

21 July 2025

Energy Policy
Ministry of Business, Innovation and Employment
PO Box 1473
Wellington
6140

Via: energyuse@mbie.govt.nz

Tēnā koe,

MDC Submission on Proposals to Support the Uptake of Smart Electric Vehicle (EV) Charging

The Manawātū District Council (MDC) thanks the Ministry of Business, Innovation and Employment for the opportunity to provide feedback on these proposals. This submission encapsulates the interests of our district's residents and businesses, with particular focus on rural communities, low-income households, and areas with limited EV charging infrastructure. We largely support measures that improve energy affordability, network resilience, and equitable access to EV charging.

MDC, however, signals a misrepresentation of EV uptake in the consultation document. The consultation document erroneously states that EV uptake is on the rise. This premise forming the problem statement is factually incorrect. While EV numbers had been growing in recent years (attributable in part to the Clean Car Discount rebate scheme), the policy landscape changed dramatically at the start of 2024. The government removed EV purchase subsidies (the Clean Car Discount ended on 1 January 2024) and simultaneously began imposing road user charges on EVs from April 2024, among other cost-parity measures.

These changes had an immediate chilling effect on electric vehicle (EV) uptake and sales. In the first quarter of 2024, new EV registrations in New Zealand plunged by roughly 75% compared to late 2023 levels. By the year to November 2024, registrations of new fully electric cars were down 55% compared to the prior year (with plug-in hybrids down 51%), whereas petrol car sales dipped only 5%.

In the Manawātū-Whanganui region, this trend was also evident. For instance, Palmerston North City recorded only 229 EV registrations in the year to March 2025, down from 329 the previous year, reflecting a decline of approximately 30% — in line with the national downturn. Despite some softening of sticker prices, the abrupt removal of financial incentives has made EVs less affordable for consumers, contributing to this slump. As of June 2025, the share of EVs in the market has remained largely unchanged, with approximately 84,000 fully electric light vehicles and around 38,700 plug-in hybrids on the road.

In addition to the foregoing, MDC would like to address several other key issues in the consultation document, including:

Limited Charging Infrastructure in Manawātū District

MDC is primarily concerned about the lack of public electric vehicle charging infrastructure in the Manawatū district. The proposal rightly alludes to ‘most EV charging happens at home’ in New Zealand and in districts like the Manawatū, and this is exacerbated because public charging options are sparse, thereby posing a serious barrier for both existing EV owners and potential adopters. In the Manawatū, outside of a few sites on state highways or in Palmerston North, public chargers are virtually non-existent- in fact, within our own district of 2,624 km² (stretching nearly 100 km in length) there is only a single public charging point, located at 42 Aorangi Street, Feilding, with none available in any of our villages.. Households in the district cannot rely on finding a convenient charging station in town or on routine trips.

MDC generally supports the government’s Electric Vehicle Charging Strategy target of 10,000 public chargers by 2030 (up from about 1,378 currently) to reach a ratio of 1 charger per 40 EVs. This planned expansion is encouraging, but it will take time to materialize and may not evenly cover all districts. Consequently, in the near term, Manawatū residents who buy EVs have little choice but to charge at home, since local public infrastructure has not kept pace. This reality raises other issues like equitable access and local uptake impacts that must shape our response to the smart charging proposal.

Equitable Access

MDC highlights that the thinking behind and the wording of the proposals is leaning more towards private charging. Therefore if public charging remains scarce, only those who own homes with off street parking (and can install a private charger) will fully benefit from EV ownership. Residents in apartments or rental housing – or those who rely on street parking- will be at a disadvantage, unable to easily charge smartly or at all. The consultation document explicitly asks about charging availability for homeowners vs renters, and in our district this gap is a serious equity concern. A policy that focuses on home charging (making it smart) should be paired with efforts to expand accessible charging options for those who cannot install charger, or else we risk marginalising certain groups. Some countries have tackled this by funding chargers in apartment complexes or kerbside chargers in residential areas.

