



Sustainability

Establishing a national direction to decarbonisation for the forces

Summary Report for NPCC

20th May 2021 Version 1



Overview

- Background & Introduction
- National Stocktake
 - Sustainability Strategy & Policy
 - Energy Usage
 - Fleet
- Electric Vehicle Infrastructure & Technology
- Proposed Next Steps



Background & Introduction

Background

Force's responsibility to ensure that organisation activity is conducted in a **sustainable and ethical manner**

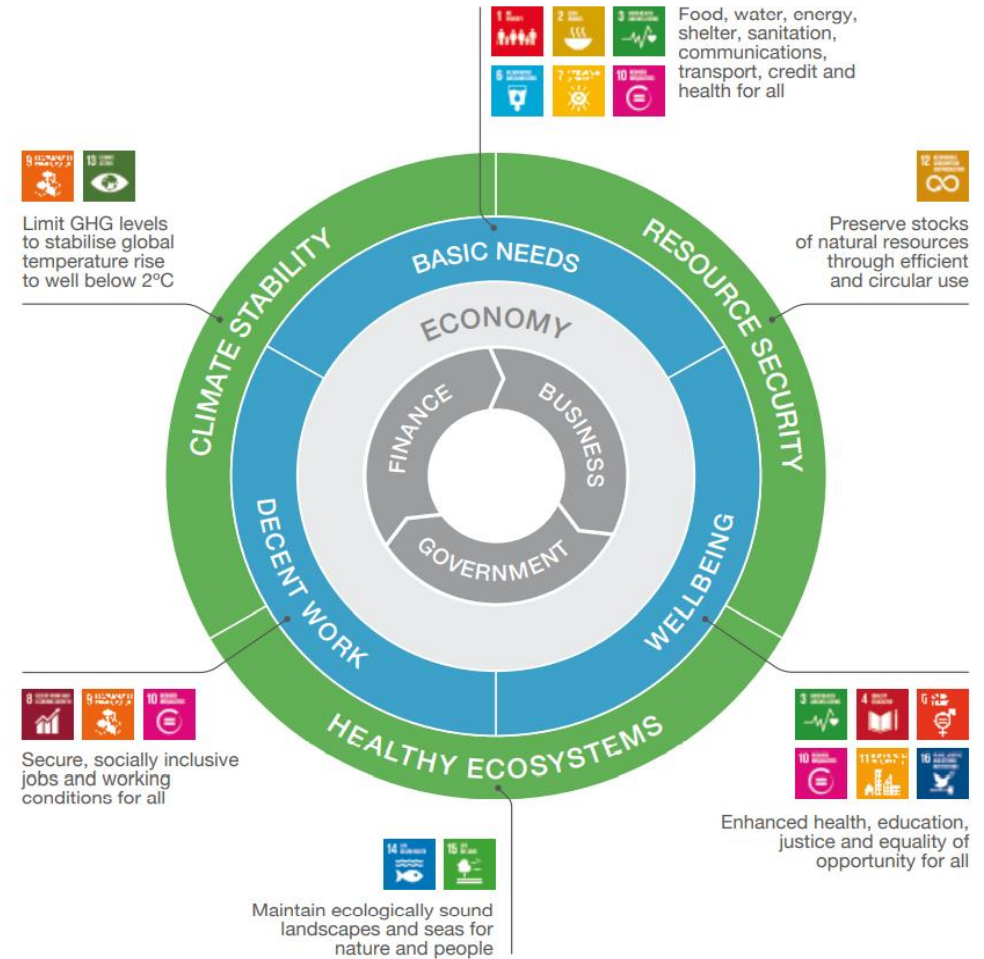
- Climate Change Act 2008
- Social Value Act (England) 2015
- Well-Being of Future Generations (Welsh) Act 2015
- Government Clean Growth Strategy

Sustainable development goals (SDG) reflects the vast array of issues and sectors where policy and regulation can act as a **lever for change**

We must ensure that sustainability issues are fully integrated into **core business activities**, aligning with long term vision and values and strategic and operational objectives

The challenge to Forces is a national one and will benefit greatly from **collaborative approach**

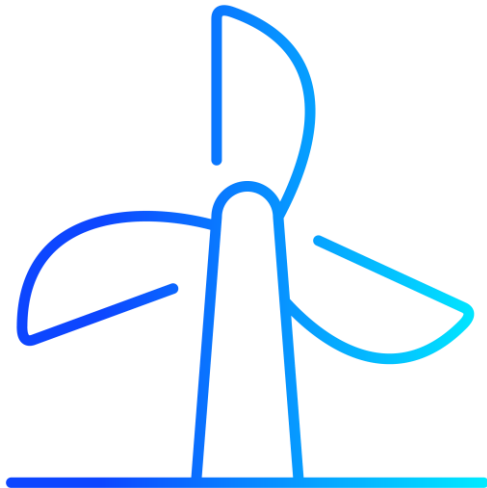
What the Economy should be delivering; Six broad social and environmental ambitions aligned to SDG's.



