Consumer Priorities for Electric Vehicle Charging Infrastructure in Northern Ireland

July 2022

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Contents

1 Executive summary

The Transport Working Group (TWG) is led by the Department for Infrastructure (DfI) and is taking forward work on the transport elements of the Northern Ireland Executive's Energy Strategy. The Minister for Infrastructure established the Electric Vehicle (EV) Infrastructure Task-Force (Task-Force) as a subgroup in support of the TWG and tasked it to produce an EV Infrastructure Action Plan by autumn 2022. The Consumer Council is a representative on the Task-Force and established the EV Infrastructure Consumer Subgroup to inform the Task-Force on consumer specific issues. The members of the Consumer Subgroup are the Consumer Council, Disability Action, Disabled Drivers Association, Guide Dogs, Inclusive Mobility and Transport Advisory Committee, Royal National Institute of Blind People, Rural Community Network and Trading Standards NI.

Consumer engagement is essential to success in decarbonising transport. As EVs will play an important role in decarbonising transport in Northern Ireland consumers must be at the heart of developing an EV Infrastructure Strategy for Northern Ireland. This paper by the Consumer Subgroup provides our nine consumer priorities for the EV charging infrastructure in Northern Ireland. We have set these within the context of the United Nations 'Consumer Principles'. The resulting Strategy must also take into consideration the specific needs of Northern Ireland consumers as outlined in section four and facilitate a just transition to EVs.

<u>Summary of Consumer priorities</u>

Consumer principle: Access
Consumer Priority 1: EV charging is available to everyone who needs it.
Consumer Priority 2: It is easy to locate public chargepoints (CPs).
Consumer Priority 3: A reliable public charging network.

Consumer principle: Choice
Consumer Priority 4: CP pricing must be fair and regulated.
Consumer Priority 5: It should be easy to pay for public charging.

Consumer principle: Fair
Consumer Priority 6: To have an accessible and inclusive charging infrastructure.

Consumer principle: Safety
Consumer Priority 7: Consumers feel safe when using CPs and pedestrians feel safe when navigating the footway.

Consumer principle: Redress
Consumer Priority 8: Users of public and home CPs are protected with options for redress, and regulation as necessary.

Consumer principles: Information, Representation & Education
Consumer Priority 9: Consumers are educated and have access to impartial and accessible information on EV charging.

2 Introduction

Consumer principles

The Consumer Council uses a set of eight guiding principles developed by the United Nations to assess where the consumer interest lies. These provide an agreed framework to approach regulatory and policy work.

They serve to protect consumers, setting out the minimum standards expected from markets when delivering products or services in Northern Ireland. The EV Infrastructure Consumer Subgroup has used these principles in establishing consumer priorities for EV infrastructure in Northern Ireland.

Figure 1: Consumer Principles

We wish to make it clear that *'consumers'* as referred to in this paper means not just users of CPs but includes others who are affected by CPs in their built environment, such as pedestrians.

Background

Moving from internal combustion engine vehicles to EVs is an essential component of the UK Government aim to decarbonise transport. Recent research shows that Northern Ireland consumers want and need

guidance, opportunity and support from government to enable them to make an active and positive contribution to decarbonising transport.[1] An EV infrastructure strategy which puts the needs of consumers at the centre and facilitates a just transition is key to achieving the decarbonisation of transport. The strategy must capitalise on opportunities to develop a network which meets accessibility requirements for disabled people and those with reduced mobility, caters for the needs of a significant rural population, and for consumers with no off-street parking. It must also recognise the importance of maintaining accessible footways for pedestrians.

EV uptake in Northern Ireland is low, at around 3-4 years behind the UK average.[2] Similarly Northern Ireland currently lags behind in terms of CPs compared to Great Britain (GB).[3] This situation is improving however, with new investment in CPs, including ESB[4] upgrading the public charging infrastructure and competitors such as Weev entering the market. It is essential than Northern Ireland develops a strategy quickly to allow opportunities for cooperation and learning between devolved governments. Northern Ireland should take advantage of the experience of nations which are further ahead in the EV charging journey such as England, Scotland and Wales which have EV infrastructure strategies, learning what has worked well and what has not.