Local Uptake impacts

MDC acknowledges that the government is relying on increased EV uptake as a key mechanism for meeting national climate change commitments. However, the limited availability of public charging infrastructure in our district remains a significant barrier to adoption—one that cannot be addressed by smart charging mandates alone. Range anxiety continues to influence consumer behaviour, particularly in rural regions where charging access is sparse.

Without substantial improvements to public charging coverage, the effectiveness of smart home charging policy will be constrained, and there is a risk that regional disparities will deepen. Urban centres such as Wellington or Auckland may benefit from broader public and workplace charging networks, while rural communities remain reliant on home-based charging and must absorb the full cost of equipment installation.

Affordability and Equity Considerations for Households

From an affordability standpoint, MDC notes that the upfront cost of installing a private EV charger- let alone a smart charger is a major concern. The consultation document

acknowledges that a fixed charging unit entails a significant purchase and install cost for consumers, and that “the upfront cost will continue to be the largest barrier to uptake of fixed charging units” (i.e. wall-mounted home chargers). For many households in Manawatū, especially those on modest incomes, this cost is prohibitive.

Requiring all new chargers sold to have smart functionality could further increase the cost of these units. Smart chargers (with communication chips, software, metering capabilities, etc.) are typically more expensive than basic chargers. For example, in the UK basic 7 kW home chargers might cost around £500, whereas smart models with added features can cost £800–£1200 installed.

While NZ prices vary, the mandate would likely nudge prices upward or at least keep them higher until economies of scale kick in. The policy proposal does not suggest any financial assistance or subsidy to offset this cost for consumers; in fact, it explicitly ruled out subsidies “due to the current fiscally constrained environment” and concerns that subsidies would mainly benefit wealthier early adopters. This is troubling, because it leaves the entire burden of investment on individual households, at a time when other costs of EV ownership in NZ have been rising.

The proposal argues that a subsidy for chargers now would “solely benefit current EV owners” (who skew affluent). However, this viewpoint misses the fact that if we want EVs to move beyond the wealthy and into the mainstream, we must lower barriers to entry for average families. Removing purchase rebates (as has happened) and then adding additional required costs (like a smart charger) could delay the point at which middle- or low-income families find EVs affordable. In the Manawatū, household incomes are generally lower than the big cities, and many households may not be able to spare up to \$2,000 (for a charger + installation) on top of an EV purchase without assistance.

MDC urges the government to revisit how other jurisdictions have balanced these issues. Some examples are South Australia, the United Kingdom and Germany who have taken different approaches using either rebates, grants or allowing flexibility in the use of smart chargers by refraining from issuing any mandates. Below are responses to the questions contained in the consultation document.

Consultation Questions

1. *Research indicates that most EV charging occurs at home. Do you have any comments on the split between private (home) and public charging and how this may change into the future?*

Council agrees that today the vast majority of EV charging is done privately – typically at home or workplace. Currently almost 80% of EV charging is at home. As EV uptake broadens to renters and high-mileage users, public and workplace charging must grow. Home charging remains most convenient and cheapest, but more public infrastructure will be needed to serve those without home chargers and long-distance travel.

In the Manawatū District, public charging infrastructure is currently limited, so most local EV owners indeed rely on home charging. However, we are conscious that public charger scarcity is a barrier in rural areas – e.g. smaller towns in our district have few or no public chargers, which can dissuade residents without off-street parking from considering an EV. Over time, as more public chargers are deployed through government and private investment, those

without home charging will gain options, and the share of charging done publicly will rise somewhat. We also note the role of workplace charging (semi-private). Many businesses are installing chargers for staff and fleet vehicles. Workplace charging can effectively supplement home charging, especially for those who live in multi-unit dwellings. It is typically done during daytime and could align with solar generation peaks – a future trend that might emerge is more daytime charging at work while solar is abundant, which is a positive for the grid if managed smartly.

