

Public EV Charging Infrastructure

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SFT's Role with Transport Scotland

1. Scale up investment in Electric Vehicle charging infrastructure.
2. Support public sector fleet decarbonisation.
3. Support the decarbonisation of buses.



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SCOTLAND
CÒMHDHAIL ALBA

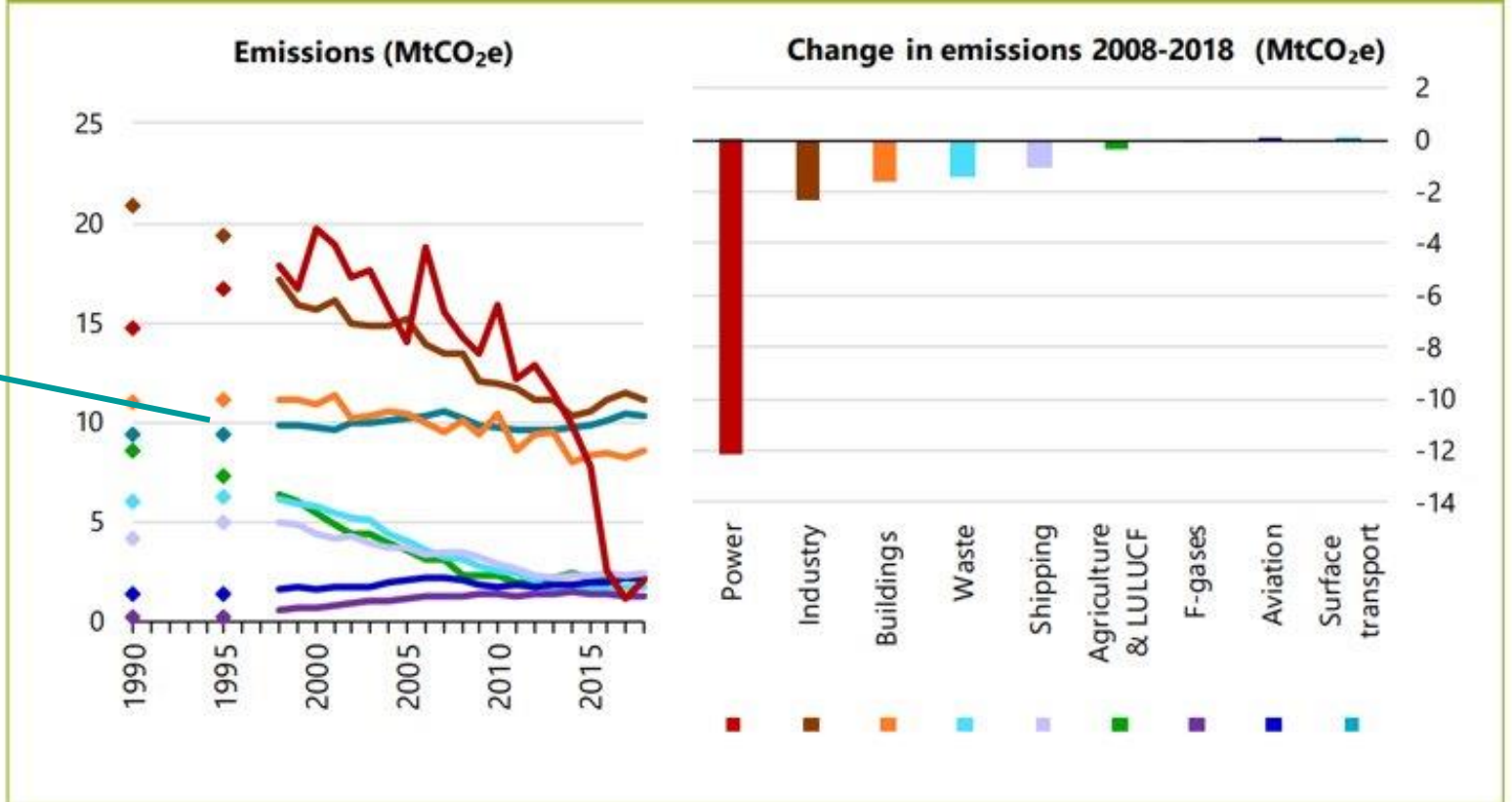
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Why are we doing this?