Introduction

Following a strategic review held with the APCC, Lianne Deeming, was tasked by the APCC and the NPCC with establishing a national direction on sustainability; **developing a consistent force wide approach on the road to decarbonisation.**

In line with the **Policing Vision 2025**, the aspiration of this direction is to work towards the carbon net zero target for 2030, demonstrating a clear commitment to the force's sustainable development goals and positioning themselves as an **Employer of Choice** for the next generation of prospective recruits.



- Sub-group formed Jan-21 to determine the **national position** on sustainability progress by the forces across some key headline metrics
- **‘National Stocktake’** undertaken across principle workstreams:
 - **Sustainability Strategy & Policy**
 - **Energy Usage (Electricity & Gas)**
 - **Fleet**
- Plus market analysis exercise on **Electric Vehicle Infrastructure** & Technology and the National Landscape.

National Stocktake

National Stocktake - Sustainability Strategy & Policy

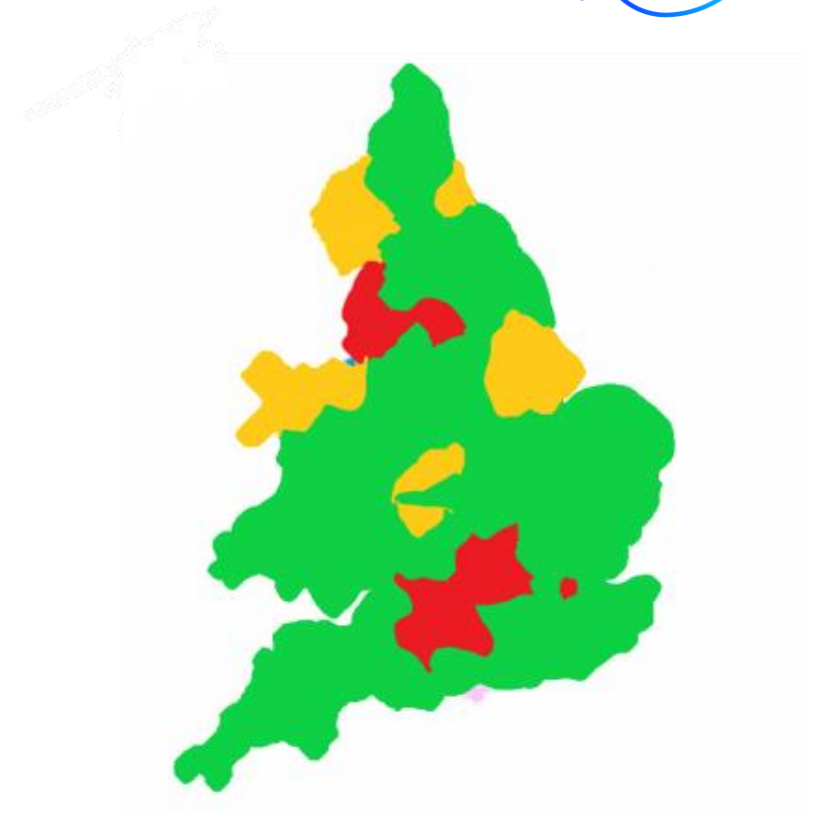


What we did:

- Identify & accumulate existing policies & strategies
- Establish headline appreciation of relative maturity of sustainability in the respective forces
- Map stakeholder network – develop key points of contact
- Engage with Emergency Services Environmental & Sustainability Group (EESG)

What we found:

- Disparate quality and interpretation of what is required across forces
- A mix of “policies” and “strategies”
- Clearly not a primary focus for many forces
- Incredibly difficult to establish network and SPOC
- Competing initiatives within other national groups albeit similar problems with engagement



