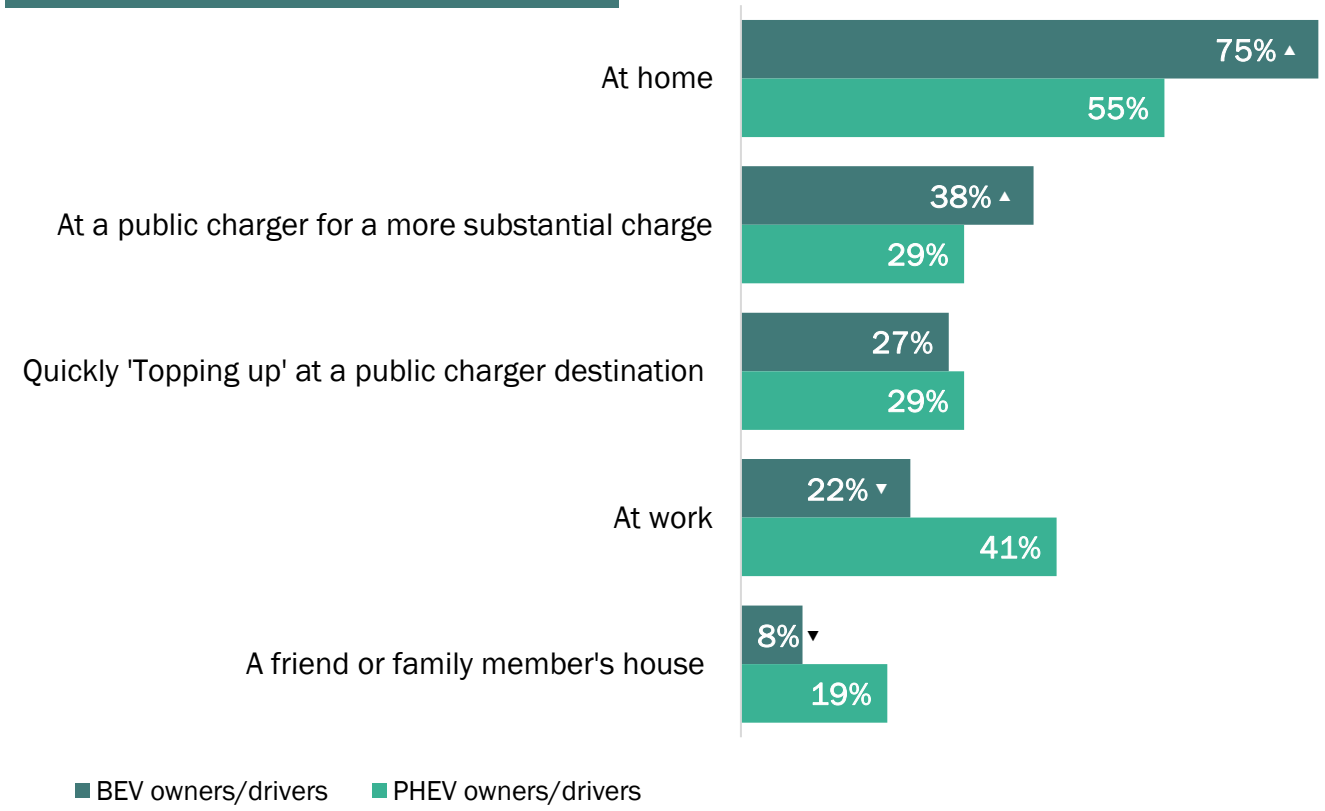
!: How would you describe the home you live in?
Base: BEV Owners/ Drivers n=362, PHEV Owners/ Drivers n=149, BEV Considerers n=68, PHEV Considerers n=81
▲▼ Significantly higher/ lower than other groups

Q: Does your primary home have a garage, carport, or off-street park where a dedicated home charger for your EV/ PHEV could be installed?
Base: Those who don't use dedicated home charger BEV Owners/ Drivers n=233, PHEV Owners/ Drivers n=113, BEV Considerers n=68, PHEV Considerers n=81

Home is the most common place for charging – particularly among BEV users.

While half of PHEV users are charging at home, they are more likely to use other private charging locations - at work (41%) and at a friend/family's house (19%). This reflects the greater proportion of PHEV users who drive a vehicle owned by their workplace (26%) or one that belongs to a family member (25%). Public charging remains an important part of the mix for current EV users, with nearly half utilising public locations. Whilst there are similar levels for topping up at public locations, those driving BEV are more likely to use public chargers for a substantial charge.

Charge locations – owners/drivers



Public charging
48% BEV / **48%** PHEV
NET: Public charger substantial charge or quick top up

Private charging
90% BEV / **93%** PHEV
NET: At home, work, friend/family member's house

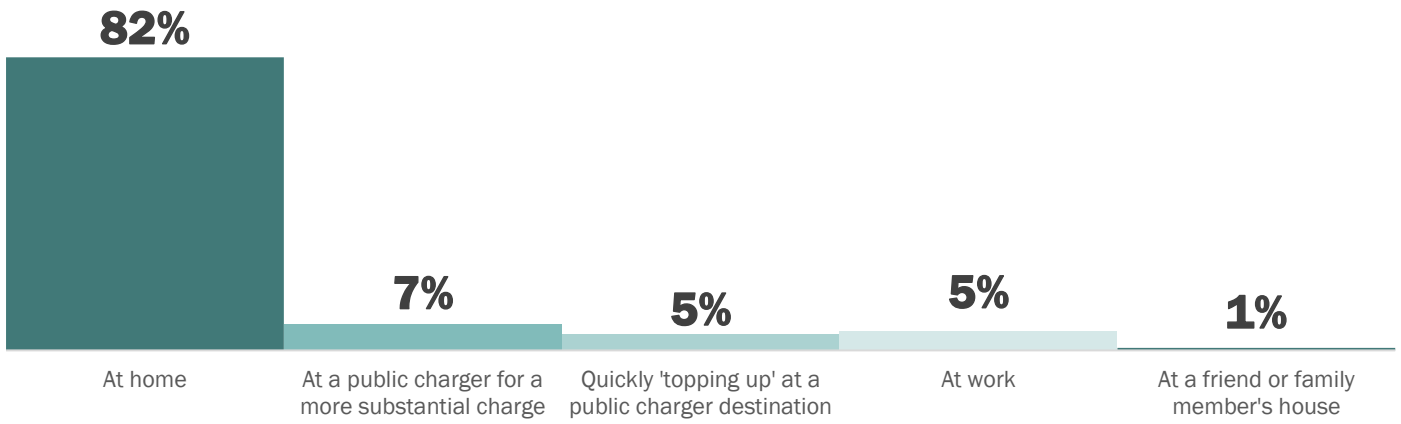
Q: At which of the following locations do you typically charge the EV/ PHEV you drive?
Base: BEV Owners/ Drivers n=362, PHEV Owners/ Drivers n=149

▲▼ Significantly higher/ lower than PHEV owner/driver

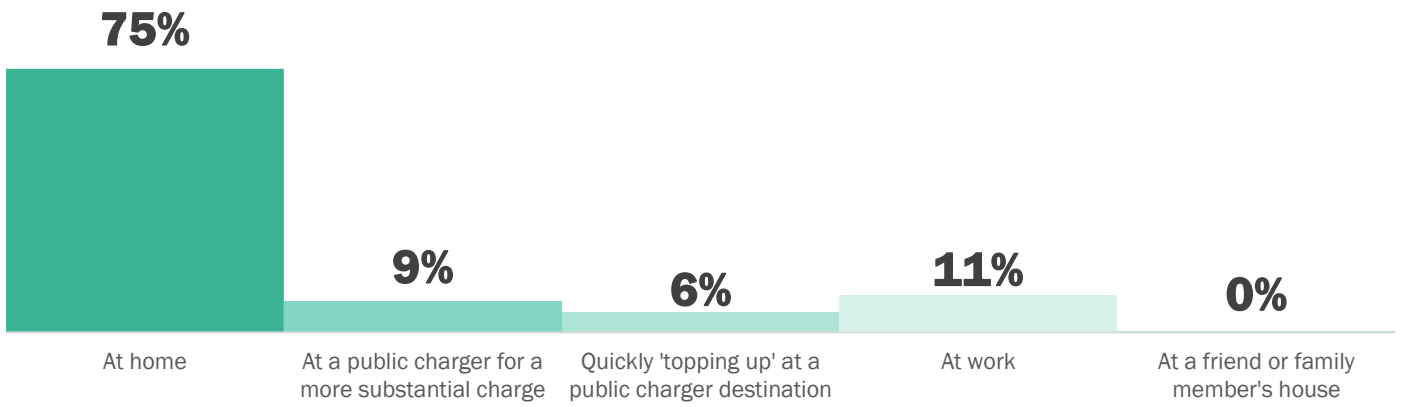
Among those who charge at home, on average, 80% of their charging is done at this location.

This is higher among BEV users – on average 82% of their charging is done at home, compared to 75% for PHEV users.

Among those who charge at home, BEV Owners or Drivers
Proportion of charging done at these locations (on average)



Among those who charge at home, PHEV Owners or Drivers
Proportion of charging done at these locations (on average)



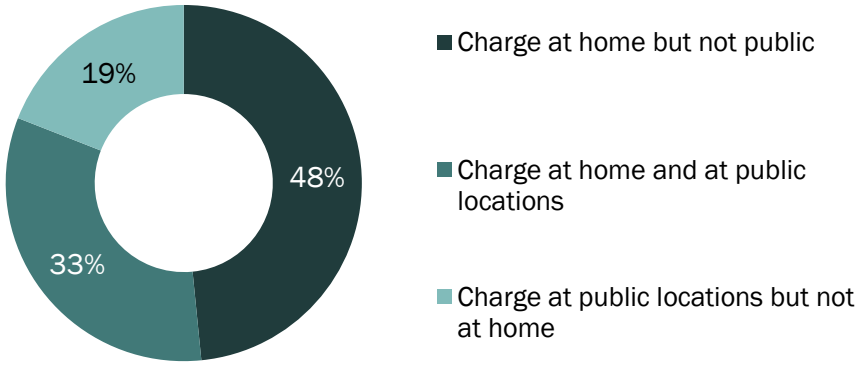
Q: Over the past year, approximately what proportion of EV/ PHEV charging did you do at each of the following types of locations?
Base: BEV owners/ drivers who charge at home n=372, BEV owners/ drivers who charge at home n=300, PHEV owners/ drivers who charge at home n=86

However, there is a group of EV users who exclusively use the public charging network.

19% of BEV users and 28% of PHEV users use the public charging network exclusively – we will understand this group in more detail in the public charging section of this report.

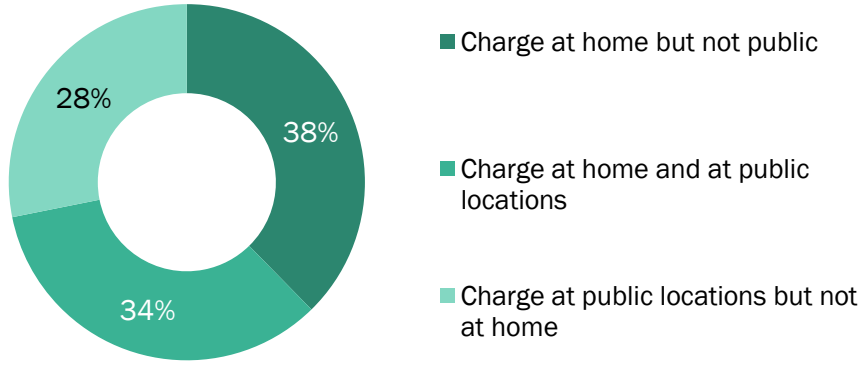
Home vs public charging

BEV Owners or Drivers



Home vs public charging

PHEV Owners or Drivers

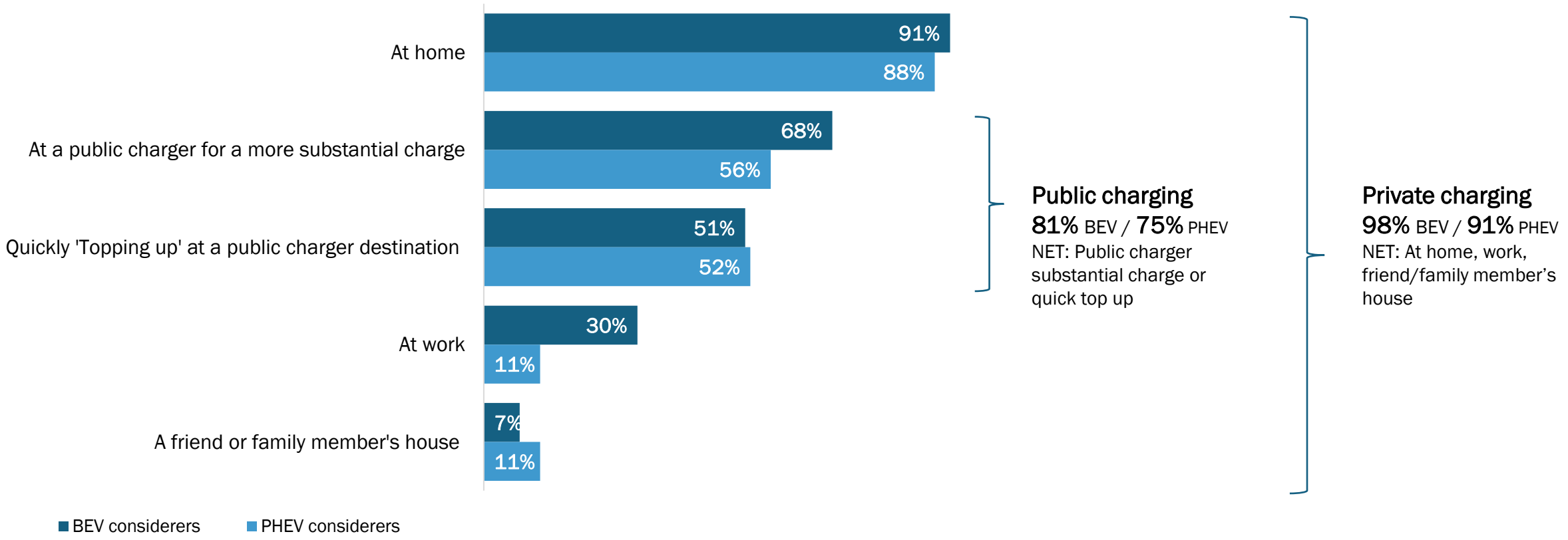


Q: At which of the following locations do you typically charge the EV/ PHEV you drive?
Base: Charge at either location, BEV owners/ drivers n=339, PHEV owners/ drivers n=117

The majority of EV considerers intend to charge at home, but their intentions towards public charging are also strong.

A majority of EV considerers intend to use the public charging network, a significantly higher proportion than current drivers actually report doing (81% vs 48% BEV, 75% vs 48% PHEV) .