Prior to the pandemic CO₂ emissions from Surface Transport were flatlining.

Figure 2.3. Greenhouse gas emissions by sector in Scotland (1990-2018)



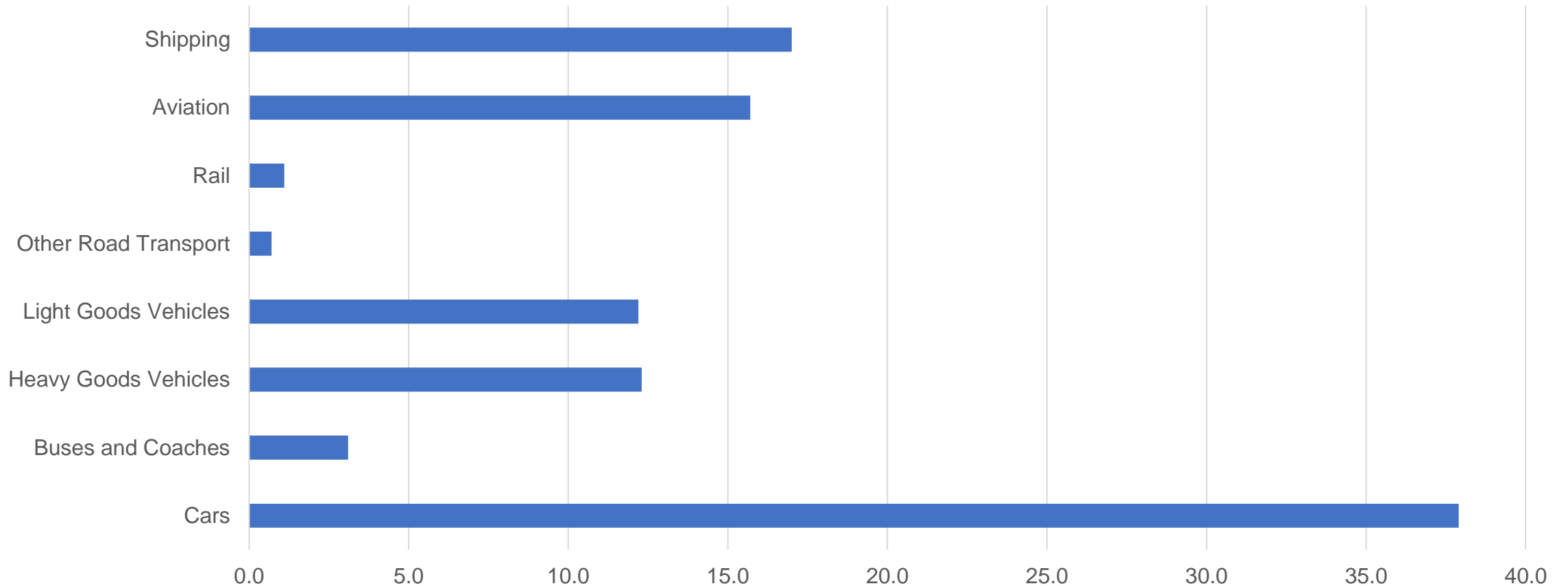
Source: NAEI (2020) *Greenhouse Gas Inventories for England, Scotland, Wales & Northern Ireland: 1990-2019*.
Notes: No emissions data are available for Scotland for 1991-1994 or 1996-1997. Does not reflect forthcoming revisions to peatland emissions or global warming potentials (see Box 2.1).

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Cars account for over 35% of all transport emissions & around 67% of surface transport emissions.