2. Do you have comments on the current state of private EV charging in New Zealand?

Private EV charging in New Zealand is still basic and largely unregulated, with around two-thirds of EV owners using standard 3-pin wall outlets instead of dedicated chargers. Fewer than 1 in 5 have invested in smart, network-connected units, with cost and low awareness acting as barriers — particularly for rural and lower-income households. Renters and those in multi-unit dwellings face added challenges, often lacking the ability to install private chargers and relying instead on slower or public options. While EECA's approved list of smart chargers is a positive development, the market remains fragmented and under-optimized, highlighting the need for clearer standards and incentives.

3. Do you agree that smart charging can support network infrastructure needs, and in turn realise benefits for end consumers?

Yes MDC agrees that smart EV charging is a key tool to support electricity network infrastructure and deliver significant benefits to consumers.

4. What are your views on whether the supply of chargers in New Zealand would move to predominantly smart charging without regulation?

MDC considers that without clear intervention, the transition to predominantly smart EV chargers in New Zealand will be too slow and fragmented to manage the growing strain on the electricity network. Although EV uptake and international trends might eventually push suppliers toward smarter models, the continued prevalence of low-cost, non-smart chargers—driven by limited awareness and upfront cost sensitivity—suggests market forces alone will not deliver timely change.

In our district, households are likely to default to the cheapest available options or stick with basic portable cables, missing the opportunity to optimise charging behaviour. Overseas experience, such as the UK's decision to regulate, reinforces the risk of delaying action and locking in inefficient infrastructure just as demand is scaling. We believe government standards are needed to make smart functionality the default, ensuring that the benefits of managed charging are embedded early rather than retrofitted later at greater cost.

5. Do you have any comments on the availability of private EV charging for varying demographics, for example, homeowners versus renters?

MDC recognises that access to private EV charging is markedly unequal across demographic groups, with homeowners—particularly those in single-family dwellings—having significantly greater access than renters and residents of multi-unit housing. In both our district and nationally, homeowners are more likely to own EVs and charge them at home, supported by off-street parking and the ability to install or use existing electrical infrastructure. Renters, by contrast, often lack dedicated parking, face restrictions on electrical modifications, and rely on more costly or inconvenient public and workplace charging—factors that contribute to lower EV uptake and entrench affordability challenges.

These disparities are especially pronounced in rural areas, where renters may live in farm cottages or small-town properties with physical space but limited electrical capacity or landlord support. MDC considers it essential that smart charging policy is complemented by targeted measures—such as “right-to-charge” regulations, landlord incentives, shared charging infrastructure, and subsidised solutions for rental households—to ensure equitable access. Without such interventions, the risk is a two-tier transition in which higher-income homeowners benefit from smart, cost-efficient charging, while lower-income and renting households face persistent structural barriers to EV ownership.

6. Is there any other relevant context, such as industry developments or international practice that we should consider?

MDC recommends that New Zealand closely align its smart EV charging policy with international best practice to ensure regulatory efficiency, market compatibility, and future-readiness. Jurisdictions such as the United Kingdom and the European Union have already mandated smart functionality, interoperability, off-peak charging defaults, and cybersecurity standards—providing proven models from which to draw. Australia is also progressing in this direction, with federal and state-level efforts focusing on demand response capabilities and data security.

Aligning with these frameworks will not only reduce compliance costs and streamline product supply chains but also prevent New Zealand from becoming a repository for substandard or outdated chargers. As global manufacturers increasingly standardise around smart, connected systems—and as technologies like V2G and V2H mature—it is critical that our regulations are designed to accommodate future developments. MDC therefore urges MBIE to adopt established international standards and remain responsive to evolving global trends in both technology and cybersecurity.