Heatmap

Forces with existing
policy/strategy = 72%

National Stocktake – Energy Usage

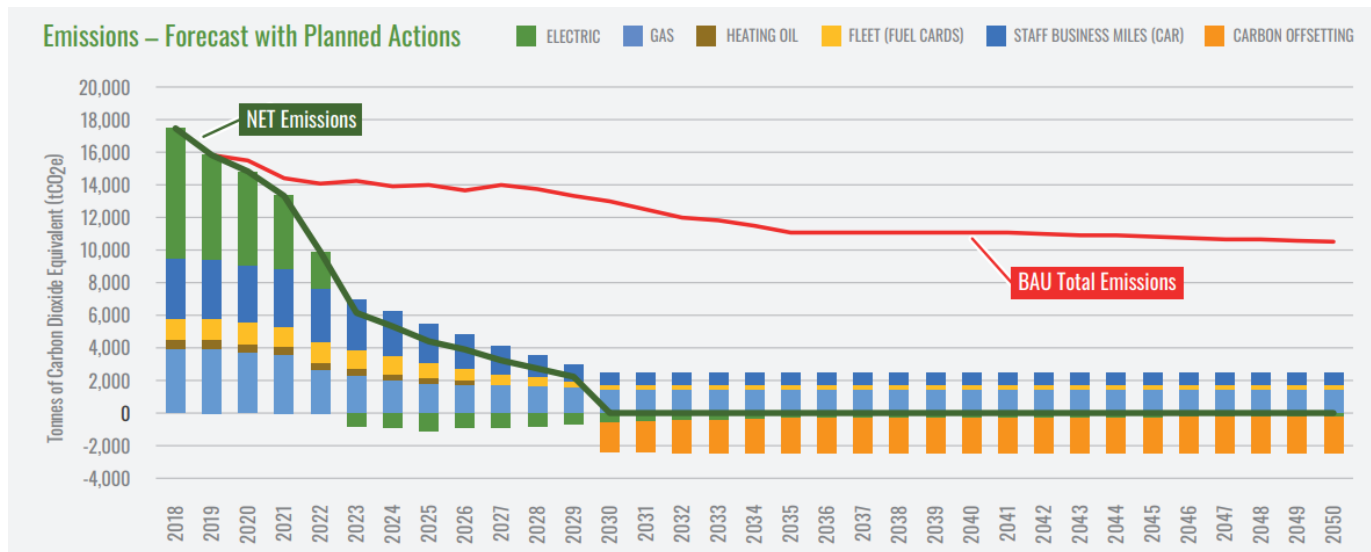


What we did:

- Attempted to accumulate a full national position on energy usage & expenditure and analyse
- Substantial liaison with all respective forces and framework providers
- Sought a carbon footprint analysis and carbon descent planning proposal for national roll-out

What we found:

- No nationally aligned strategy either commercially or in relation to the sustainability credentials on energy purchase (still gaps in data from some forces)
- Carbon Descent proposal received – light touch and deep-dive options available for force's consideration
- Sustainable energy options available to be explored on a national basis, Renewable Energy Guarantees of Origin (REGO) and Power Purchase Arrangements (PPA)



Carbon Descent Planning

Forecast interventions Vs BAU

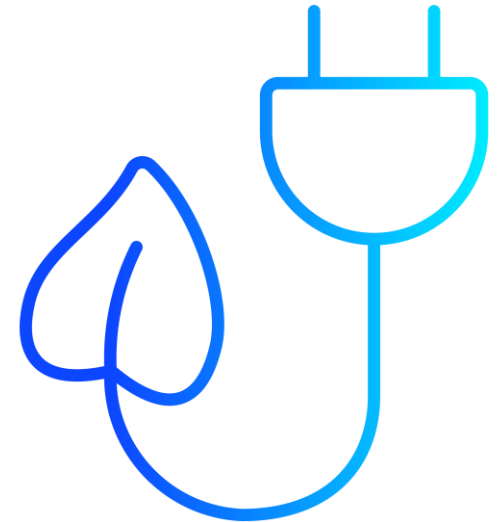
National Stocktake – Fleet & EVCI

What we did:

- Worked with National Association of Police Fleet Managers and (NAPFM) to ascertain a baseline of all forces and current position in terms of the make-up of the UK Fleet.
- Questionnaire sent to fleet managers explored fuel-mix, telemetry, EV charge points
- On-going national procurement for fleet giving significant insight