Therefore, the Consumer Priorities for Northern Ireland in this paper are informed, in part, by the Department for Transport's (DfT) March 2022 'Government Response to the 2021 Consultation on the Consumer Experience at Public Chargepoints'.[5] The final policy decisions will require regulatory amendments and once amended the regulations will apply to the entire UK. These regulations will realise positive outcomes for consumers.

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[1] Future of Transport Research – commissioned by the Consumer Council March 2022 2 (consumercouncil.org.uk)
[2] Development of Electric Vehicles in Northern Ireland (infrastructure-ni.gov.uk)
[3] EV charging network: 'A bit of a shambles' - agendaNi
[4] ESB welcomes Levelling Up Fund support to transform EV charging network in Northern Ireland
[5] Consumer Experience at Public Chargepoints - Government Response to the 2021 Consultation on the Consumer Experience at Public Chargepoints (publishing.service.gov.uk)

Electricity grid and cost

Whilst this paper offers the perspective of consumer priorities, it is apparent that issues with electricity grid capacity need to be addressed with urgency if Northern Ireland is to have an EV network with CPs where they are most needed. The success of any EV Infrastructure Strategy depends on it.

There is a significant need for a co-ordinated approach to CP installation planning, to ensure CP accessibility in both urban and rural areas. This planning should take into account that most charging will take place at home and that EV technology range and home charging capability are likely to improve. It should also ensure that there is not either an over provision of CPs or excess demand placed on parts of the electricity grid which necessitates expensive reinforcement, both of which will create additional costs to consumers. Careful consideration must be given to the fair distribution of costs of the new charging infrastructure, the cost of connecting that infrastructure to the electricity grid, and the potential cost of grid reinforcement to support that infrastructure.

The perspective of rural dwellers requires specific consideration as sustainable and active travel options are often unrealistic to serve their daily needs, with many dependent on private vehicles. It is important to learn from the experience of broadband, which largely left rural areas behind in comparison to urban areas, to ensure geographic equality of EV charging. Therefore, the electrification of private transport in rural areas may necessitate particular investment in the electricity grid to cope with the resultant increase in demand.

Design and affordability of EVs

The focus of this paper is EV infrastructure. However it is also important that car manufacturers design EVs that are accessible to all.

With the electrification of private transport, opportunities should be sought to make EVs affordable so all consumers (including those on lower incomes and dependent on private vehicles) can benefit from and contribute early and effectively to the decarbonization of transport. For

example, consideration could be given to establishing affordable EV sharing schemes.

Travel hierarchy

The Strategy should acknowledge the travel hierarchy in the Department for Infrastructure publication 'Time for Change'[6] where consumers will be encouraged to firstly substitute trips, secondly shift modes and lastly switch fuels. However, it is important to note that for many Northern Ireland consumers, there is no practical alternative to a private car for mobility. Therefore, until transformative investment in public transport is forthcoming, the right of consumers in Northern Ireland to access the benefits of EVs must be paramount.

Accessible information

Accessibility and usability must be applied to all interactions with consumers regarding CP provision. This should include that all information is provided in alternative formats including (but not limited to) accessible documents, sign language vlogs, audio description and easy read.

Digital exclusion

Throughout this paper reference is made to digital technology and online information. Recent Consumer Council research[7] shows that there is a proportion of the Northern Ireland population that may never attain sufficient levels of digital literacy or for whom other barriers to digital services will always remain. A key recommendation from this research is that for these consumers, traditional face-to-face and telephone services continue to be vital and should be maintained. Therefore, there is a need to ensure that digitally excluded consumers are catered for in terms of EV infrastructure and CP information.

[6] Planning for the future of Transport (infrastructure-ni.gov.uk)
[7] Impact_of_Digitalisation_on_NI_consumers.PDF (consumercouncil.org.uk)

3 Consumer priorities

For each Consumer Priority examples are given which might underpin it. These are examples to demonstrate how the priority can be addressed; as such they should not be considered as an exhaustive or comprehensive list.