7. What cybersecurity risks do you see with greater uptake of smart EV chargers?

Smart EV chargers are essentially Internet of Things devices on the grid, which makes them potential targets for cyberattacks. If compromised, an attacker could steal sensitive user data, disrupt charging services, or even manipulate a large number of chargers simultaneously to destabilize the power grid. Researchers have demonstrated, for example, that a coordinated hack turning thousands of chargers on or off at once could cause sudden spikes or drops in electricity demand, straining local networks and potentially leading to outage. These threats are not just theoretical – in 2024 a hacker leaked over 100,000 records from multiple EV charging providers,¹ and security flaws have been found that allowed remote control of poorly secured chargers.

There are also privacy concerns: charging data (timing, duration, location, user identity) could reveal personal routines or whether someone is home if intercepted. Additionally, a compromised charger might serve as a gateway into a home Wi-Fi network or even into utility systems if chargers are integrated with grid control platforms, further expanding the attack surface. Recognizing these risks, some jurisdictions now require that all communications from smart chargers be encrypted and that chargers meet strict cybersecurity standards (like complying with ETSI EN 303 645) to guard against tampering and unauthorized access. In

¹ Virta “How to Address the Increasing Threat of Cyberattacks on EV Charging Stations”
<https://www.virta.global/blog/en/blog/how-to-address-the-increasing-threat-of-cyberattacks-on-ev-charging-stations>

summary, the key cybersecurity risks for smart EV charging infrastructure include unauthorized access and control, data/privacy breaches, and large-scale coordinated attacks, which could lead to anything from individual fraud or inconvenience up to serious grid reliability issues if left unaddressed.

8. Do you see a role for cybersecurity to be managed alongside any requirements relating to smart functionality, or should this be managed by another mechanism?

It is imperative that cybersecurity is built into smart-charger functional specifications and not treated separately. MDC notes that leaving security considerations until later will occasion in systemic vulnerability. Regulatory integration will ensure baseline protection from the beginning.

10. Are there any additional objectives you think we should also adopt to inform decisions on this proposal?

MDC recommends adding equity and accessibility as a distinct policy objective within the smart EV charging framework, to ensure that underserved communities—including renters, rural residents, and lower-income households—benefit from the transition. While current objectives largely focus on peak demand management, cost reduction, and user experience, they do not explicitly account for systemic access barriers that many populations face.

This recommendation aligns with New Zealand’s National EV Charging Strategy, which identifies improving access for renters, low-income households, and geographically isolated areas as a key priority. Rural areas like Manawatū often contend with sparse public charging networks, longer travel distances, and grid capacity constraints—underscoring the need for tailored approaches that go beyond urban-centric solutions. Including an equity objective would guide complementary measures such as right-to-charge regulations, EV-ready building codes, and targeted infrastructure in high-need areas, drawing on international best practice.

MDC also supports referencing international standards and climate outcomes—such as enabling smart charging to align with renewable generation—as guiding principles but considers equitable access the most critical addition to strengthen social outcomes and inclusivity in New Zealand’s EV charging transition.

11. Which option do you prefer and why? Are there other options you think should be considered? (see page 10-14)

MDC generally supports Option 4A conditional upon the inclusion of other supporting measures such as incentives and assistance programs. We note that direct subsidies for chargers were considered and not preferred on equity grounds, however, there could be other ways- for example, a rebate for installing a smart charger in a rental property or funding assistance for community charging hubs in rural villages. These would not replace Option 4A but supplement it to ensure no one is left behind.

We also encourage exploring building code changes requiring new buildings (or major renovations) to include EV charger readiness (conduit, space for a smart charger, etc.). While this is outside the scope of MBIE’s equipment regulation as such, it is a parallel action that aligns with making smart charging ubiquitous.

12. Do you agree with our assessment of the options against the objectives? If you agree or disagree, please explain why.

Yes, MDC broadly agrees with MBIE’s assessment of how each option performs against the stated objectives. We, however, want to emphasize a couple of points that might deserve more weight in the assessment. One is the equity aspect we mentioned in Q10. The formal objectives did not explicitly include equity, so perhaps it was not in the assessment criteria. But in our view, any chosen option should also be judged on whether it allows all segments of society to participate. Option 4A, for example, scores highly on technical and economic objectives, but we note that by itself, it does not resolve disparities in charging access (e.g., it does not automatically help renters get chargers).