Intended charge locations – considerers



Public charging
81% BEV / **75%** PHEV
NET: Public charger substantial charge or quick top up

Private charging
98% BEV / **91%** PHEV
NET: At home, work, friend/family member's house

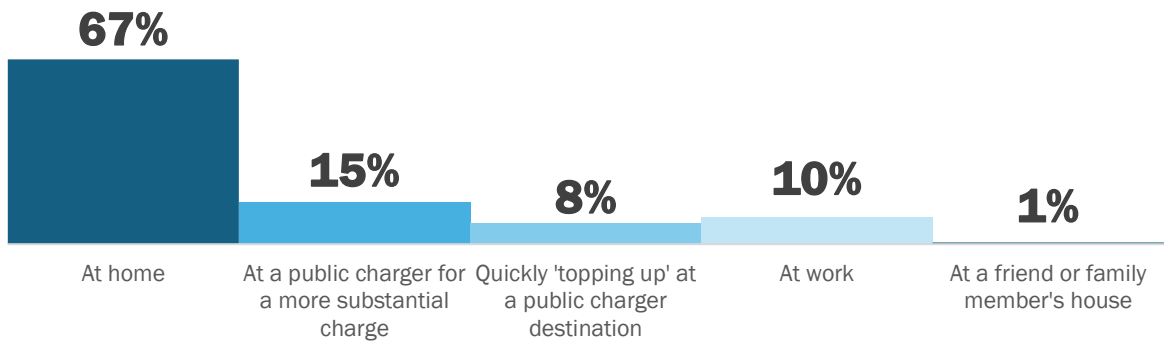
Q: At which of the following locations do you intend to charge your EV/ PHEV?
Base: BEV Considerers n=68, PHEV Considerers n=81

▲▼ Significantly higher/ lower than PHEV considerers

EV considerers expect to use public chargers more than owners are currently.

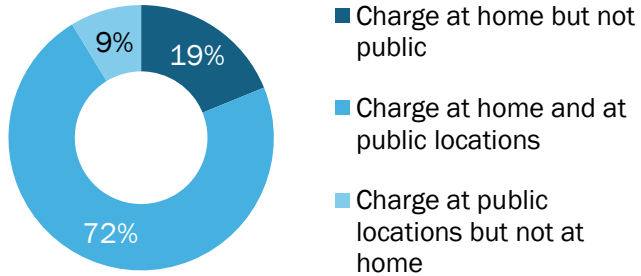
However, many anticipate they will take a blended approach: 72% of BEV and 63% of PHEV considerers plan to use both home and public charging locations.

Proportion of charging intended at these locations (on average): BEV Considerers

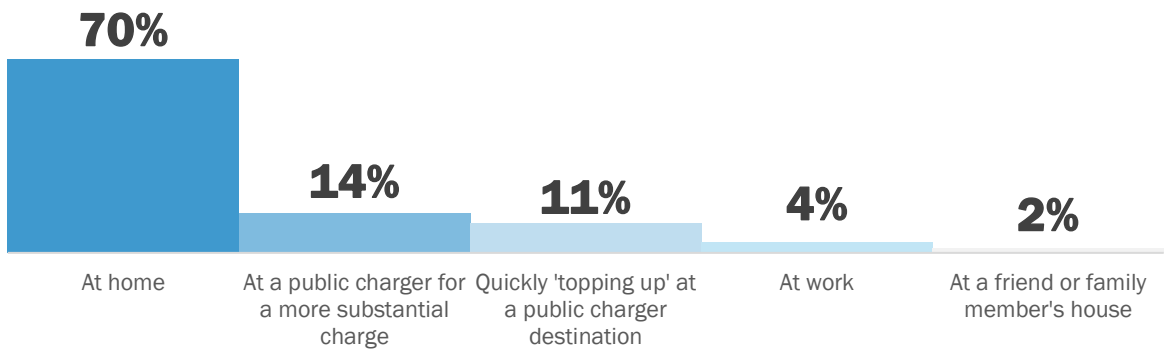


Home vs public charging

BEV Considerers

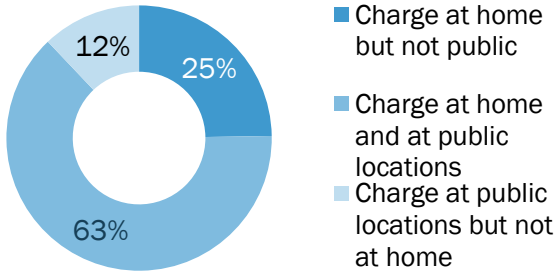


Proportion of charging intended at these locations (on average): PHEV Considerers



Home vs public charging

PHEV Considerers



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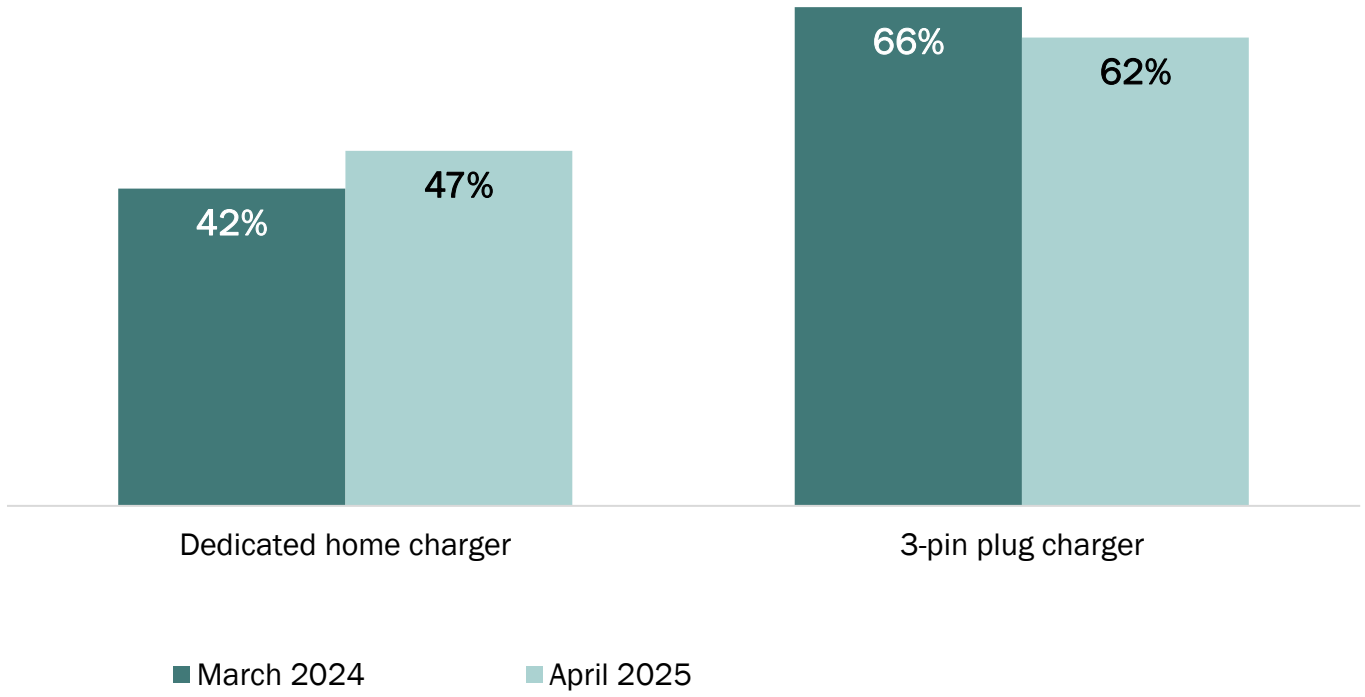
Q: Approximately what proportion of EV/ PHEV charging do you intend to do at each of the following locations?
Q: At which of the following locations do you intend to charge your EV/ PHEV?
Base: Intend to charge at either location home or public locations, BEV considerers n=68, PHEV considerers n=81

A closer look at charging at home

Since early 2024 the reported usage of dedicated home chargers has grown, and 3-pin has decreased.

Charger usage at home – EV users current study compared to previous measurement*

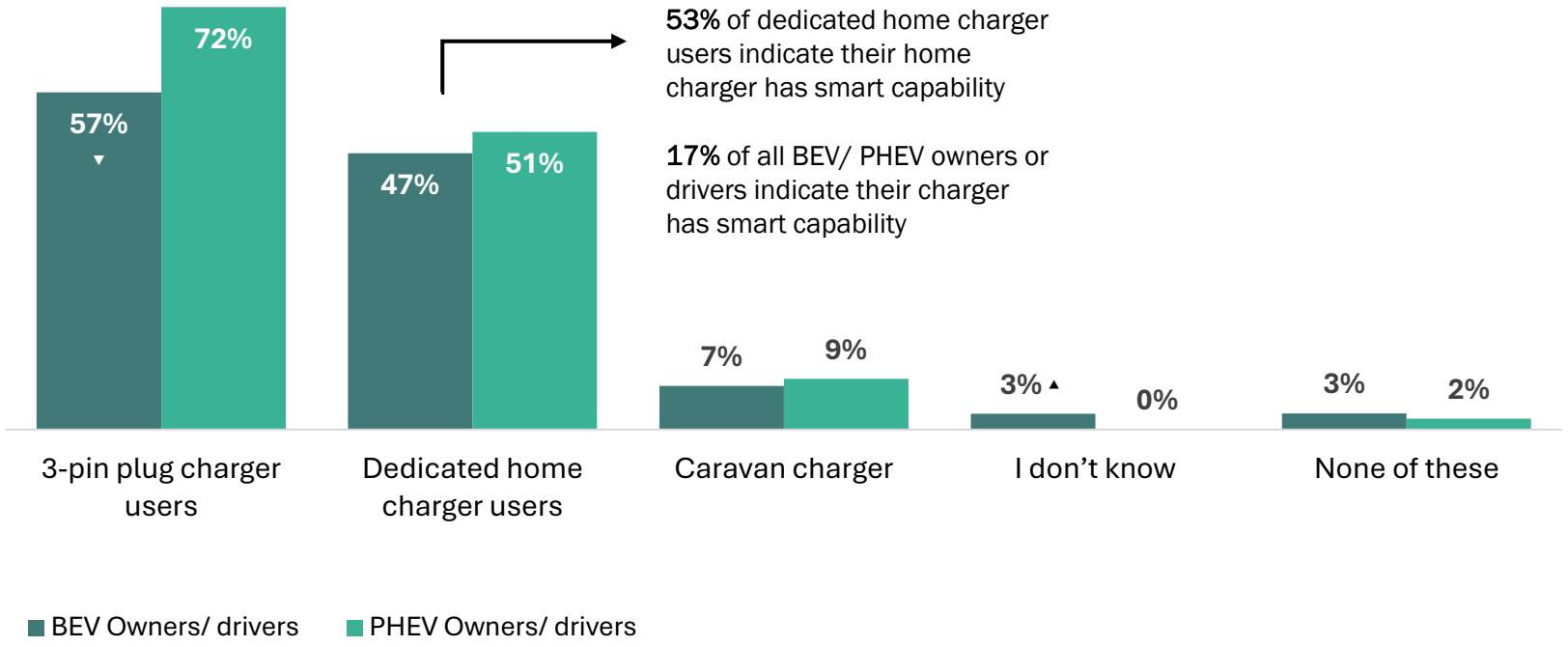


Q: What type(s) of charger(s) do you use to charge your EV/ PHEV at home?
Base: Owners/drivers who charge at home n=372
March 2024 Smart Charging Research. Q: How do you currently charge your EV at home?
PANEL BASE: EV Considerer n=66, EV Owner n=187

However, 3-pin chargers are still the most popular for home charging.

3-pin plugs are used by almost three quarters (72%) of PHEV owners/drivers and over half of BEV drivers (57%). Around half of EV users charge with a dedicated home charger.

Type(s) of charger(s) owners or drivers use for home charging



53% of dedicated home charger users indicate their home charger has smart capability

17% of all BEV/ PHEV owners or drivers indicate their charger has smart capability

Overlap: Dedicated home chargers and 3-pin plug

Among those who charge at home, the overlap between using a dedicated home charger and a 3-pin plug is relatively limited, though notably higher among PHEV users.

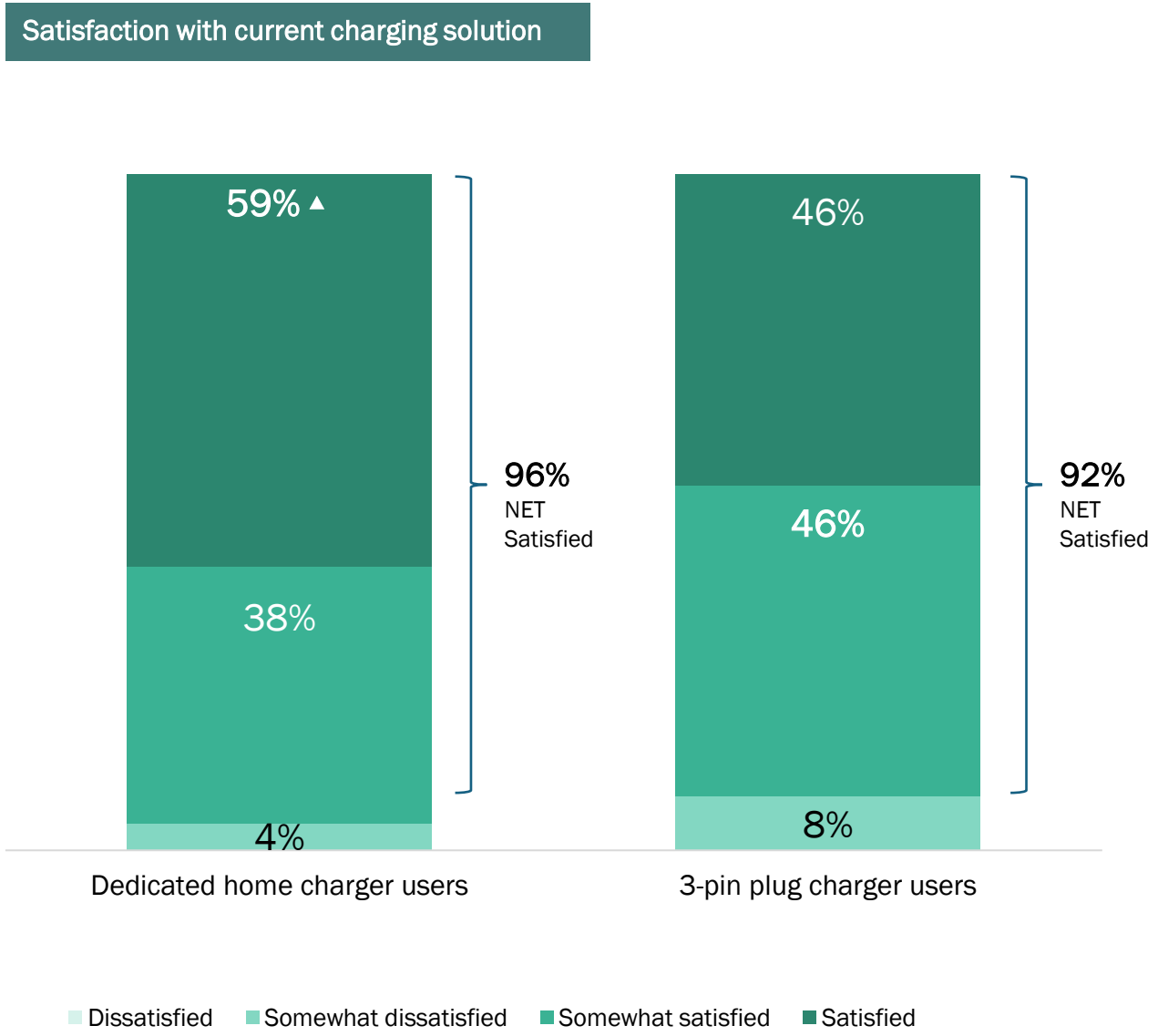
While 14% of those who currently charge at home engage with both methods, this drops to 11% among BEV users and rises to 25% among PHEV users.