What we found:

- 80% of national fleet is currently diesel with only 2% electric
- Currently 786 vehicles chargers across the Police estate to suit this 2% of electric fleet
- 37% of those are slow chargers (taking between 8-10 hours to charge a vehicle), 62% are fast chargers (3-5 hours) and 1% rapid chargers (taking ½ - 1 hour)
- Significant number of factors for consideration in relation to Ultra Low Emission Fleet for the future

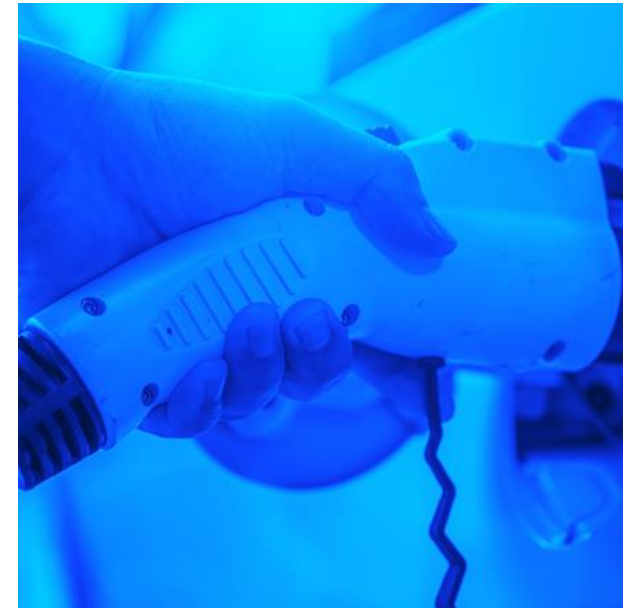


Ultra Low Emission Fleet – Factors for Consideration

- No diesel/petrol vehicles on sale after 2030 (hybrids 2035)
- 9 year period with two replacement cycles (Average vehicle lifespan 4 years)
- 40,000 vehicles in national fleet – average cost £20k