Consumer principle: Access

Consumer Priority 1: EV charging is available to everyone who needs it.[8]

Underpinned for example by:

- Solutions for and understanding that disabled and older people may face additional difficulties in accessing CPs, for example with the weight of charging cables, the force required to attach the connector, the lack of wheelchair accessible parking, accessible parking and dropped kerbs at charging points. It is essential that these issues are addressed if Northern Ireland is to have EV charging available to everyone who needs it.
- A co-ordinated approach to CP installation planning to ensure CP accessibility in both urban and rural areas. This must also ensure the equitable distribution of costs of CP infrastructure to consumers.
- Home charging installations which are easily available for those with off-street parking.
- Sufficient on and off-street charging for private and commercial vehicles which is convenient and stress free.
- Provision of on-street public CPs and community charging hubs for those with no off-street parking.
- Sufficient en-route rapid public CPs informed by emerging international standards regarding distance between CPs.
- Sufficient destination charging including at workplaces and public buildings.

[8] Everyone can find and access reliable public chargepoints wherever they live Taking charge: the electric vehicle infrastructure strategy (publishing.service.gov.uk)

- CPs should be interoperable i.e. compatible with a large range of EV models; and offer payment methods that are accessible for all EV drivers.
- An accessible EV charging network in more remote rural areas of Northern Ireland is needed and will have benefits for the tourism industry.

Consumer Priority 2: It is easy to locate public CPs.

To achieve this priority CP data should be readily available which will make it easy to locate CPs and tell if they are working. 'Open data' will be essential here and is listed as a Policy Area in 'Consumer Experience at Public Chargepoints - Government Response to the 2021 Consultation on the Consumer Experience at Public Chargepoints'[9].

Underpinned for example by:

- Up-to-date information available online, for example Zap-map.[10]
- All CP operators should be required to provide information on a central online source.
- Provision of accessible information for those who are digitally excluded.
- Adequate signage to find CPs easily when on the move and within car parks.
- Accurate information on whether a CP is operational.
- The ability to book a charging session in advance.

Consumer priority 3: A reliable public charging network.

Underpinned for example by:

- A minimum of 99% reliability across the charging infrastructure.[11]
- A free 24/7 helpline which is available for those who experience an issue at a public CP.[12]

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[9] Consumer Experience at Public Chargepoints - Government Response to the 2021 Consultation on the Consumer Experience at Public Chargepoints (publishing.service.gov.uk)
[10] Charging points and electric vehicles UK 2022 - Zap Map (zap-map.com)
[11] The consumer experience at public chargepoints - GOV.UK (www.gov.uk)
[12] The consumer experience at public chargepoints - GOV.UK (www.gov.uk)

Consumer principle: Choice

Consumer Priority 4: CP pricing must be fair and regulated.

Underpinned for example by:

- A competitive market which offers choice for consumers. Charging an EV is currently free at the point of use at ESB CPs in Northern Ireland. This differs to GB which has pay to charge at public CPs. Paying to charge is likely to be introduced as CPs are upgraded and the network expands with competitors coming into the market.[13] However, Northern Ireland is unlikely to experience a level of competition in the EV charging market which might be the case for example in GB, particularly in areas of lower population density. This means it will be necessary to plan for and carefully monitor price and provision as EV infrastructure develops.
- A standard metric mandated for pricing will enable consumers to easily understand and compare prices at public CPs as they can currently with petrol and diesel retailers. It will also facilitate comparison of price at public CPs to home charging. The metric used should be pence-per-kilowatt hour (kWh).

Consumer Priority 5: It should be easy to pay for public charging.

Underpinned for example by:

- Payment methods which are standardised across CPs.
- Paying to charge which is not dependent on the use of a smartphone.[14]
- The option to pay using a debit or credit card and contactless payment at every CP.
- Cash payment should be available at every CP. This may require the department to work with CP operators to make this possible. For example, the possibility should be explored of a payment card which

[13] £20m Weev investment in Northern Ireland public electric charging network with 1,500 new points | UTV | ITV News

[14] The consumer experience at public chargepoints - GOV.UK (www.gov.uk)

can be uploaded using cash at a Post Office or Paypoint outlets, as recommended by Which?[15]

- Consumers should be able to access all public CPs with one membership card or smartphone app.[16]
- If possible, where there is a parking charge this should be included in one transaction when paying for charging.

Consumer principle: Fair

Consumer priority 6: To have an accessible and inclusive charging infrastructure.

Inclusively designed public charging should be central to decision making in this area.