Q: What type(s) of charger(s) do you use to charge your EV/ PHEV at home?
Base: Owners/ drivers who charge at home, BEV n=300 vs PHEV n=86

▲▼ Significantly higher/ lower than PHEV owner/driver

The majority of EV users are satisfied with their current home charging arrangement.

This is equally the experience for dedicated home charger users and those using 3-pin plug chargers. High satisfaction suggests there may be limited urgency to change their current approach.



Q; How satisfied are you with your current EV/ PHEV charger solution?
Base: BEV/ PHEV owners or drivers who use dedicated home charger n=156, use 3-pin plug charger n=231

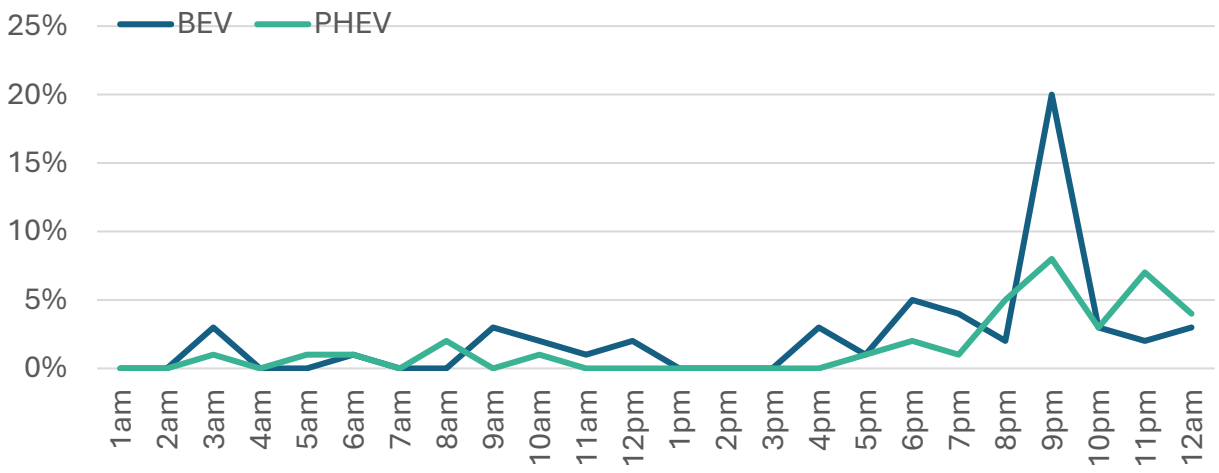
▲▼ Significantly higher/ lower than 3-pin plug charger users

Home charging is a predominantly passive and convenience-driven process.

For many, charging is a routine part of their day, plugging in at night and unplugging in the morning. Most do not specify a specific start or end time, instead reporting that this happens whenever they can or automatically. For those who do state a time, the most common start and end times are during off-peak.

A quarter (25%) start charging during off-peak - between 9pm– midnight.

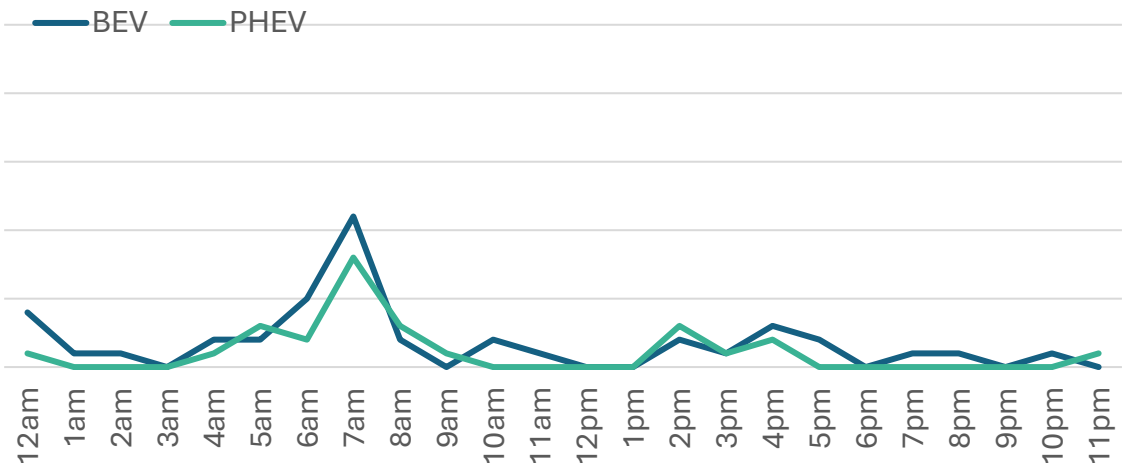
Start time of home charging



	BEV	PHEV
Whenever I can	43%	62%
Don't know	4%	1%

A third (34%) stop charging before peak electricity time starts – between midnight and 7am.

End time of home charging



	BEV	PHEV
Whenever I can	24%	29%
It stops automatically	29%	42%
Don't know	4%	3%

Q: What time of the day do you typically start charging your EV/ PHEV at home? If you charge multiple times per day, please think about your longest typical charging session? And what time of the day do you typically stop charging at home? Again, if you charge multiple times per day, please think about your longest typical charging session
Base: Owners/drivers who charge at home n=372, BEV n=300, PHEV n=86

People rely on multiple sources to inform home charging, indicating the absence of a single, trusted place for guidance.

Current BEV and PHEV users have accessed an average of 3.2 and 3.3 different sources of information on home charging, respectively. Considerers report engaging with even more sources, suggesting that information is spread across a wide range of channels.

Information source(s) used/ intended to be used to research how to charge an EV/ PHEV at home

	BEV Owners/ Drivers	PHEV Owners/ Drivers	BEV Considerers	PHEV Considerers
Looked online in a general search	49%	52%	60% ▲	43%
People I know who own EVs	43%	33% ▼	58% ▲	51%
Car dealer(s)/seller	38%	40%	46%	50%
YouTube / YouTube reviews	38%	37%	43%	43%
Electricity provider	32% ▼	34%	47%	59% ▲
Online forums	28%	29%	35%	25%
Electrician	21% ▼	28%	31%	46% ▲
Social media (e.g. Facebook)	22%	30% ▲	21%	17%
Government website(s)	17% ▼	19%	29%	34% ▲
Vehicle magazines / websites	20%	15%	23%	20%
Insurance company	7% ▼	12%	12%	21% ▲
Other	3%	1%	6%	3%
Don't know	1%	0%	0%	2%
None of these/ no research	5% ▲	2%	0%	0%

AVG. number of information source(s)

BEV Owners/ Drivers	3.2 ▼
PHEV Owners/ Drivers	3.3
BEV Considerers	4.1 ▲
PHEV Considerers	4.1 ▲

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And which of the following information sources did you use when researching how to charge an EV/ PHEV at home? | If you were to research how you might charge an EV/ PHEV at home, which of the following information sources would you use?
Base: BEV Owners/ Drivers n=362, PHEV Owners/ Drivers n=149, BEV Considerers n=68, PHEV Considerers n=81

▲▼ Significantly higher/ lower than other groups

Summary & implications

Home and public charging are both important in the charging ecosystem.

Home charging is understandably the most common choice for EV users, particularly those who use a BEV. The public charging network is used by half of EV users and a popular consideration among those looking to purchase an EV in the near future (over three quarters anticipate they'll use it).

Whilst there are groups of EV users who charge in either public or private (home, friends/family, work) locations exclusively, around a third use both home and public charging in complement to meet different needs.

Reported usage of dedicated home chargers has grown. 3-pin usage has softened.

Around half of EV users charge with a dedicated home charger. 3-pin plugs are particularly common among PHEV users (72%) but are also used by 57% of BEV drivers.

Among those who charge at home, there is dual use of these two charging methods occurring for 14%. This is higher among PHEV users (25%) compared to BEV users (11%).

Whilst the majority of dedicated home charger users express high satisfaction with their charging solution, so do users of 3-pin plugs.

Many EV considerers are open to a dedicated home charger, however 3-pin plugs still receive notable interest.

Breaking passive charging habits will require overcoming inertia.

There appears to be limited motivation for people to review current charging routines - charging behaviours are largely passive, driven by routine and automation, and satisfaction with current setups is high. Strong levers could be needed to encourage the uptake of dedicated home chargers.

Combined with a fragmented information landscape, shifting home charging habits will demand clear, trusted guidance and compelling reasons to challenge the status quo.

Home charging – dedicated home charger vs 3-pin plug charger deep dive

Understanding New Zealanders' perceptions of dedicated home chargers and barriers to overcome to drive adoption, comparing those who have a dedicated home charger and those who do not.

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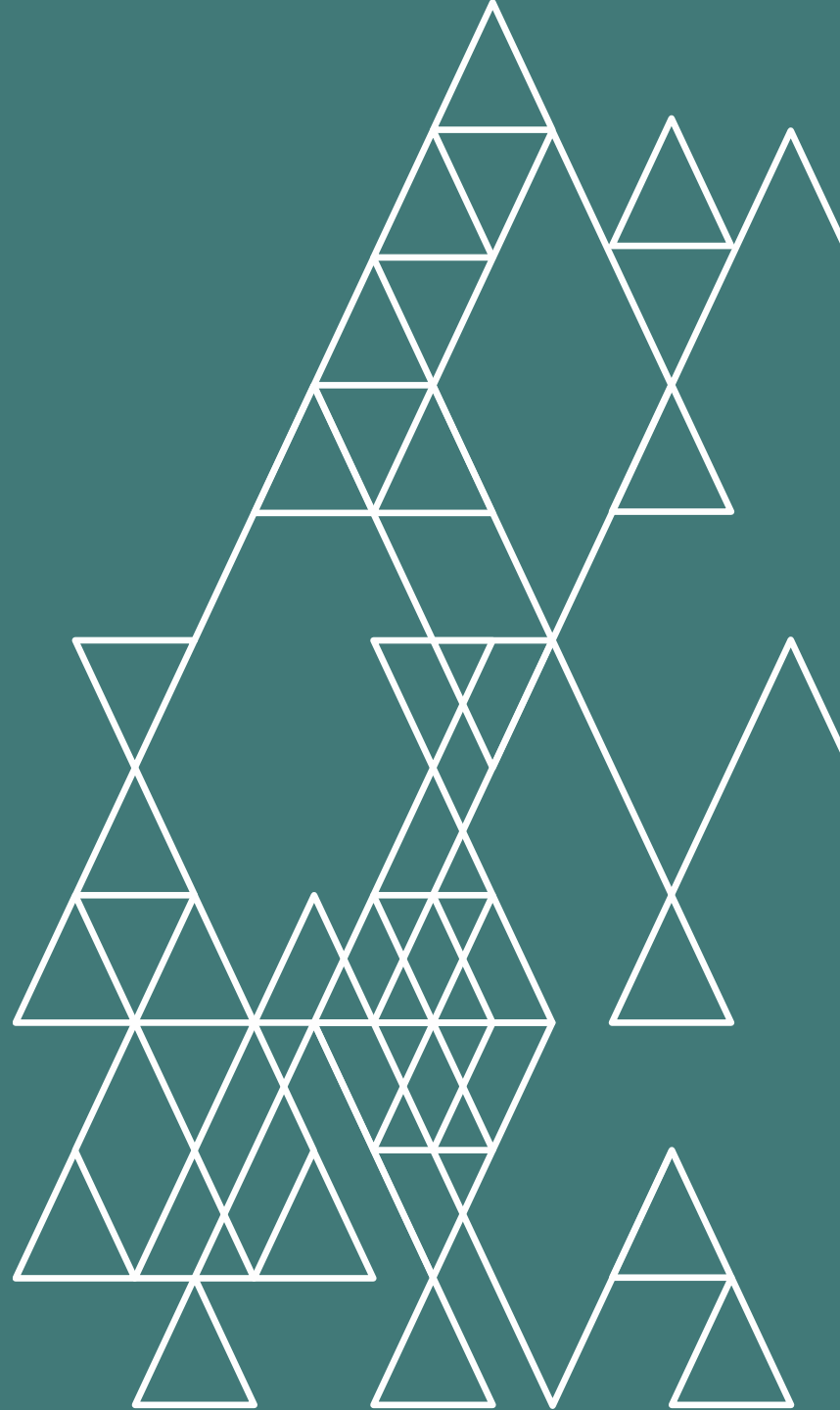


The profiles of those who currently use a dedicated home charger and those who use 3-pin are most differentiated on their age and newness of their EV.

There are no significant skews in BEV and PHEV ownership between dedicated home charger users and 3-pin charger users

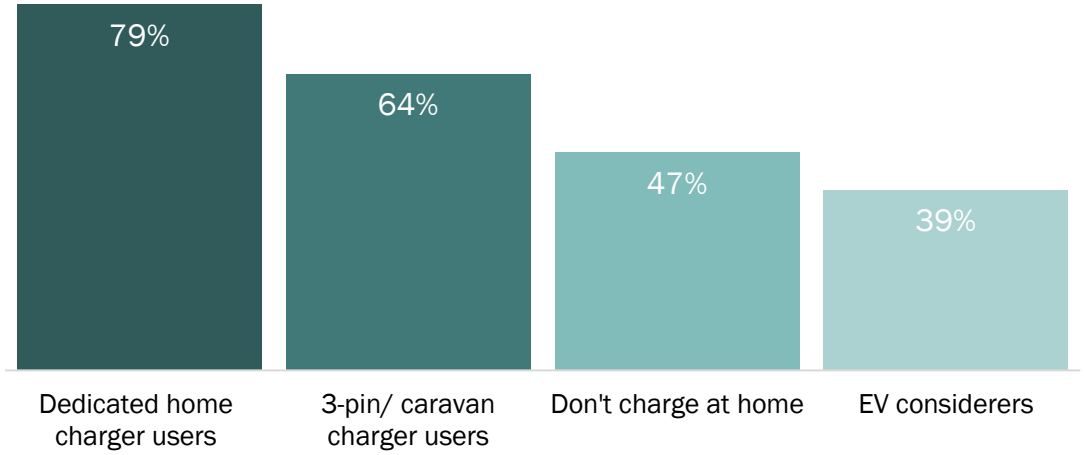
Dedicated home charger users	3-pin charger users	Don't charge at home	EV users whose vehicle is owned by their workplace	EV considerers
- Skew under 55 years. - Comparatively more likely to be based in the lower North Island or Canterbury. - Vast majority are homeowners.	- More likely to be aged 55+. - More likely to live in Wellington, Canterbury, or other South Island regions. - Majority own their homes	- Tend to be younger, over-indexing on people under 35 years. - More likely to be female. - More concentrated in Auckland. - While just over half own their home, this group over-indexes on renters. Within this audience: - 49% own an EV - 34% drive an EV owned by their workplace - 22% drive an EV that belongs to a family member - 7% lease an EV	- Over index on being between the ages of 35-54 years. - They are more concentrated in Auckland, although they over index in Wellington too.	BEV considerers - Tend to be older, with over 3 in 10 aged 55+; they are most likely to be in Auckland or Wellington. - The majority own their homes. PHEV considerers - Tend to be older still, over indexing on being in the 55+ age bracket; they are also over index on being based in Wellington.
- Typically drive new vehicles. - While local and suburban trips are most common, they are more likely than the total market to take inter-city trips as well as and inter-regional drives on rural roads. - Nearly half also use public chargers alongside home charging.	- Most drive second-hand vehicles. - Comparatively less likely to take intercity or inter-regional motorway trips. - Least likely group to charge at public locations. - No significant differences between BEV/PHEV owners/drivers' profiles.	- Less likely to take inter-regional trips via rural roads. - No significant differences between BEV/PHEV owners/drivers' profiles.	- Over index on having a new EV. - More likely to take local, suburban trips or inter-city trips.	- BEV considerers over-index on interest in public charging and local travel. - Both BEV and PHEV considerers over-index on interest in public charging.