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Scottish Government's Response

Reducing private car km by 20% by 2030 – Active Travel

Phasing out of the need for new petrol and diesel cars and vans by 2030

Removing petrol and diesel cars & vans from the public sector fleet by 2025

Supporting a full transition to zero emission medium and heavy duty vehicles by 2040

Accelerating deployment of charging infrastructure



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Current Landscape in Scotland

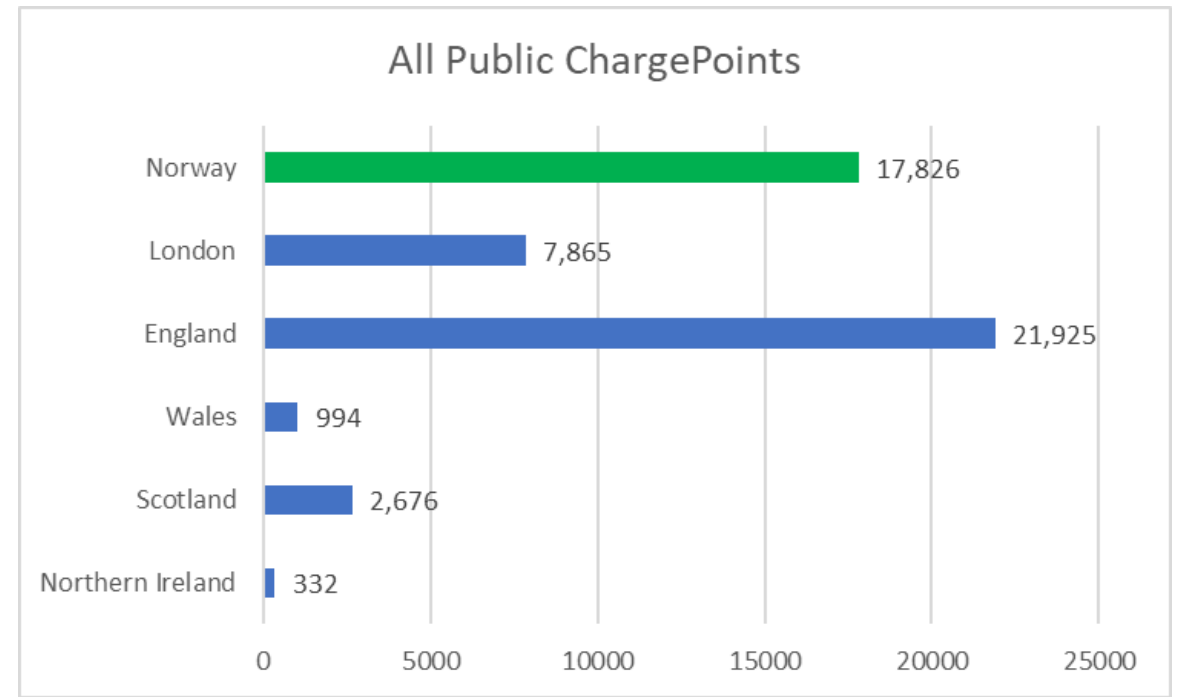
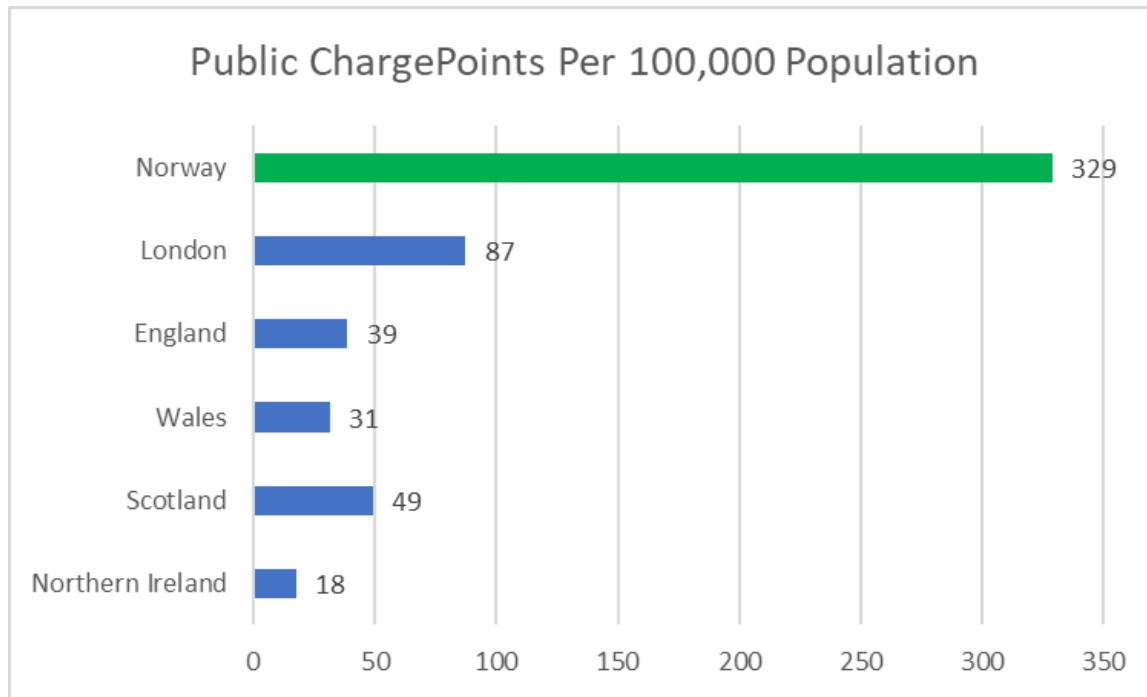
Number of registered cars & LGVs	2,835,421
Number of BEVs & PHEVs	30,135 (1%)
Total number of public EV chargepoints	2,676
Total Number of rapid chargers	684 (26%)
Public Charge Points per 100,000 population	49
EVs per Public Charge Point	11