13. What are your views on the functionality outcomes that could be adopted?

a. Are there any outcomes that you think should be required?

b. Do you think any functionality outcomes above should not be included, and if not why?

c. Are there any different types of requirements we need to consider for V2X chargers?

MDC supports a smart charger functionality framework that prioritises key outcomes such as flexibility, interoperability, user control, and safety, aligning with international best practice. At minimum, chargers should support two-way communication, remote scheduling or load control, user interface access (via app or device), and interoperability with multiple platforms and energy retailers, consistent with global best EV Smart Charge Point Regulations and open standards like OCPP and ISO 15118.

Basic charging should function offline to accommodate rural connectivity constraints, and chargers should include energy metering and secure communication protocols, including encryption and safe firmware. MDC does not support mandating overly specific technologies (e.g., in-built displays or fixed communication methods) but recommends outcome-based requirements that allow for innovation and cost control. MDC suggests the laying of regulatory groundwork—similar to the EU’s (Alternative Fuels Infrastructure Regulation) AFIR approach—for V2X scalability in the future, particularly by ensuring chargers use updatable software and standards (e.g., ISO 15118-20) that do not preclude future integration.

14. Do you think there is a case for voluntary or mandatory labelling of EV chargers, and why or why not?

a. If you support labelling, what content do you think should be incorporated in the label?

Side by side with supporting measures, MDC supports mandatory labelling of EV chargers, particularly to indicate smart functionality, energy efficiency, and key technical features, as a vital complement to regulatory requirements. Mandatory labels—modelled on existing schemes like New Zealand’s Energy Rating Label—would empower consumers at point of sale, clarify what constitutes a “smart charger,” and drive competition on quality, safety, and energy performance.

Internationally, the UK’s EV Smart Charge Point regulations require consumer information to be transparent, and labelling has proven effective in other sectors at promoting efficiency and informed decision-making. Clear indicators (e.g. standby power use, connectivity type, supported protocols such as OCPP or ISO 15118, and compliance with AS/NZS safety and cybersecurity standards) would help consumers differentiate chargers beyond technical spec sheets, especially as many remain unfamiliar with smart charging concepts. While labels should be concise, optional use of QR codes could provide further detail online; overall,

labelling would foster both consumer confidence and market innovation and is unlikely to be effective if kept voluntary.

15. What types of chargers should your preferred option be applied to? For instance, if you think different types of chargers (for example public vs private, or chargers smaller or larger than 2.4kW) should be subject to different parts of your preferred option, please explain.

No comment.

16. Do you agree with our assessment of the scope against the objectives? If you agree or disagree, please explain why.

MDC broadly supports MBIE's assessment that prioritising regulation of private chargers—especially residential and workplace units—delivers the greatest benefit in terms of peak demand management, cost reduction, and user experience. We agree that this segment represents the majority of charging load and offers the most effective opportunity to shape consumer behaviour and reduce grid stress. However, we see slightly greater value in also including public chargers, particularly in rural areas where even a few high-powered units can impact local networks.

Smart functionality in public infrastructure enhances resilience and supports equity by improving service for renters and travellers who rely on shared facilities. While we acknowledge the need to avoid over-regulating very low-power devices, we advocate for a practical scope that includes all mainstream home, workplace, and public chargers above a reasonable threshold (e.g. >2 kW) to ensure consistent outcomes, avoid loopholes, and future-proof the charging network.

17. If you agree with option four – requiring EV chargers to be smart:

- a. What types of chargers should the requirements apply to? For example, should there be a minimum or maximum size?*
- b. Is there a case to regulate public chargers as well as private, and what are the risks of including or excluding public chargers?*

Including public chargers enhances network resilience, supports equitable access (especially for renters and rural users), and reduces risks such as vendor lock-in and cybersecurity vulnerabilities. While compliance may introduce modest costs for public providers, these are manageable with phased implementation, and the long-term benefits—such as demand response capability and consistent user experience—justify a unified, inclusive regulatory approach.