For more detailed profiles, refer to the Appendix of this report.

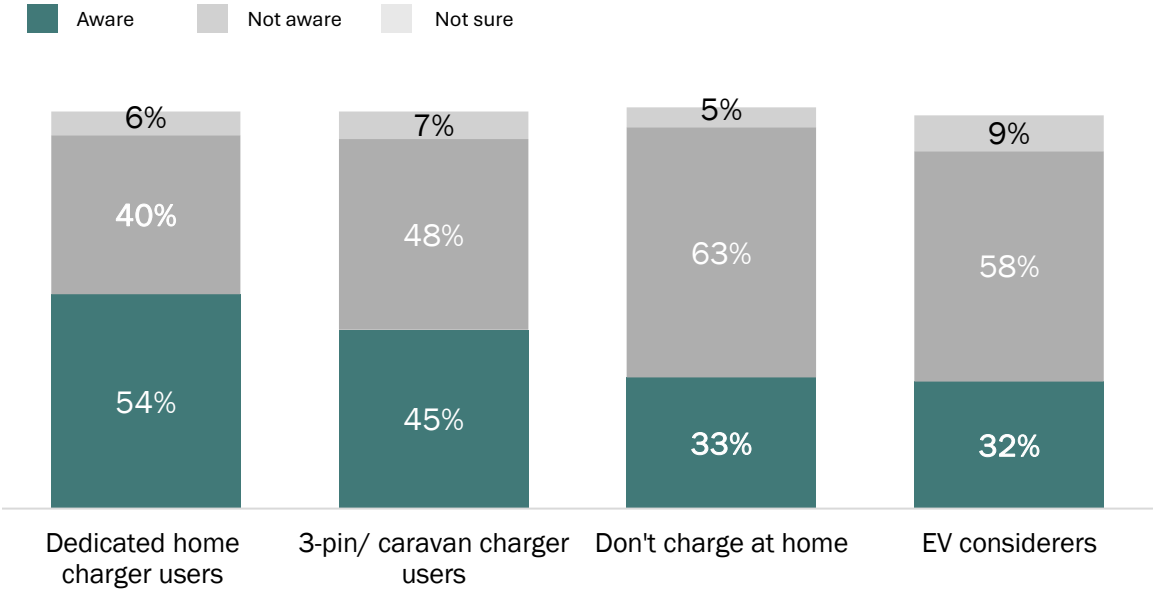
There’s a big opportunity to increase awareness of dedicated home chargers, especially smart chargers, among those not currently using them.

Knowledge of dedicated home chargers, including those with smart capabilities, is quite low at around 50% for those who use 3-pin or caravan chargers and around 60% for EV considerers. BEV users have significantly higher knowledge (68%) than PHEV users (50%).

T2B knowledge of dedicated home chargers (% know a little/ know a lot)



Awareness of charger units with smart capability



How much do you know about dedicated home chargers? | Did you know about smart EV chargers, as described above, before today?
Base: Dedicated home charger users n=156, Owners or drivers who charge at home but not with a dedicated home charger n=216, Owners or drivers who do not charge at home n=118, EV considerers n=118, BEV users who charge at home n=365, PHEV users who charge at home n=158.

As a result of limited knowledge, those not using dedicated home chargers underestimate their benefits.

Perceived benefits of dedicated home chargers

Users of dedicated home chargers are more likely to see the benefits of faster charging.

Non-users of dedicated home chargers:

- Those using other home charging methods (3-pin, caravan) are less likely to associate dedicated home chargers with benefits like faster charging, safety and cost savings, creating little incentive to switch from their current home-charging method.
- In contrast, EV considerers show stronger understanding of these benefits, making them a promising audience for dedicated charger engagement.

BEV vs PHEV users: there are no significant differences in how drivers/owners of these EVs perceive dedicated home chargers.

	Use		Do not use	
	Dedicated home charger users	3-pin/ caravan charger users	Don't charge at home	EV Considerers
Faster charging (than 3-pin)	**72%▲**	69%	**51%▼**	71%
Can remotely monitor and control charging	**58%▲**	**39%▼**	45%	43%
Safer to use	50%	**34%▼**	45%	**58%▲**
Automatically taking advantage of lower off-peak charging rates	49%	**38%▼**	47%	**63%▲**
Getting data insights on my charging habits and energy consumption through an app	**49%▲**	**28%▼**	36%	42%
Avoids risk of overloading my home's electrical circuits	44%	**32%▼**	34%	**54%▲**
Allows me to store electricity in my EV to use in my home/ sell back to grid	26%	**20%▼**	35%	**36%▲**
I don't know enough to answer	1%	**11%▲**	5%	8%

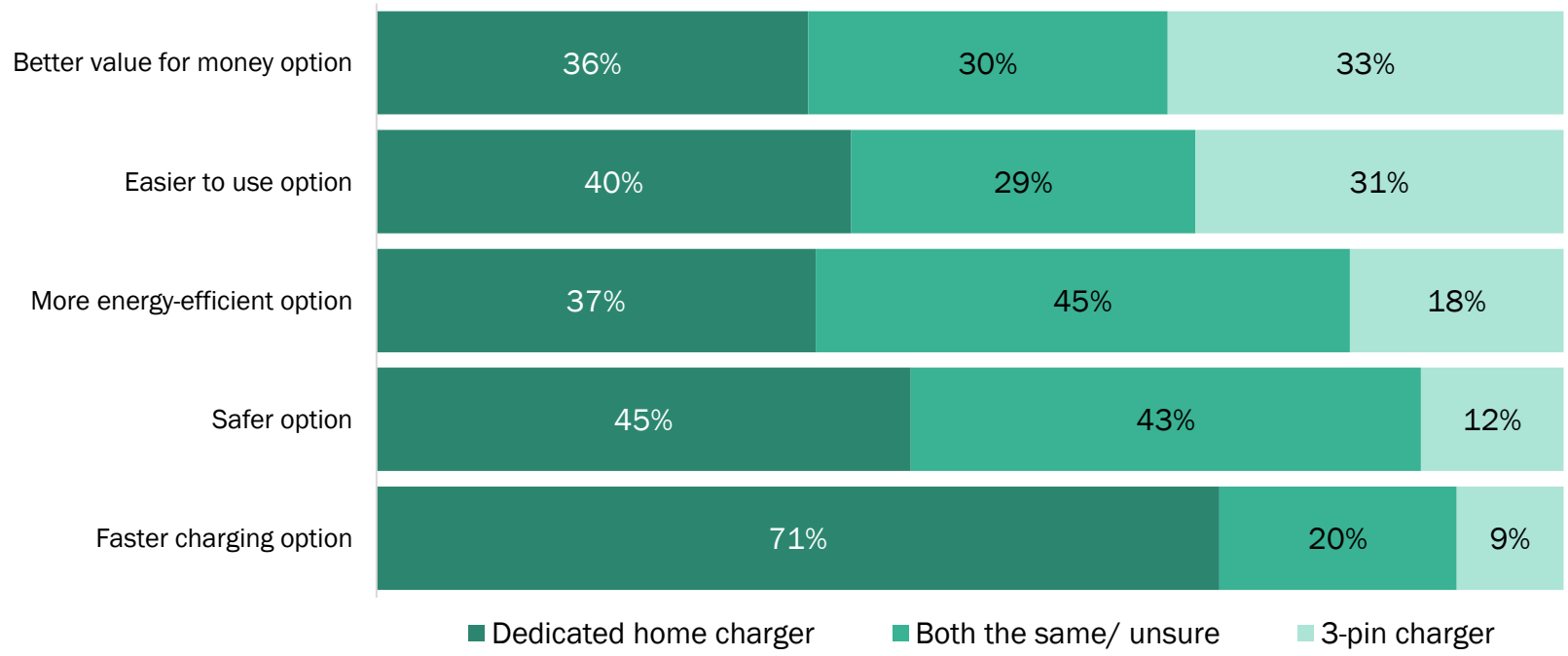
Which, if any, do you see as the main benefits of a dedicated home charger to you personally?
Base: Dedicated home charger users n=156, Owners or drivers who charge at home but not with a dedicated home charger n=216, Owners or drivers who do not charge at home n=118,EV/ PHEV considerers n=118

▲▼ Significantly higher/ lower than other groups

Even among those who charge at home, the unique benefits of dedicated home chargers are not clearly understood.

Whilst dedicated home chargers are recognised for faster charging, there's considerable potential to better differentiate them from 3-pin plug chargers on safety, ease, and value for money.

Perceived benefits of dedicated home chargers vs 3-pin plug chargers



BEV vs PHEV owners/drivers

BEV users are significantly more likely to associate faster charging and safety with dedicated home chargers than PHEV users (noting that PHEVs typically have a limited charging speed).

However, it is not that PHEV users are more likely to associate these with 3-pin – they are either unsure or see both chargers as similar on these features.

For each of these features which type of home EV charger do you associate most with it?
Base: Owners/ drivers who currently charge at home total n=372; BEV owners/ drivers n=300, PHEV owners/ drivers n=86

In turn, perceived costs of dedicated home chargers are a key barrier to uptake.

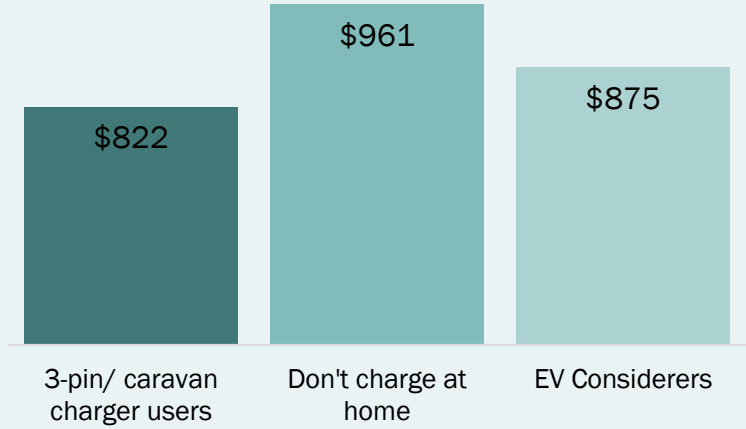
Perceived disadvantages of dedicated home chargers

	Dedicated home charger users	3-pin/ caravan charger users	Don't charge at home	EV Considerers
The cost to install the charger	61%	67%	64%	69%
The cost of the charger	**45%▼**	**70%▲**	53%	63%
Can't take it with me if I move house	38%	**25%▼**	36%	42%
It might degrade my battery lifespan	25%	**15%▼**	**30%▲**	17%
Reliance on a stable internet connection to work properly	16%	**8%▼**	**30%▲**	17%
It is/seems complicated to use	13%	10%	11%	12%
I'm worried about data collection of my charging behaviour	11%	**8%▼**	18%	17%
I have had a bad experience with one	9%	8%	11%	5%
Other	3%	4%	2%	3%
Don't know enough to answer	1%	**12%▲**	4%	11%
None of these	**11%▲**	4%	**2%▼**	2%

Cost Usage Technology Other

BEV vs PHEV users: there are no significant differences between how drivers/owners of these EVs perceive the limitations of dedicated home chargers.

Average price willing to pay for a dedicated home charger (excl. installation)



Q: What would you be prepared to pay for a dedicated home charger (excluding installation)?
Base: Owners or drivers who do not charge at home n=118, Owners or drivers who charge at home but not with a dedicated home charger n=138, EV/ PHEV considerers n=76
*Source: EDVB- **EV Home Chargers: Cost and Comparison**

▲▼ Significantly higher/ lower than other group

And what, if any, do you see as the main disadvantages to having a dedicated home charger for you personally? | What would you be prepared to pay for a dedicated home charger (excluding installation)?
Base: Dedicated home charger users n=156, Owners or drivers who charge at home but not with a dedicated home charger n=216, Owners or drivers who do not charge at home n=118,EV/ PHEV considerers n=118

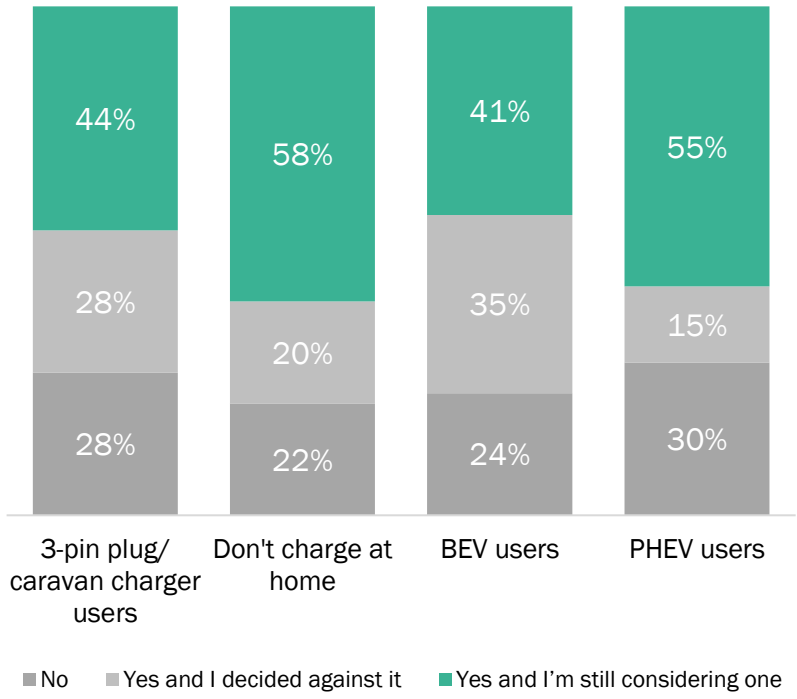
There is an opportunity to convert.

2 in 5 users of 3-pin plug/ caravan chargers are still considering a dedicated home charger and over half of EV considerers are open to this as their charging solution.