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How does Scotland compare?



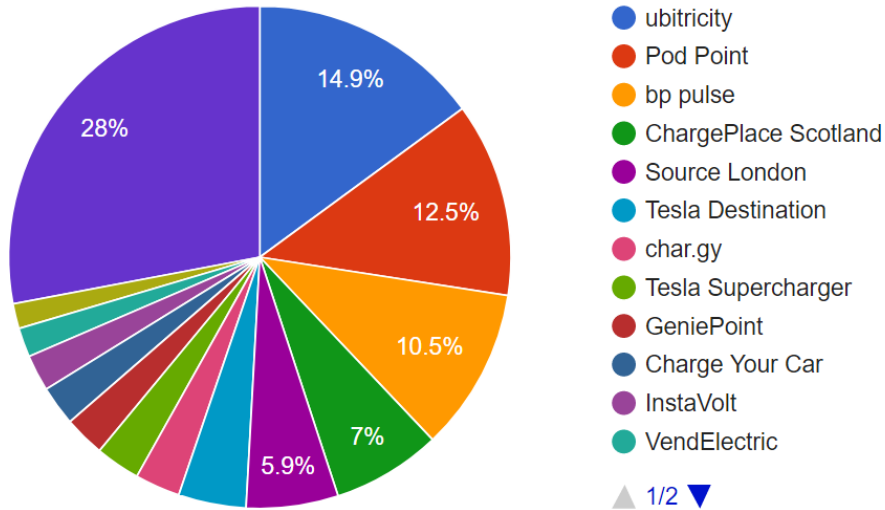
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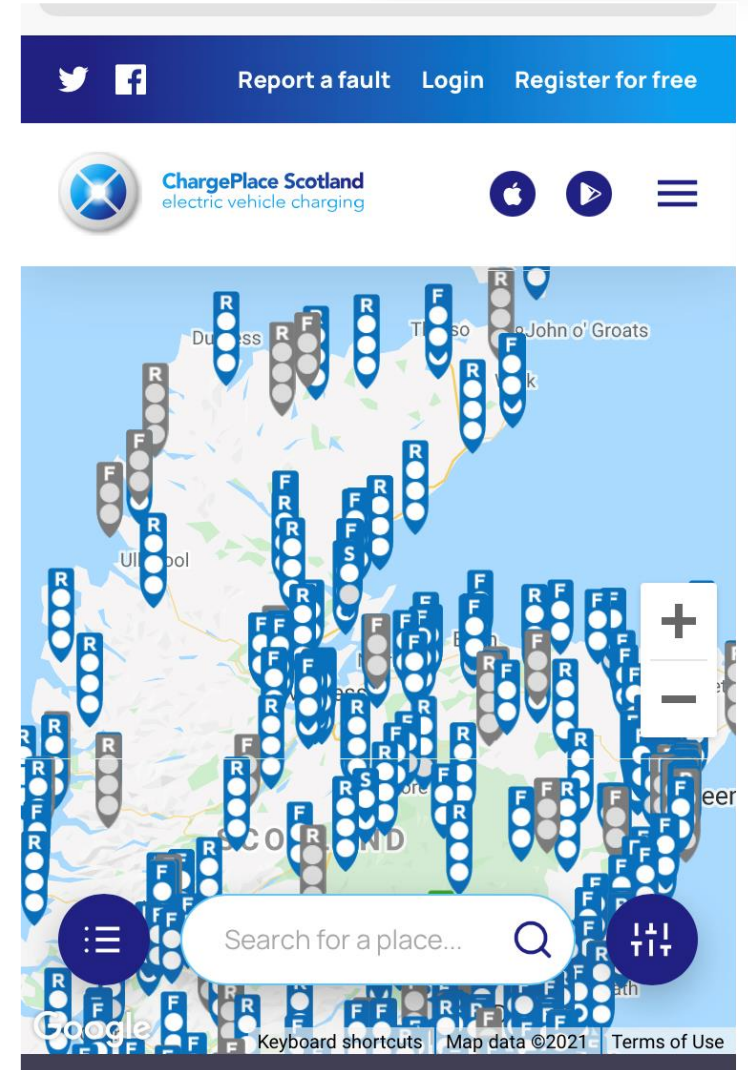