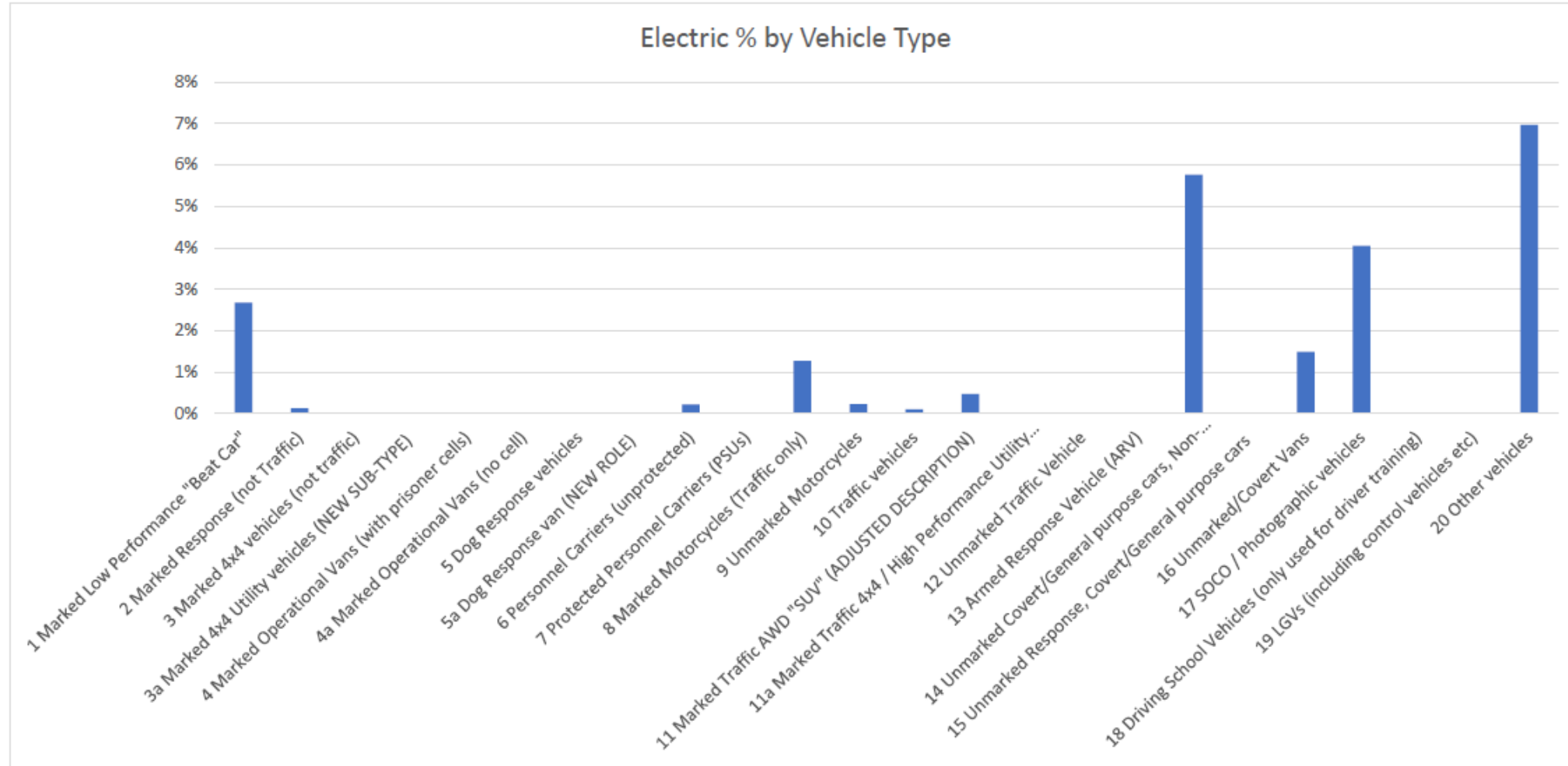
Key Issues

- Training Vehicle Technicians
- Skills shortage (currently less than 10% of technicians in UK trained on EV)
- Minimal use of this technology
- Management of Police Specific Requirements (Modifications)
- Cultural/Behavioural Changes
- Leasing v Buying?
- E Vehicles projected to have lower costs, ranges improving
- Impact of COVID Pandemic on working practices virtual v physical meetings
- Investment Decisions – when & how many?
- Other Technologies – Hydrogen?
- Wider Sustainability Agenda



Ultra Low Emission Fleet – the challenge...

Vehicle Fuel Mix Analysis – Electric Volumes



Electric Vehicle Infrastructure & Technology – the National Landscape

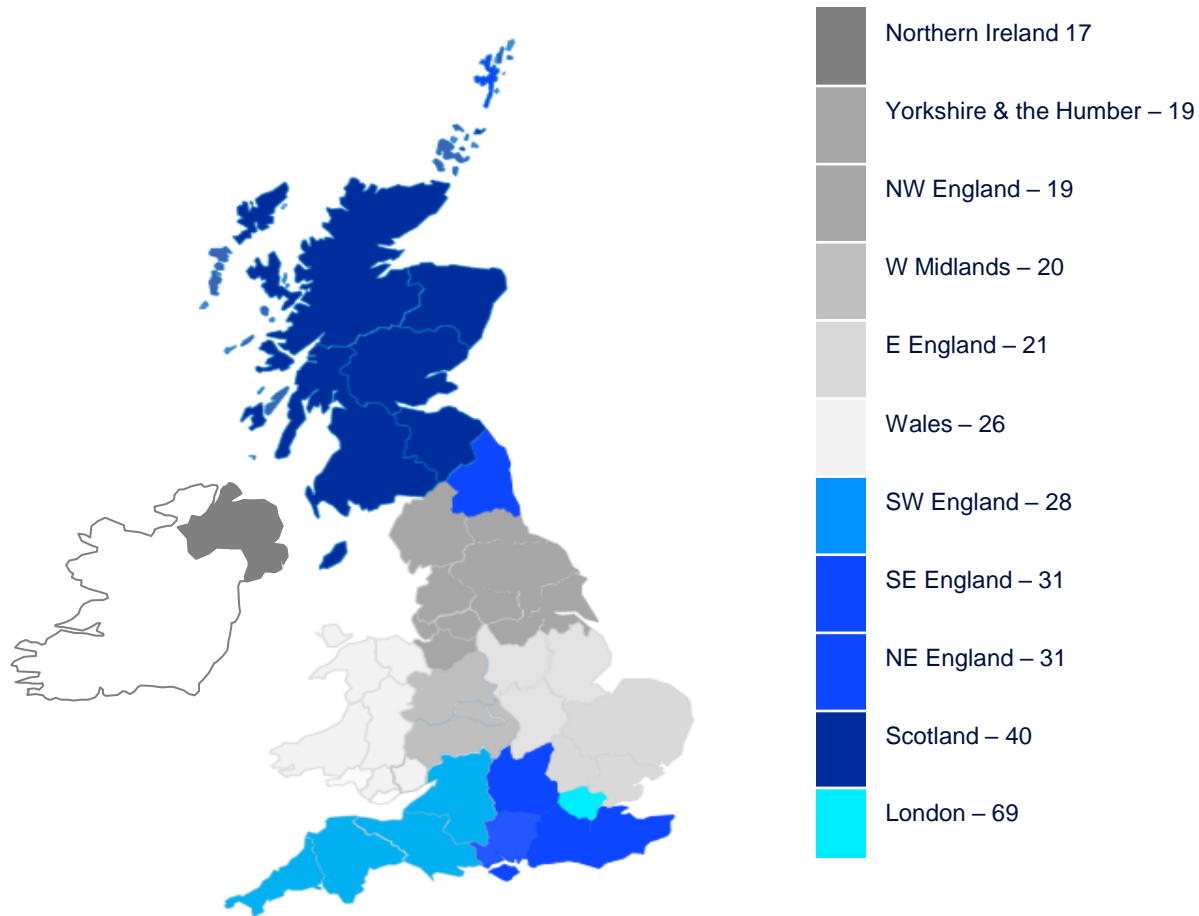
Electric Vehicle Infrastructure & Technology – the National Landscape