Did you consider purchasing a dedicated home charger for your EV/ PHEV? | How satisfied are you with your current EV/ PHEV charger solution? | Which EV/ PHEV charging solution would you be considering for your home?
Base: Owners or drivers who charge at home but not with a dedicated home charger n=216, Owners or drivers who do not charge at home n=118, BEV users who charge at home but not with a dedicated home charger n=171, PHEV users who charge at home but not with a dedicated home charger n=50, EV considerers n=118.

▲▼ Significantly higher/ lower than other group

Consideration of dedicated home charger – among Owners or Drivers who do not have one



Consideration of home charging methods – among Considerers of EVs

Dedicated home charger	**53%**
3-pin plug charger	**51%**
Caravan charger	**13%**
I don't know	**21%**

Summary & implications

3-pin charger users and EV considerers both present an opportunity for greater uptake of dedicated home chargers.

2 in 5 users of 3-pin plug/ caravan chargers are still considering a dedicated home charger and over half of EV considerers are open to this as their charging solution.

For EV considerers in particular, their openness to dedicated home chargers combined with general uncertainty about the specifics at this stage (type of make, model, what charging solution they'll use) presents a timely opportunity to shape charging preferences early.

There is a lack of distinction in the benefits offered by the two main types of chargers, in the minds of New Zealanders.

While openness to dedicated home chargers is strong, key barriers remain, particularly around knowledge and perceived cost.

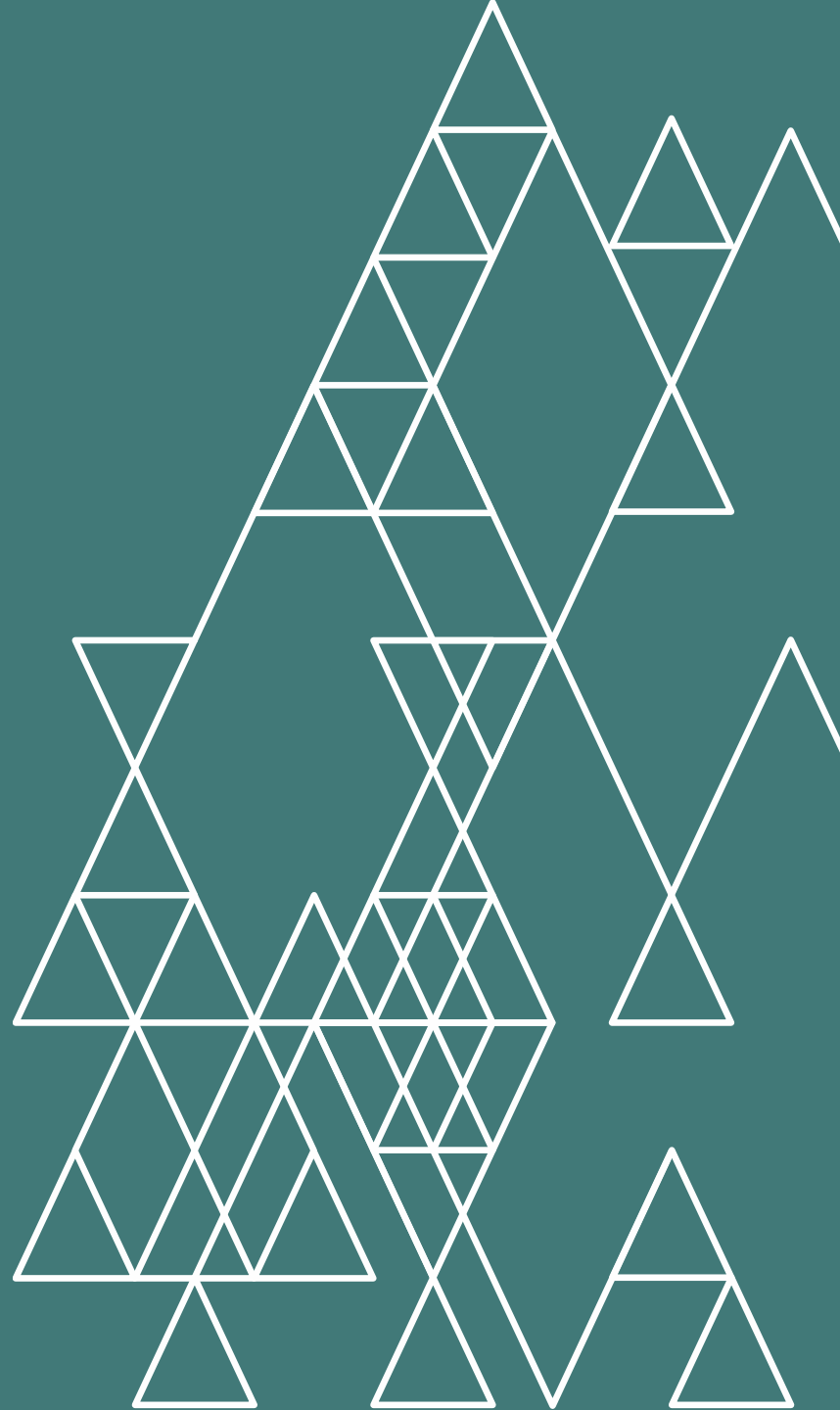
Although knowledge of dedicated home chargers is limited across audiences, considerers are a key group where this gap stands out: just over a third (39%) say they know a little or a lot about them.

Many also underestimate the benefits beyond faster charging and overestimate the costs of dedicated home chargers. While willingness to pay generally aligns with market prices, cost remains a two-fold barrier, covering both the charger itself and installation. These perceptions underscore the need to build awareness and address misconceptions to support broader adoption.

Increasing knowledge of dedicated home chargers and their benefits should be the first step to driving adoption.

Public charging

How New Zealanders are using the public charging network, and how this shapes their experience, perceptions and needs.

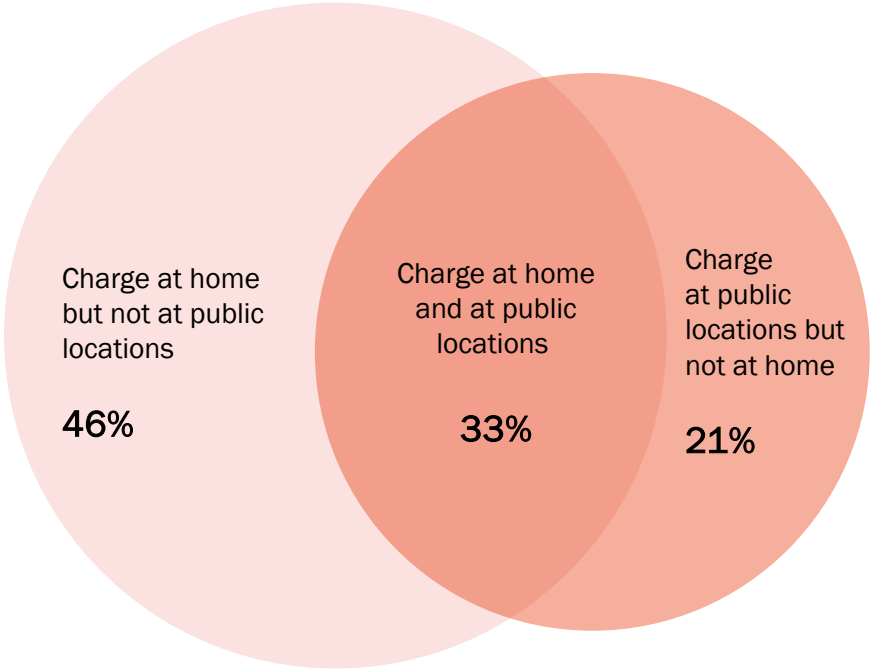


Among EV users who charge in the most common locations – home or public – a third use both and one in five are entirely reliant on the public charging network.

Those reliant on the public charging network tend to be younger, living in Auckland and more likely to rent.

Charge at home (and not on public network)

- **Skew older in age**
  - 18-34 years: 44%
  - 35-54 years: 29%
  - 55+ years: 27%
- **Majority live outside of Auckland**
  - Auckland: 39%
  - Outside of Auckland: 61%
- **Majority are homeowners:**
  - Own home: 80%
  - Rent/ other: 20%
- **Over-index on using their vehicles for local/ suburban trips:**
  - Local/ suburban trips: 93%
  - Inter-city trips: 41%
  - Inter-regional trips on high-/ motorways: 23%
  - Interregional trips on rural roads: 20%
- **EV type:**
  - BEV: 72%
  - PHEV: 33%
- **EV ownership:**
  - Own vehicle: 71%
  - Lease vehicle: 3%
  - Work vehicle: 8%



Charge on the public network (and not at home)

- **Skew younger in age**
  - 18-34 years: 76%
  - 35-54 years: 20%
  - 55+ years: 4%
- **Majority live in Auckland:**
  - Auckland: 58%
  - Outside of Auckland: 42%
- **Under-index on homeownership:**
  - Own home: 51%
  - Rent/ other: 49%
- **Over-index on using their vehicles for interregional trips on high-/ motorways**
  - Local/ suburban trips: 80%
  - Inter-city trips: 59%
  - Inter-regional trips on high-/motorways: 44%
  - Interregional trips on rural roads: 13%
- **EV type:**
  - BEV: 61%
  - PHEV: 48%
- **EV ownership:**
  - Own vehicle: 54%
  - Lease vehicle: 10%
  - Work vehicle: 15%

Note: Venn diagram %s reflect among those who charge at home/ and or at public locations. Other less common private charging locations not included in this calculation.
At which of the following locations do you charge your EV? | At which of the following locations do you intend to charge your EV?
Base: Owners or drivers who charge at home and/ or public locations n=436, Charge at home put not public locations n=231, Charge at home and public locations n=141, Charge at public locations only n=64

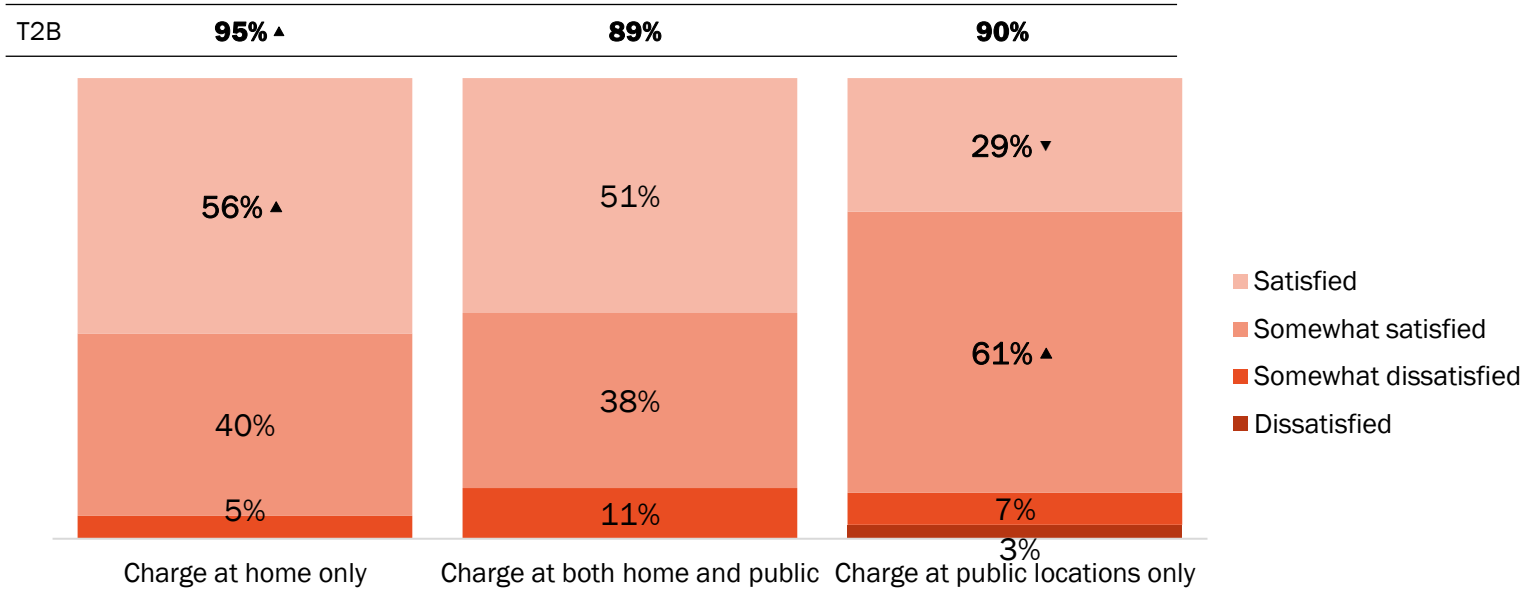
The experience of those who depend solely on public charging suggests that the system could better serve them.

Among those charging exclusively at public locations, 29% are satisfied with their set up, compared to 56% of those who only charge at home and 51% who use a combination of public and home charging.

Those who don't charge at home face the challenges of the public network more often, such as chargers being occupied when needed.

BEV vs PHEV users: more PHEV users report experiencing public charging issues than BEV users (chargers all in use: 45% vs 25%, and chargers being occupied by a vehicle not changing: 34% vs 12%)

Overall satisfaction with charging set-up



T2B frequency of experiencing public charging issues (% most times / all the time)

	Total	Charge at both home and public locations	Charge at public locations only
Chargers are all in use	**33%**	**28%**	**42% ▲**
Charger is occupied by a vehicle not charging	**21%**	**21%**	**21%**
Chargers are out of service	**17%**	**17%**	**17%**

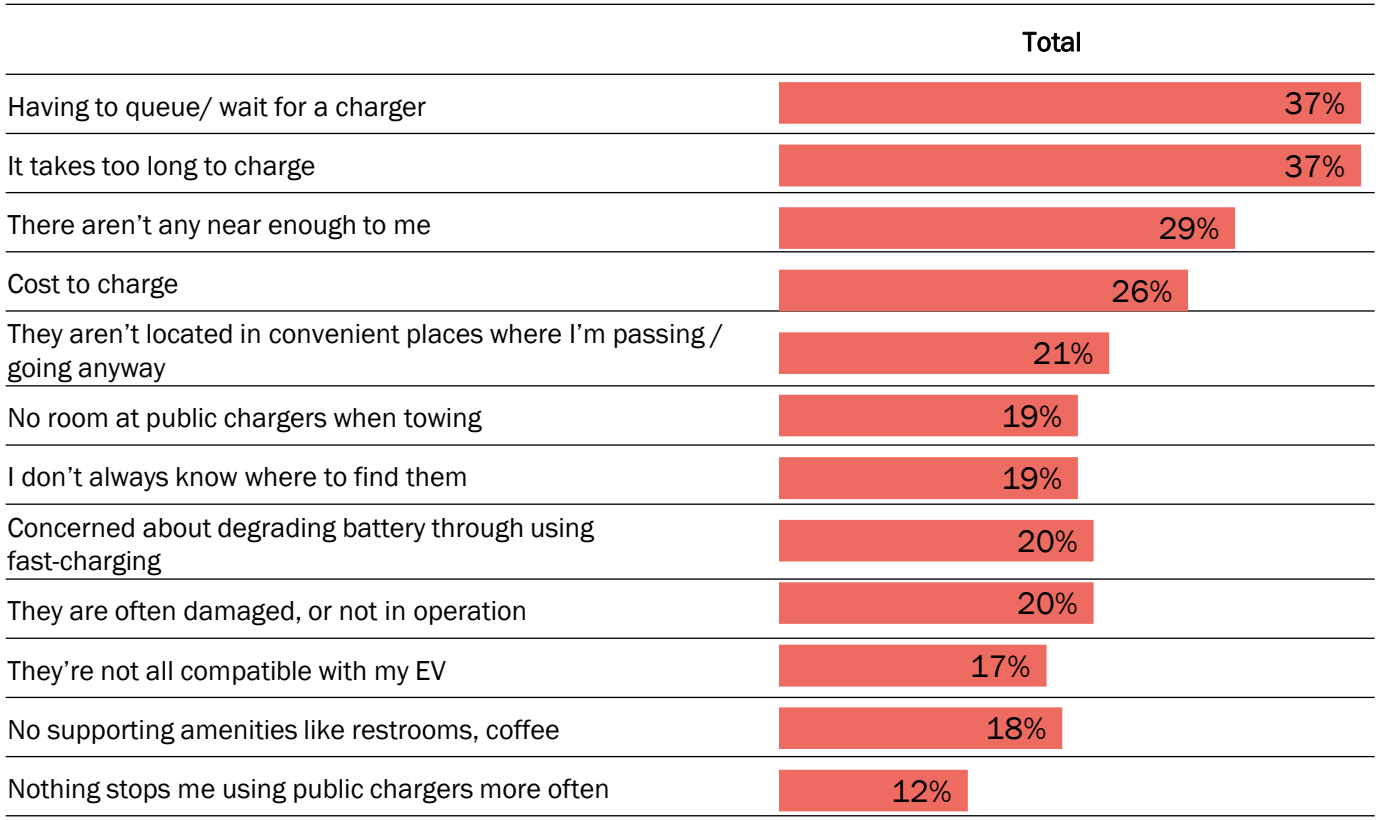
In the past 12 months, how often have you experienced the following when you have gone to a public charging station to charge your EV? | Q: How satisfied are you with your current EV/ PHEV charger solution?
Base: Total Owners or drivers who charge at public locations n=205, Charge at home and public locations n=141, Charge at public locations only n=64, Charge at home only n=231, BEV owner/ driver n=153, PHEV owner/ driver n=65.