The Charge Place Network

Market share of UK charging points by network



Total devices: 27128, Updated: 12 November 2021



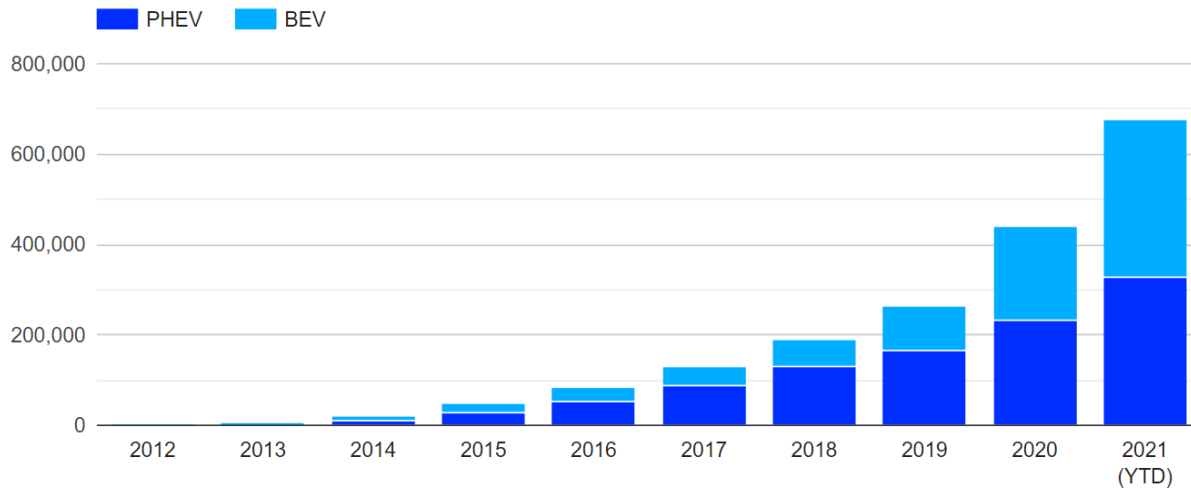
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Future Investment Need

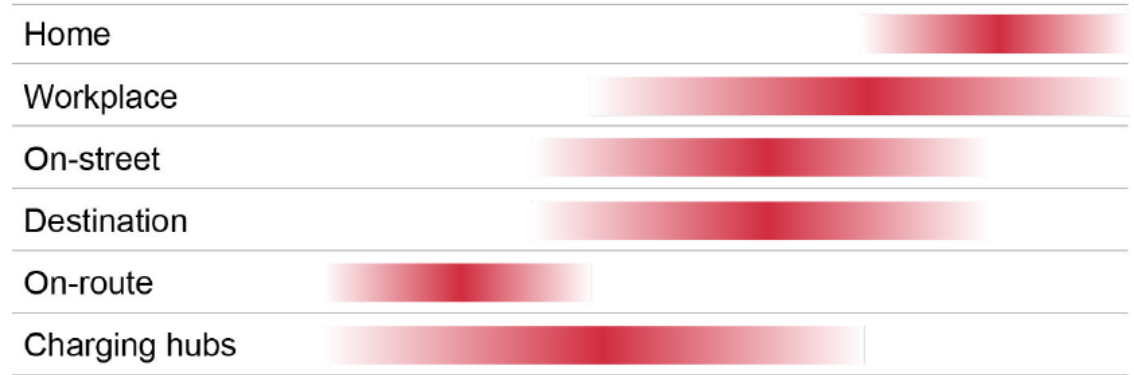
Cumulative number of plug-in vehicles registered in the UK (2012 to date)