Underpinned for example by:

- Adoption in Northern Ireland of PAS 1899 EV Accessible Charging Specification (currently draft) once published. This will provide accessibility standards for all CPs[17] and must address issues faced by disabled people as mentioned in Consumer priority 1.
- Procurers of public CPs should be strongly encouraged/incentivised to go beyond the minimum level of accessibility.
- Owners of existing public CPs should be required to assess how accessible and inclusive their CPs are currently and make any necessary improvements in accordance with the PAS once published.
- There should be accessible parking bays with CPs available in all car parks and included in the design of any new car parks.
- Charging points must adhere to an inclusive street design. There is currently insufficient policy and guidance in this regard. Therefore, standards must ensure that footways maintain accessibility for pedestrians both in regard to maintaining acceptable widths and minimising any potential hazard created by the positioning of CPs.

[15] https://www.which.co.uk/policy/sustainability/8670/electricvehiclecharging

[16] Page 19 Roaming - We define roaming as the ability to use a payment app across multiple chargepoint networks, with all public chargepoint networks covered by at least one roaming provider. The consumer experience at public chargepoints - GOV.UK (www.gov.uk)

[17] This PAS was sponsored by the charity Motability and the Office for Zero Emission Vehicles (OZEV). Its development was facilitated by BSI Standards Limited.

Poorly located, managed and/or difficult to detect CPs can pose a safety risk for pedestrians, in particular blind or partially sighted pedestrians. Guide Dogs has a clear policy position[18] on this issue which states *'Where charging points are installed on the pavement, there should be a clear width of 2m on the pavement for pedestrians to get around, and they should be located by the kerb edge. Cables should not be a trip hazard. This could particularly be a risk for people with sight loss. Incorporating charging points with current street furniture such as lampposts and bollards located close to the kerb would also reduce street clutter.'*

- Plans for development or installation of EV charging infrastructure that may pose barriers to others such as wheelchair users or people living with sight loss and their mobility, should be subject to consultation before approval or works being carried out.
- It is important that policy makers and providers of CPs consider and embrace rapidly improving EV technology which makes it easier to charge, for example wireless charging. Such improvements realise time efficiency for all consumers and are particularly important for those with reduced mobility such as wheelchair users.
- Consumers should be able to charge ad-hoc on the public network i.e. without needing a membership card or smartphone app.

Consumer principle: Safety

Consumer priority 7: Consumers feel safe when using CPs and pedestrians feel safe when navigating the footway.

Underpinned for example by:

- Identifying and mitigating risks to safety at public CPs e.g.
  - A requirement for all public CPs to have a safe connector release mechanism.
  - Advice to reverse into EV CP parking spaces if possible whilst recognising that for some people such as wheelchair users this is not possible.
  - Educating consumers on EV electrical safety.
  - CPs must be adequately lit.

[18] guide-dogs-ev-charging-points-position-statement.pdf (azureedge.net)

  - CPs should be weatherproofed (where possible).
  - Provision of security cameras which are visible.
  - Located in an area which is not secluded.
  - CPs should have contrasting features to enhance their visibility for people with sight loss. This should include good tonal contrast, and reflectors/lighting to ensure they are visible during dull weather conditions or at night.[19]
  - Footways are accessible for pedestrians (see Consumer priority 6).
  - If cables from charging points in residential dwellings must cross a pavement, the cable must be recessed or sunk into the pavement in a way that will prevent a trip hazard.[20]
- Educating consumers on safe charging at home at point of EV sale.

Consumer principle: Redress

Consumer Priority 8: Users of public and home CPs are protected with options for redress and regulation as necessary.

As in many other markets, EV CP users need to be protected from Greenwashing, mis-selling, poor quality products and scams.

Underpinned for example by:

- Ensuring protection:[21]
  - To be affordable for all, low-income households that are more likely to be dependent on public charging may need extra price protection.
  - For data privacy it will be necessary to have robust security and measures such as protocols in place.
  - From exclusivity contracts at Motorway Service Areas which can restrict consumer choice.
  - From mis-selling EV bundles and tariffs.
- Ensuring new homes are EV-ready and local planning policies incorporate facilities for charging EVs.

[19] guide-dogs-ev-charging-points-position-statement.pdf (azureedge.net)
[20] guide-dogs-ev-charging-points-position-statement.pdf (azureedge.net)
[21] Consumer Experience at Public Chargepoints - Government Response to the 2021 Consultation on the Consumer Experience at Public Chargepoints (publishing.service.gov.uk) pages 30/31

- The regulation and enforcement of EV charging point and charging products' quality standards.
- Trader certification schemes such as The Electric Vehicle Consumer Code for Home CPs (EVCC).[22]
- Ensuring appropriate regulation of home CP sales and installation.
- Providing suitable and accessible contact information at CPs for consumers to register complaints, defective equipment/lighting and to report adverse incidents.