▲▼ Significantly higher/ lower than other group/s

Greater use of public charging is hindered by inconvenience due to wait times, limited charging speeds and charger availability.

Along with wait and actual charging times, the supply of chargers near them is a key issue among those who don't charge at home. Cost to charge is a greater barrier among those who also charge at home and BEV users.

Factors preventing owners/drivers from using public chargers (more often)



Use public network:

- Use public network only: Top 3 barriers same as total (no significant differences)
- Use both public & home charging: Significantly more likely to see cost to charge (37% ▲) and inconvenient charging locations (31% ▲) as barriers. Less likely to see 'aren't any near me' as a barrier (18% ▼).

Do not use public network:

- Home charging only: Top barrier is cost to charge (40% ▲). Less likely to see time to charge (26% ▼) and not having enough chargers near (13% ▼) as barriers.

BEV vs PHEV users:

- For BEV users, cost to charge (41% ▲) is a significantly greater barrier
- For PHEV users, time to charge (40% ▲) and not knowing where to find chargers (32% ▲) are significantly greater barriers

Which of the following, if any, stops you from using public EV/PHEV chargers (more often)?
Base: Owners or drivers who charge at home and/ or public locations (total) n=436, Charge at home but not public locations n=231, Charge at home and public locations n=141, Charge at public locations only n=64. Owners or drivers who charge at home and/ or public locations: BEV users n=338, PHEV users n=117.

▲▼ Significantly higher/ lower than total

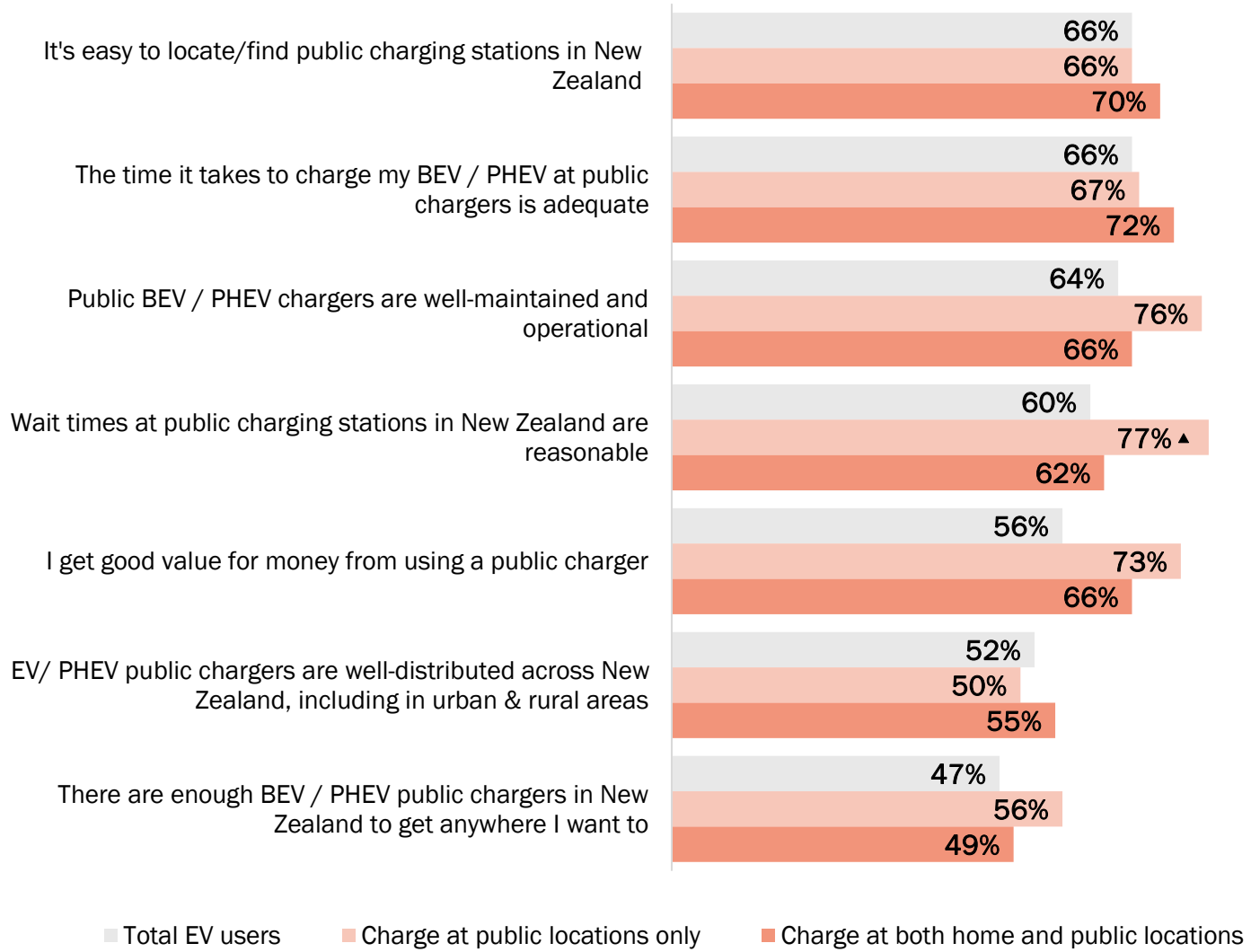
Perceptions of the public charging system are relatively positive overall, however the perceived strengths are different for those who only use public chargers and those who home charge too.

Those who rely more strongly on public chargers agree they offer good value for money and are generally well maintained.

Those who use public charging as a complement to home charging are more likely to think that charging time is adequate and stations are easy to locate. BEV users are also more likely to hold this perception over PHEV users.

However, only half believe public chargers are well distributed across urban and rural areas in New Zealand. This is even less among PHEV users (45%) and those who do not currently use the public network (45%).

Perceptions of the public charging system (net agree/ strongly agree)



To what extent do you agree or disagree with the following statements?
Base: EV Owners/ drivers total n=480, Owners/drivers who do: Public charging only n=64; Charging at home and in public n=141; Charging at home only n=228, Owner/ driver BEV n=362, Owner driver PHEV n=149.

▲▼ Significantly higher/ lower than other group

Costs and speed are key to improve the experience of current public charging network users.

BEV and PHEV users seek the same top 3 improvements: cheaper, faster, and facilities. Faster charging is the improvement those solely reliant on public chargers would most like to see (71%), whereas cheaper charging is most desired by those who also charge at home (61%).

What would significantly improve experience of using public chargers

		Use public network		Do not use public network	
	Total EV users	Drive BEV	Drive PHEV	Drive BEV	Drive PHEV
Cheaper charging	61%	65%	54%	-	-
Faster chargers	58%	56%	64%	45%	47%
Better facilities nearby like cafes and toilets	48%	50%	52%	41%	32%
More chargers available at a single location	48%	47%	48%	37%	40%
Better reliability of chargers	41%	45%	40%	37%	32%
Shelter at the charging station	36%	35%	41%	25%	36%
Credit card payment option	35%	41%	28%	36%	45%
Faster servicing of out of order chargers	34%	35%	33%	30% ▲	19% ▼
Increased consideration to personal safety like cameras and lighting e.g. when charging alone at night	31%	30%	34%	22%	30%
Better technical support/help from charging provider	22%	20%	28%	-	-
Accessibility for towing	18%	15%	26%	10%	15%

Significant differences by region for top 3 improvement factors:

- Cheaper charging: Auckland (62% ▲)
- Faster charging: Canterbury (80% ▲),
- Auckland (49% ▼)
- Better facilities nearby: Lower NI (84% ▲)

▲ ▼ Significantly higher/ lower vs other regions

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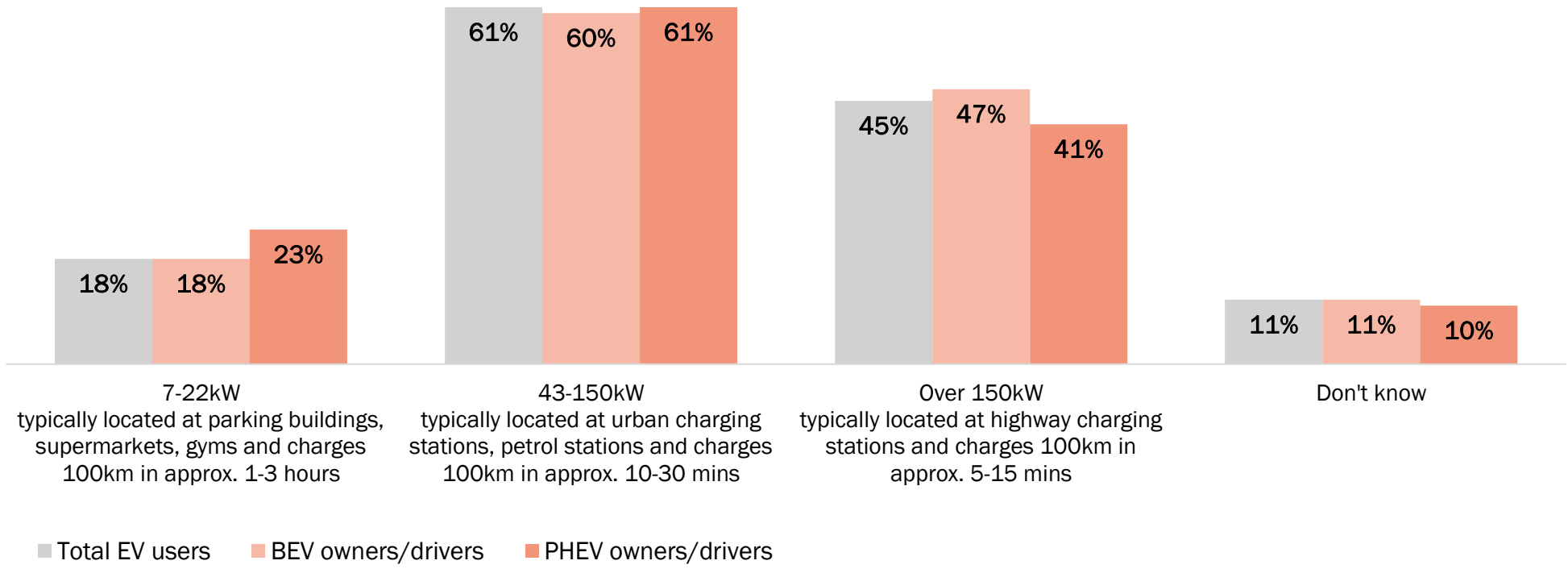
Which of these would significantly improve your experience of using public charging?
Base: Base: EV Owners/ drivers total n=480, BEV owners/ drivers who use public charging network n=153 vs PHEV owners/ drivers who use public charging network n=65; BEV owners/ drivers who do not use public charging network n=209 vs PHEV owners/ drivers who use public chargin g network n=84;

▲▼ Significantly higher/ lower than total

The majority of EV users are interested in seeing more 43-150kW chargers in the public network.

Appetite for faster chargers (over 150kW) is greatest among those who do long, inter-regional trips, however nearly half of all EV users think New Zealand needs more chargers of this speed.

Public charger speeds New Zealanders want more of



Public network users:

- Use public network only: Significantly more likely to think we need more 43-150kW chargers (69% ▲).
- Use both public & home charging: Significantly more likely to think we need more 43-150kW chargers (69% ▲) and over 150kW chargers (50% ▲).

Regional differences:

- Greater appetite for 7-22kW chargers among Aucklanders (23% ▲).
- No other significant differences based on sample sizes.

Trip type:

- Greater appetite for chargers over 150kW among those who take inter-regional trips in their EV (58% ▲).

What public charger speeds do you think we need more of in New Zealand?
Base: EV Owners/ drivers total n=480, BEV owners/ drivers n=362, PHEV owners/ drivers n=149, Owners/drivers who charge in public n=205; Public charging only n=64; Charging at home and in public n=141, EV users who live in Auckland n= 188, EV users who take Inter-regional trips n=193.

▲▼ Significantly higher/ lower than total

National highways are where most EV users want to see more public chargers located.

Chargers located at accomodation (hotels, motels, holiday parks) or at malls/ supermarket parking lots are also of interest to 3 in 5.

Location of public chargers sought

Regional differences:

- South Islanders want to see more chargers in rural locations (61% ▲).
- Aucklanders want to see more chargers in malls/supermarket parking lots (69% ▲).

BEV vs PHEV users:

- 74% of BEV users would like to more public chargers on national highways than PHEV users (60%).

Where would you like to see more public EV chargers located?
Base: EV Owners/ drivers total n=480, BEV owners/ drivers n=362, PHEV owners/ drivers n=149, South Island EV users n=126, Auckland EV users n=188

▲▼ Significantly higher/ lower than total

Summary & implications

There's a subgroup of New Zealanders who are reliant on the public charging system – whose needs look different to those who also charge at home.