Source: SMMT, OLEV, DfT Statistics. Updated: October 2021



Charging Type	Icon	Kilowatt	Charge time
Rapid/Ultra Rapid	⚡⚡⚡	43-350kW	15-45 mins
Fast	⚡⚡	7-22kW	1.5-5 hrs
Slow	⚡	<7kW	8-12 hrs



Source: Electric Vehicle Charging Strategy for Wales

Demand

V

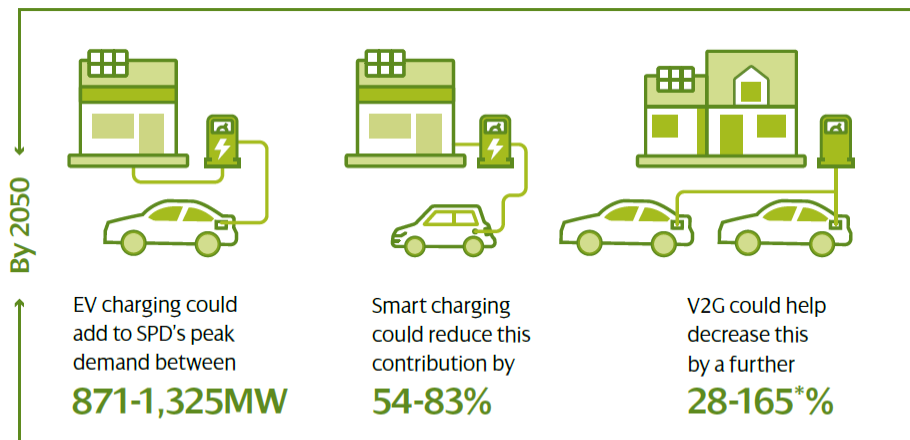
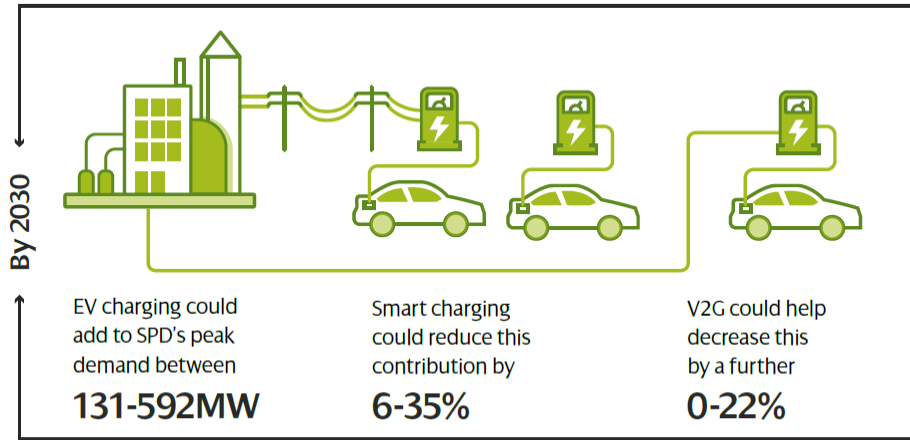
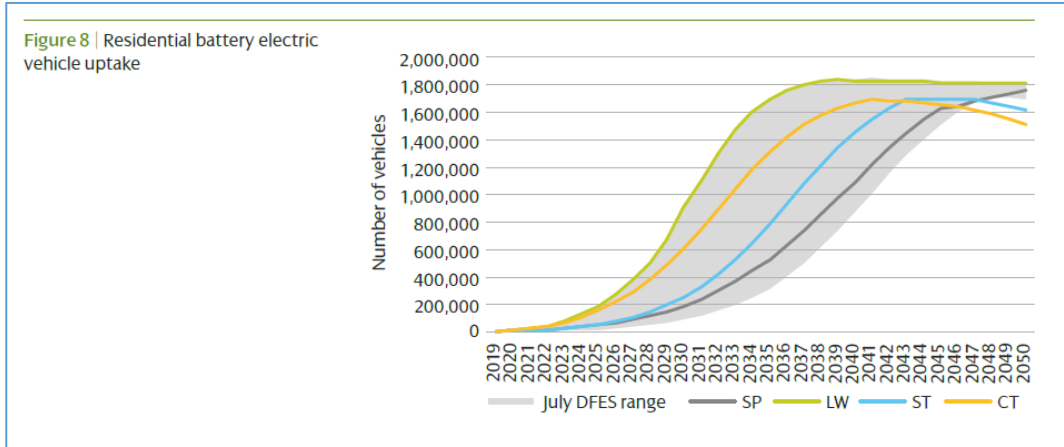
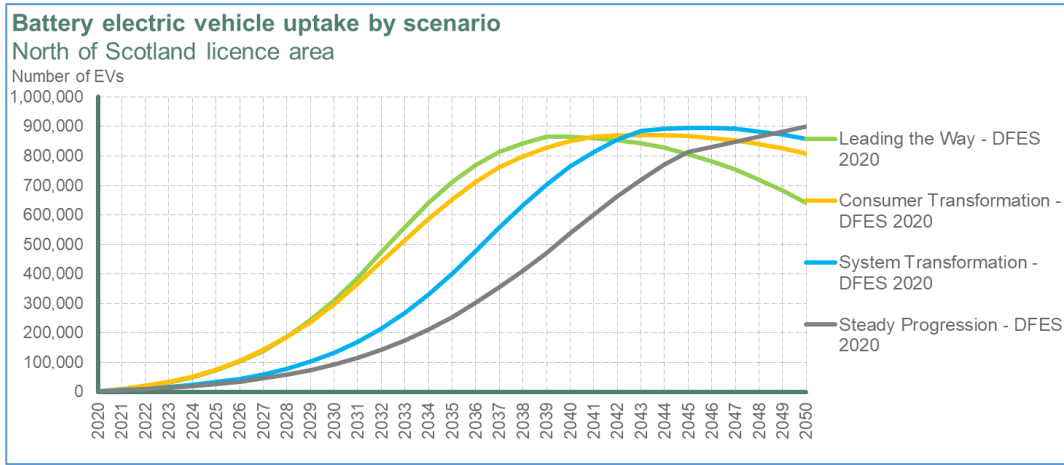
Supply