18. Do you agree with our assessment of the costs and benefits of each option?

Overall, MDC agrees that the long-term benefits of strong smart charging regulation far outweigh the costs, and that weaker measures yield much smaller net benefits. One cost/benefit aspect we want to ensure is accounted for is impact on low-income EV owners. The analysis avoided recommending subsidies (arising from the analysis that current EV owners earn higher-incomes). However, as EVs become accessible to more moderate-income families through the used market, we need to watch that the added charger cost does not become a barrier. The analysis assumes a small cost increase, which is fine for most, but for a marginal low-income household, even \$200 could matter.

19. Are there any impacts you believe we should consider that are not covered?

MDC notes that there are a few additional impacts that the consultation document has not covered. As mentioned earlier, the transition to smart charging may unintentionally widen equity gaps. Without targeted support, these groups may be unable to benefit from off-peak electricity pricing or participate in demand-side response programmes, limiting their ability to realise cost savings and undermining the policy's social equity objectives.

Behavioural and educational factors will strongly influence the effectiveness of smart charging. Many EV owners are unfamiliar with how smart chargers operate or how to maximise their benefits. Without dedicated consumer education and support—ideally in partnership with electricity retailers—there is a risk that users will override off-peak settings or avoid participation altogether, significantly reducing the intended network and cost efficiencies.

Enforcement and compliance will be critical to realising the policy's intent. Agencies such as MBIE and EECA will need resources to prevent the import and retail of non-compliant devices. This includes outreach to rural distributors and enforcement at border and retail levels to avoid grey market leakage, which could otherwise undermine public safety and regulatory trust.

Taken together, these impacts illustrate the need for a carefully coordinated approach—combining regulation with consumer education, local network readiness, and targeted support to ensure a just and safe transition to smart EV charging for all New Zealanders.

20. Are there any unintended consequences on the market for EV chargers or wider EV market you think we haven't considered?

There are a number of unintended consequences that could arise from regulating smart chargers and recommends early mitigation. These include a short-term rise in second-hand or imported non-compliant chargers, concerns about added cost or complexity discouraging some prospective EV buyers, and temporary market adjustments as lower-end models exit and suppliers adapt to new standards.

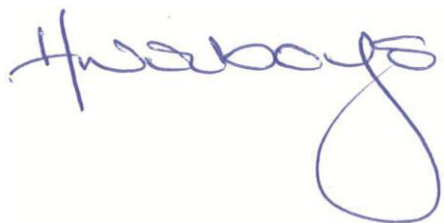
21. How do you see the proposal affecting different people and groups (e.g., business users, manufacturers, consumers)?

MDC considers that consumers and businesses will face some upfront cost increase that will potentially translate to long-term savings and features. Local manufacturers and suppliers will need to meet higher product standards, which may phase out low-end models but align New Zealand with international trends. Each group will need some support in transition (be it information or time to adjust), and we should plan for that.

Overall MDC supports the overarching goals of the smart EV charging proposal and recognises its potential to improve network efficiency, unlock long-term consumer benefits, and enable more sustainable transport outcomes. However, we remain concerned that the proposal, as currently framed, places undue emphasis on private charging while underplaying the urgent need for accessible public infrastructure and the real affordability constraints faced by many of our residents—particularly renters, rural communities, and lower-income households.

To ensure a fair and effective transition, smart charging policy must be implemented alongside targeted equity measures, expanded public charging networks, and coordinated support for local electricity providers and consumers. A balanced approach—combining regulatory certainty with financial, technical, and behavioural support—will be key to unlocking the full benefits of smart charging across all regions, including ours. We welcome further engagement with MBIE to ensure the final framework reflects both national goals and local realities.

Yours sincerely,

A handwritten signature in blue ink, appearing to read 'Helen Worboys', with a large loop at the end.

Helen Worboys, JP

Mayor