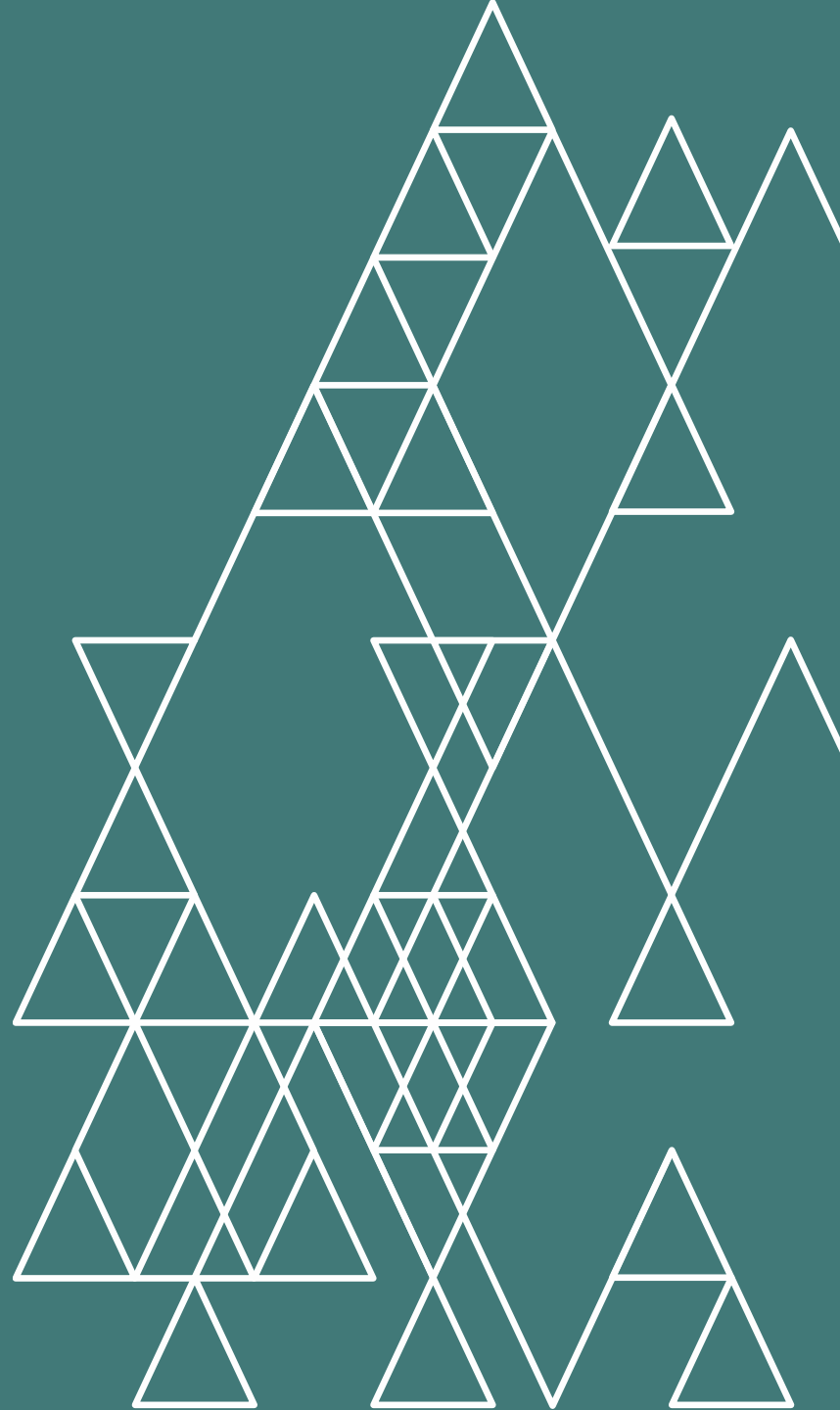
While most EV drivers use a mix of public and private charging, around 1 in 5 New Zealanders charge only at public locations. This creates a high level of dependency on the public charging network. These individuals are more likely to be younger and renters, which may limit their ability to install a home charger.

Across users of the public charging network, those solely reliant on public charging report the lowest satisfaction with their current experience. The top deterrents to using public charging more often are having to wait (either for a charger or for their vehicle to charge) and not having public chargers near to them. Having to wait for a charger is also an issue that affects many who use a mix of home and public charging - improving this aspect could make public charging more attractive overall, even to those who currently only charge at home.

Whilst EV drivers experience some challenges with the charging network, those who depend on it are more likely to hold positive perceptions the chargers are being well-maintained and operational and agree that wait times are mostly reasonable (despite 2 in 4 often experiencing chargers all being in use).

Areas that would enhance the public charging experience across EV user groups relate to speed of charging, cheaper charging, and better facilities nearby.

Bringing it all together



Summary

Empowering New Zealanders to adopt smart charging solutions

There's an opportunity to inform EV considerers' decisions and future charging behaviours.

Key decisions, including vehicle type or make and model, are still forming for EV considerers. This stage of uncertainty in combination with their high consideration for dedicated home chargers makes EV considerers an attractive target audience to drive the adoption of dedicated home chargers.

Dedicated home chargers continue to compete with 3-pin plug chargers.

Although most current EV users and considerers are homeowners and are well set-up for dedicated home charging, 3-pin chargers remain commonly used and widely considered, particularly by those buying second-hand vehicles and PHEVs.

There is room to grow the adoption of dedicated home chargers, but inertia and limited knowledge are key barriers to overcome.

Charging behaviours are largely passive and routine-driven and users' satisfaction with their current set-up is high, leaving little motivation to change. On top of this, knowledge of dedicated home chargers, including smart chargers, is limited and their benefits are commonly underestimated. Thus, driving awareness of the benefits of dedicated home chargers and clearly differentiating them from 3-pin plug solutions will be key to encourage adoption.

On top of this, price barriers to dedicated home chargers are overestimated.

While willingness to pay generally aligns with market prices, cost remains a two-fold barrier, covering both the charger itself and installation. This again highlights the importance of building awareness and addressing misconceptions of dedicated home chargers to encourage engagement among current and future EV users.

Summary

Growing the public charging network

EV considerers anticipate using public chargers more than current EV owners use them.

Currently, 1 in 5 EV users rely on the public charging network, while 1 in 3 use it alongside home charging. Among EV considerers, over 3 in 4 expect to use public charging options.

It's possible people may expect to use public chargers more than they end up using them because they are used to the petrol station fuelling experience.

Different needs means different design considerations

Different user groups have varying needs, necessitating distinct design considerations:

- Exclusively public chargers value proximity and charging speed, which would encourage greater uptake.
- Supplementary public users (those who also charge at home) are primarily concerned with cost, and prefer sites with multiple chargers.

Addressing these differences is especially critical in metropolitan centres like Auckland, where there is a higher concentration of renters and greater reliance on public charging infrastructure.

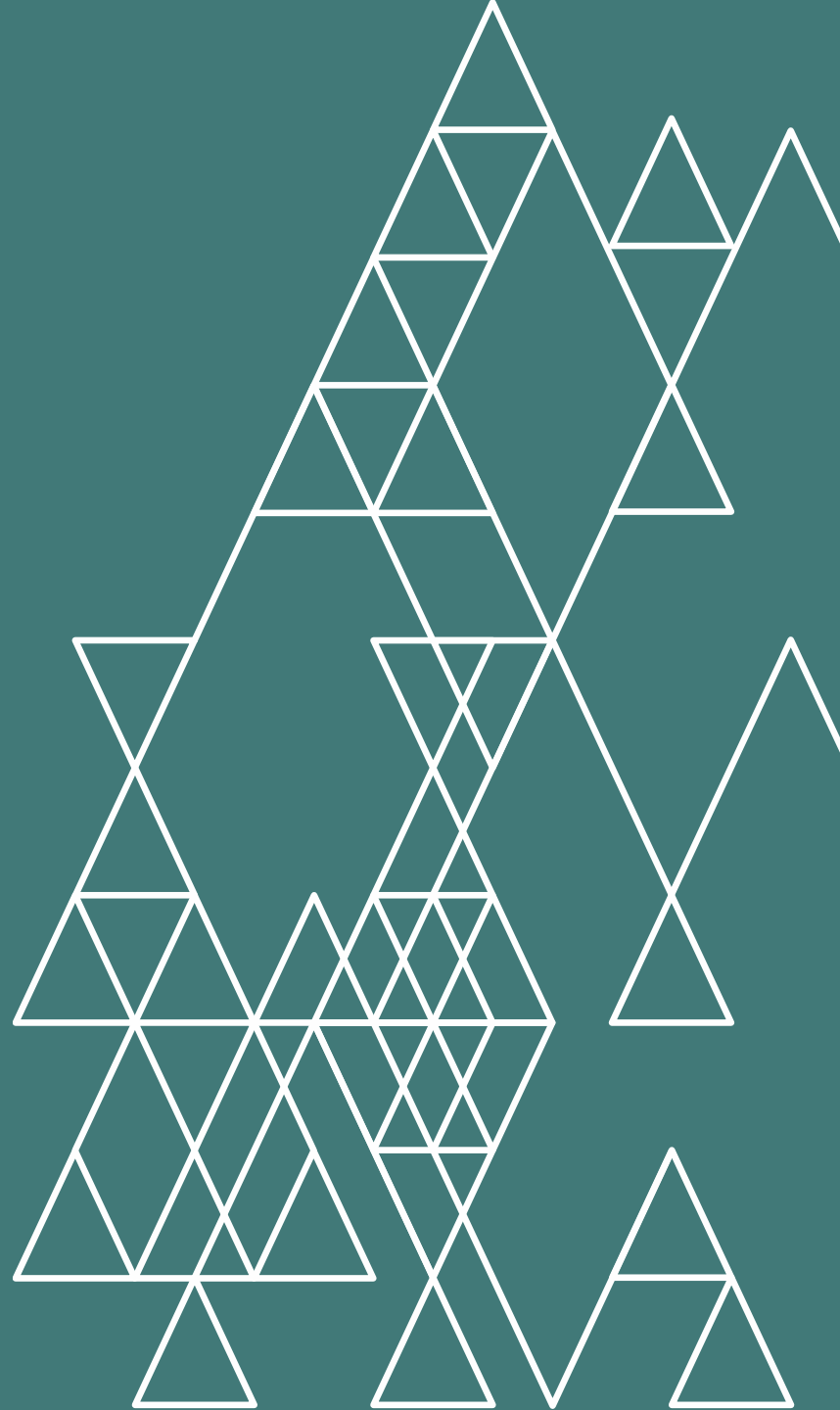
System-wide improvements to support all users

Some improvements would benefit all users of the public network:

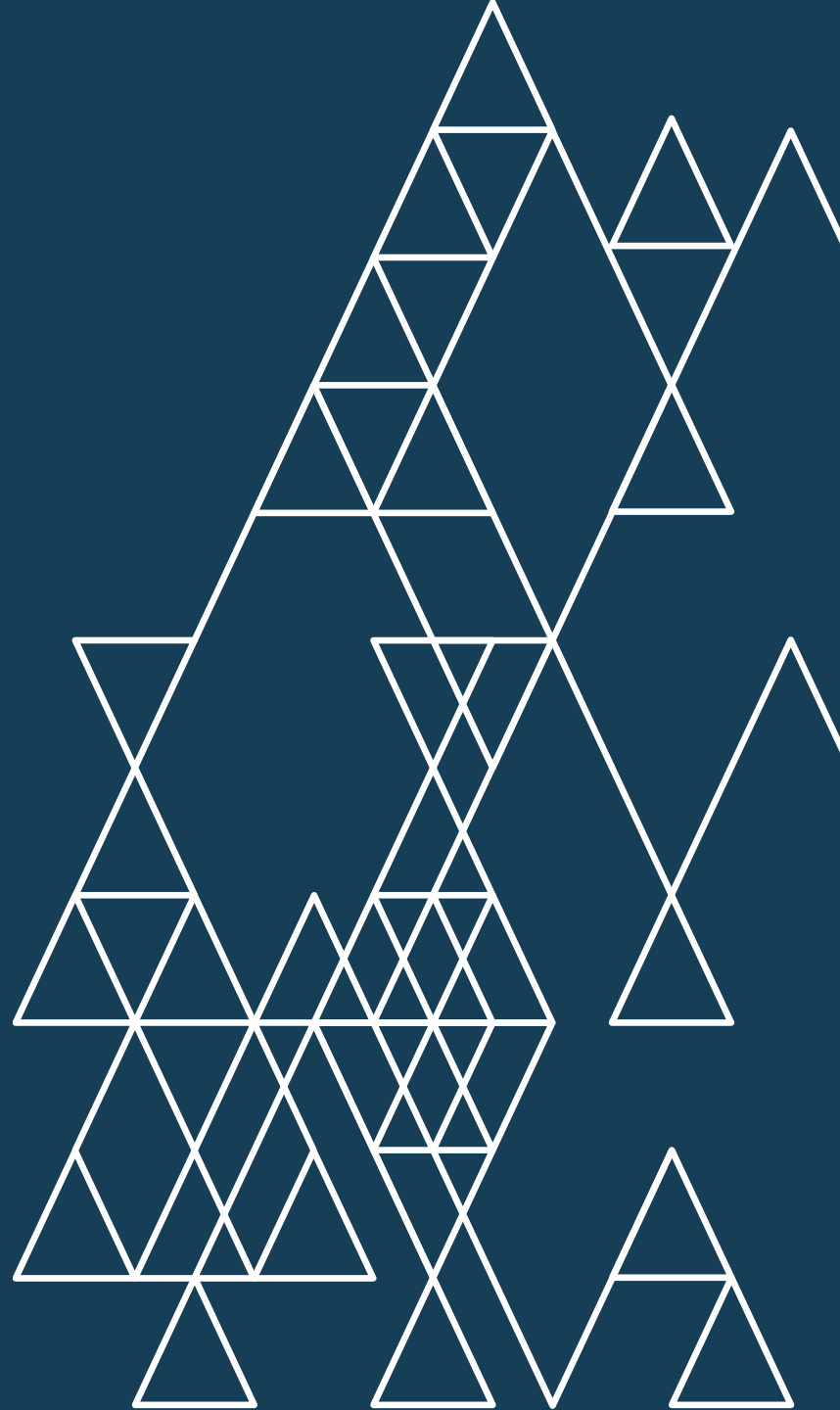
- Wait times and queues for available chargers is a deterrent across user groups.
- Improving charger distribution and network footprint is essential, as the current perception is that there are not enough well-distributed chargers across New Zealand.

Enhancing these aspects would make public charging more reliable, appealing, and better able to support a growing EV user base.

Appendix



Profiling EV users: those with & without dedicated home chargers...



Audience summary

Dedicated home charger users represent around a quarter of the total market, skewing under 55 years. They are comparatively more likely to be based in the lower North Island or Canterbury. The great majority are homeowners.

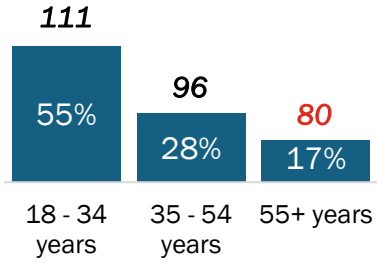
Dedicated home charger users typically drive new vehicles and, while local and suburban trips are most common, they are more likely than the total market to take inter-city trips as well as and interregional drives on rural roads.