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Energy Generation & Distribution



*The peak demand reduction above 100% means vehicle to grid has gone beyond offsetting the peak demand contribution from electric vehicles.

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Emerging Challenges and Opportunities

1. Leverage Private Investment & Expertise.
2. Mixed Economy Models.
3. Access across all of Scotland.
4. Maintain a consumer focused approach.
5. Develop guidance and shared learning.
6. Review pricing policies and tariffs.
7. Collaboration with Distribution Network Operators.
8. Continued engagement with OFGEM.



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Electric Vehicle Charging
Infrastructure Report
July 2021

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What could the future look like?



Home Charging



Workplace Charging



On-street Charging



Destination, On Route & Charging Hubs

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Emerging Market Activity

“**NatWest** wants to install 600 electric vehicle charging points across its UK locations by 2023” – Zap Map

“**Shell** offers to install 50,000 electric vehicle charging points in UK” – FT Sept 21

“2,400 EV Charging Bays Across 600 **Tesco** Stores” – PodPoint Nov 2018

“**McDonalds** partners with InstaVolt to Create Electric Charging Network” mcdonalds.com June 2020



www.pod-point.com



www.shell.co.uk

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Transition to a New Programme

- Establish Scotland's Vision for Electric Vehicle Charging.
- Make Scotland an attractive place to invest.
- Develop and pilot new funding models.
- Commercialise the existing network.
- Legislation for EV enabled buildings.
- Support local authorities through the transition.



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**Thank you for
listening.**