Consumer principles: Information, Representation & Education

Consumer Priority 9: Consumers are educated and have access to impartial and accessible information on EV charging.

There is a need to educate and inform consumers to ensure behavioural change which is critical to the success of decarbonising transport.

Underpinned for example by:

- Ongoing consumer research and engagement.
- A communication strategy to inform consumers about EVs including EV charging.
- Provision of ongoing impartial advice and support, including information about financial support schemes.
- Raise the awareness of charging map information, such as Zap-map[23], to alleviate concerns around 'range anxiety'.
- Sufficient accessible information should be provided on all CPs which is consistent across all locations and includes instructions on how to use CPs which are clear and use plain English.
- Consumers should have access to information which illustrates CPs with a higher accessibility standard.
- Advice on finding an EV home charger installer. Consumers should be educated about installing a home charge point ideally at the point of purchasing an EV. The information provided should be impartial.

[22] https://www.electric-vehicle.org.uk/the-code?msclkid=956a163ed06511ecb95664cf970f1660
[23] Charging points and electric vehicles UK 2022 - Zap Map (zap-map.com)

- Consumers should be educated on safety issues such as EV electrical safety for home charging and advice to reverse into EV CP parking spaces if possible.[24]

4 Northern Ireland specific concerns

There are characteristics and issues particular to Northern Ireland which should be taken into consideration when deciding the Northern Ireland EV Infrastructure Strategy.

- How the EV infrastructure in Northern Ireland is funded merits careful consideration. In GB the connection costs are largely socialised (i.e. paid for by all bill payers) which has helped to stimulate the EV charging market. In Northern Ireland the CP operator bears most of the cost. Policy makers need to consider what is an equitable balance of allocating costs between electricity consumers and CP operators here.

- It is well documented that Northern Ireland discretionary income is the lowest in the UK. Therefore, affordability in terms of EV charging in Northern Ireland will mean something different compared to other devolved administrations. It may be necessary for the NI Executive to consider how it could fund financial support schemes that promote EVs.

- As recognised in the Steer report[25] Northern Ireland is largely rural and there is a high ratio of consumers who potentially have access to home charging. However, this rural nature combined with the lowest discretionary income in the UK means consumers here will need additional help to access EV charging. It is important that EV charging is not just urban centric. This is of particular concern following the withdrawal of the home CP grant by the UK government, meaning Northern Ireland consumers can no longer avail of this grant.

[24] Recognising that for some people such as wheelchair users this is not possible.
[25] Development of Electric Vehicles in Northern Ireland (infrastructure-ni.gov.uk)

- Northern Ireland is further behind in its EV journey compared to GB therefore funding incentives should be a key component of a Northern Ireland EV infrastructure strategy. For example, the continuation/extension of criteria for funding such as OZEV EV Chargepoint Grant for flat owner-occupiers and people living in rented properties.

- Public charge points in Northern Ireland and Republic of Ireland should be interoperable.

- Northern Ireland consumers do not have access to smart meters unlike the rest of the UK. A wider decision needs to be taken in Northern Ireland on the need to roll out smart meters. However, there should be an awareness that some vulnerable and less digital savvy consumers may not be able to take advantage of smart meters.

- DfT will appoint a body to enforce the regulations outlined in the Government Response to the 2021 Consultation on the Consumer Experience at Public Chargepoints. The Strategy should give consideration to how enforcement will work in Northern Ireland.

- The Motability Scheme, which helps people with disabilities to lease accessible vehicles, must adapt to be able to include EVs.

5 Conclusion

The nine Consumer Priorities in this paper should be given serious consideration as to how they will be delivered within the EV infrastructure Strategy for Northern Ireland. We expect that as the Strategy is developed and implemented there will be opportunity to further contribute from a consumer viewpoint.

6 Glossary

CP	Chargepoint
DfT	Department for Transport
EV	Electric vehicle
GB	Great Britain
OZEV	Office of Zero Emission Vehicles
TWG	Transport Working Group