Nearly half also use public chargers alongside home charging, highlighting continued engagement with the public charging network.

26%
of the total market*
47%
of EV drivers

Profile: Dedicated home charger users

AGE



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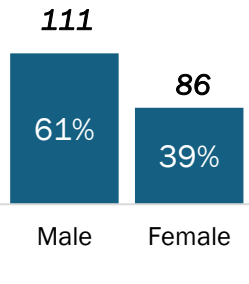
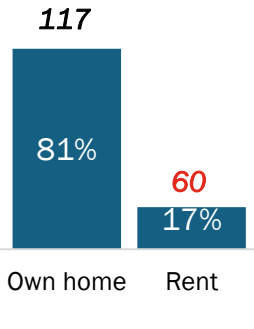


LIVING SITUATION



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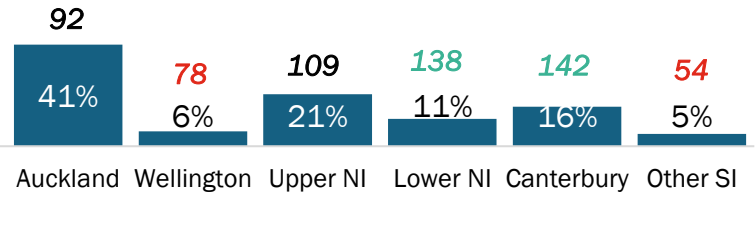
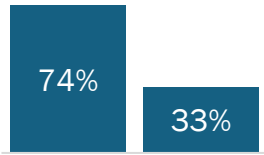
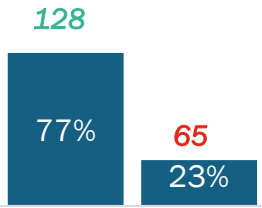


TYPE OF EV

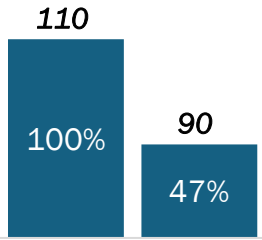


NEWNESS OF EV



WORK VEHICLE

CHARGING LOCATIONS



KMS DRIVEN IN EV IN A TYPICAL WEEK

	%-	Index
0-80 km	13%	68
81-200km	45%	105
Over 200km	41%	117
Not sure	1%	33

WHEN DEDICATED CHARGER PURCHASED

Same time as bought the vehicle	53%
Came free with the vehicle	20%
Before vehicle bought	13%
3-6 months after vehicle bought	7%
Over 6 months after vehicle bought	4%
Not applicable/ already installed	3%

TRIPS EV IS USED FOR

	%	Index
Local/ suburban trips- around the city/ town I live in	90%	101
Inter-city trips- driving between different cities	66%	128
Inter-regional trips on high-/motorways- longer trips between NZ regions	39%	113
Inter-regional trips on rural roads- longer trips between NZ regions	28%	129

Base: Dedicated home charger users n=156
Index ≥ 120 (higher vs total market) vs Index ≤ 80 (lower vs total market)
*Total survey market (EV Owners/ drivers and considerers)

Audience summary

BEV/ PHEV users who use chargers other than a dedicated home charger (3-pin/ caravan) are more likely to be aged 55+, and live in Wellington, Canterbury, or other South Island regions, and the majority own their homes.

Most drive second-hand vehicles. BEV/ PHEV users within this audience are comparatively less likely to take intercity or inter-regional motorway trips.

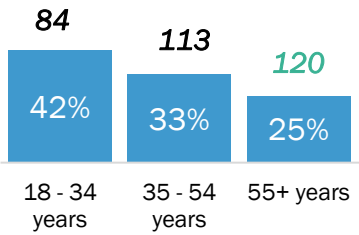
Further, they are the least likely group to charge at public locations.

No significant differences between BEV/PHEV user profiles.

29%
of the total market

Profile: EV users who charge at home but not with a dedicated home charger

AGE



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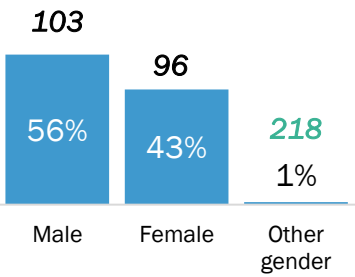
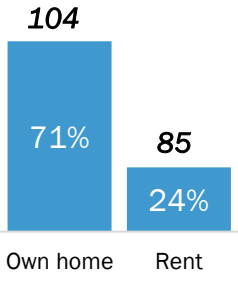
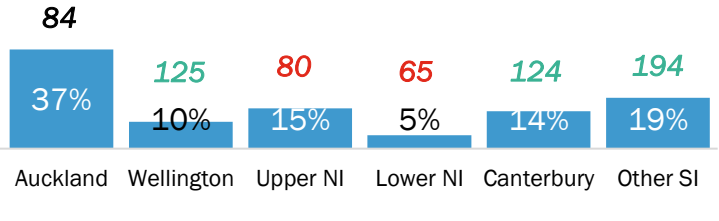


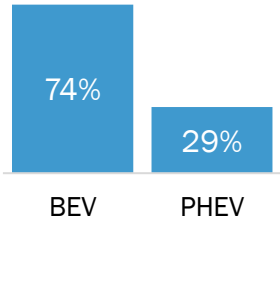
LIVING SITUATION



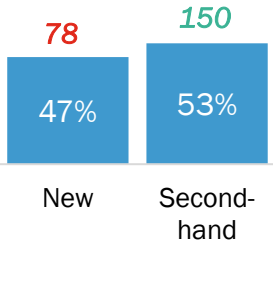
REGION



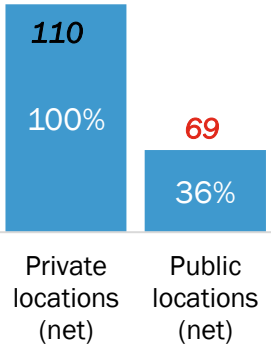
TYPE OF EV



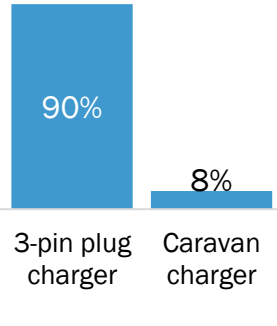
NEWNESS OF EV



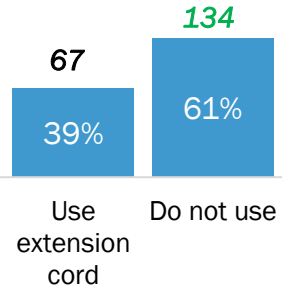
CHARGING LOCATIONS



HOME CHARGER USED



EXTENSION CORD USE



KMS DRIVEN IN EV IN A TYPICAL WEEK

	%-	Index
0-80km	27%	140
81-200km	34%	79
Over 200km	34%	99
Not sure	5%	152

TRIPS EV IS USED FOR

	%	Index
Local/ suburban trips- around the city/ town I live in	92%	104
Inter-city trips- driving between different cities	39%	76
Inter-regional trips on high-/motorways- longer trips between NZ regions	27%	79
Inter-regional trips on rural roads- longer trips between NZ regions	22%	101

Base: Owners or drivers who use a 3-pin plug users excluding those who have a dedicated charger at home, and those within caravan chargers n=216
Index ≥ 120 (higher vs total market) vs Index ≤ 80 (lower vs total market)

Profile: EV drivers or owners who do not charge at home

Audience summary

BEV/ PHEV users who don't charge at home tend to be younger, over-indexing on people under 35 years, more likely to be female, and are more concentrated in Auckland.

While just over half own their home, this group over-indexes on renters.

They are less likely to take interregional trips via rural roads and to charge in private locations like friends' homes or workplaces.

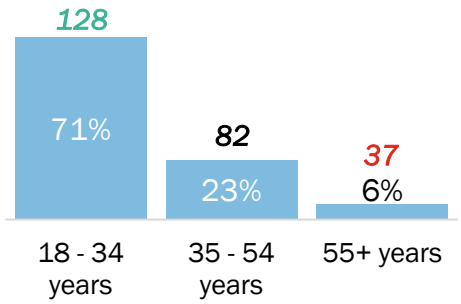
No significant differences between BEV/PHEV owners/drivers profiles

25%
of the total market

Within this audience:

- 49% own a BEV/ PHEV
- 34% drive a BEV/ PHEV owned by their workplace
- 22% drive a BEV/ PHEV that belongs to a family member
- 7% lease a BEV/PHEV

AGE



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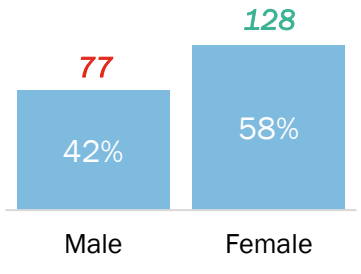
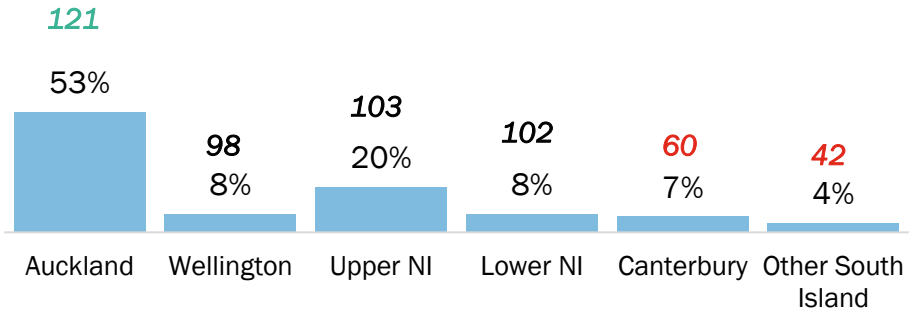
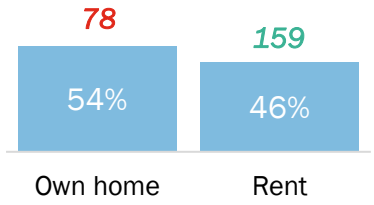


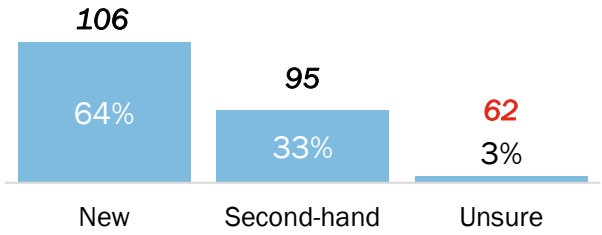
REGION



LIVING SITUATION



NEWNESS OF BEV/PHEV



CHARGING LOCATIONS

	%-	Index
Public charger	58%	123
Charge at work	51%	176
Friends/ family	26%	217

KMS DRIVEN IN EV IN A TYPICAL WEEK

	%-	Index
0-80km	20%	104
81-200km	40%	93
Over 200km	37%	107
Not sure	3%	84

TRIPS BEV/ PHEV IS USED FOR

	%	Index
Local/ suburban trips- around the city/ town I live in	79%	88
Inter-city trips- driving between different cities	45%	88
Inter-regional trips on high-/motorways- longer trips between NZ regions	31%	90
Inter-regional trips on rural roads- longer trips between NZ regions	10%	47

Base: Owners or drivers who do not charge at home n=118
Index ≥ 120 (higher vs total market) vs Index ≤ 80 (lower vs total market)

Profile: BEV/PHEV users owned by the workplace

Audience summary

BEV/ PHEV users whose vehicle is owned by their workplace over index on being between the ages of 35-54 years. They are more concentrated in Auckland, although they over index in Wellington too. They also over index on having a new EV.

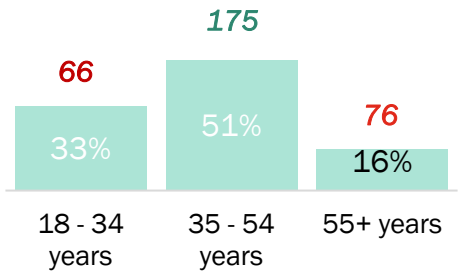
Almost three-quarters of this group own their home rather than rent.

They are more likely to take local, suburban trips or inter-city trips.

11%
of the total market

Within this audience:
- 57% drive a BEV
- 49% drive a PHEV

AGE



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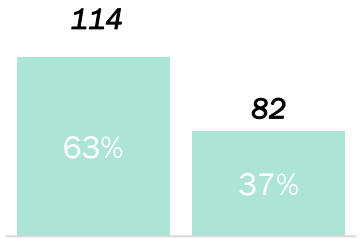
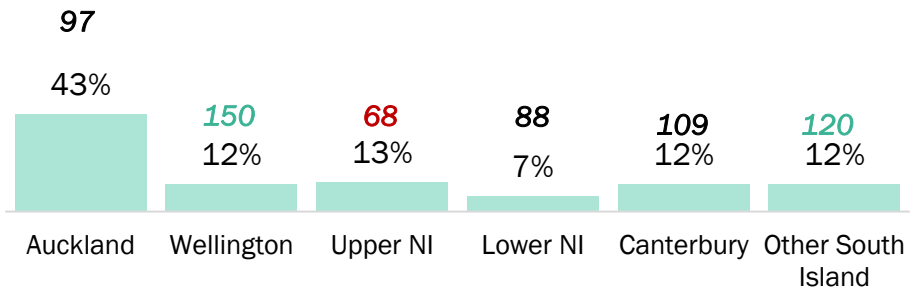
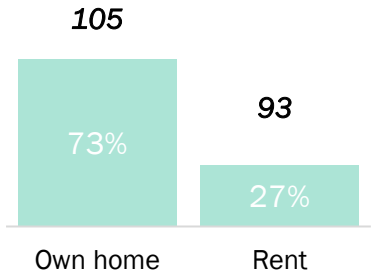


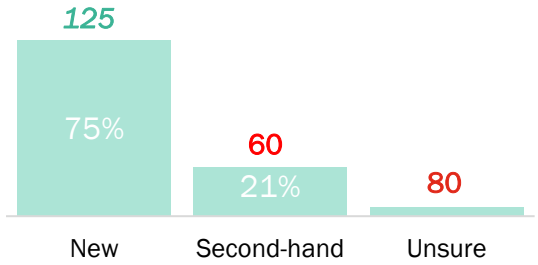
REGION



LIVING SITUATION



NEWNESS OF BEV / PHEV



CHARGING LOCATIONS

	%-	Index
Charge at home	36%	53
Public charger	34%	72
Charge at work	62%	214
Friends/ family	15%	125

KMS DRIVE EV IN A TYPICAL WEEK

	%-	Index
0-80km	25%	131
81-200km	49%	113
Over 200km	24%	82
Not sure	3%	100

TRIPS BEV/ PHEV IS USED FOR

	%	Index
Local/ suburban trips- around the city/ town I live in	81%	188
Inter-city trips- driving between different cities	57%	107
Inter-regional trips on high-/motorways- longer trips between NZ regions	28%	40
Inter-regional trips on rural roads- longer trips between NZ regions	15%	10

Base: Drivers who use an EV owned by their workplace base n=67
Index ≥ 120 (higher vs total market) vs Index ≤ 80 (lower vs total market)

Thank you