Market Analysis - Key findings

Policies	Public funding	Private funding	Partnerships	Technology
<p>Multiple policies and schemes with no holistic approach:</p> <ul style="list-style-type: none">- PIP scheme 2011-21013- The City Scheme in partnership with GUL 2015-2020- The CIIF 2018- The Project Rapid 2020 <p>Despite all these programmes the rate of installation of EVCPs needs to increase five-fold for the 2035 zero emissions target to be met.</p>	<p>£1.1bn spent in 10 years to incentivise the take-up of ULEV.</p> <p>Only 9.7% of that spend contributed to deployment of public EVCI.</p> <p>Funding schemes viewed as difficult to bid for by many local authorities.</p> <p>As a result, there are substantial regional variations in funding the roll out of public EVCPs.</p>	<p>Private funding has fueled the supply of public EVCIs to date (reaching 20,455 EVCPs by the start of 2021).</p> <p>Despite nearly doubling in the last two years, this rate of growth is not sufficient.</p> <p>An estimated £5-10bn of further private funding is still required to achieve the 2030 and 2035 deadlines.</p> <p>With the infrastructure needed to be in place to attract take-up, private companies need to be incentivised to invest.</p>	<p>EV charging is still not profitable at present.</p> <p>Achieving the roll-out will take a shared risk and reward approach from private companies and local authorities working in partnership.</p> <p>New partnerships are being forged, and various ownership models and revenue share arrangements are emerging.</p> <p>However, there is no single common approach.</p>	<p>The Government is agnostic as to the type of zero emission vehicle (electric or hydrogen).</p> <p>This technology-neutral approach should lead to infrastructure for both.</p> <p>To date financial initiatives have focused on electric cars (as the most market-ready zero-emission technology).</p> <p>Strategy and funding for hydrogen is lagging behind and not expected until early 2022.</p>

Growth in public EVCI is primarily driven by commercial viability leading to significant regional disparities

Devices per 100,000 population



- Overall, the UK has started to see progress in its EV infrastructure, however as most of the provision of EVCPs has been market-led (except for Scotland), with CPOs and other businesses, such as hotels, choosing where to install devices, installation to date has varied across the regions.
- London and the South-East are leading the way for availability of charging device provision per 100,000 of population. Higher adaptation levels, and dense population (meaning that many car owners do not have access to off-street parking/home charging), make it an attractive market.
- Scotland is also ahead of many parts of the UK for EVCPs. Scottish councils benefit from automatic allocation of public funding for EVCI, with the amount dependent on their population density.
- North-East is in third place, with some commercial projects being rolled out by the Electrified Powertrain Technology Group, helping with expansion of EV technology in the region.
- Northern Ireland, Yorkshire and the Humber, and the North-West have the fewest number of EVCPs. The challenges include high upfront costs and uncertain demand mean it is still prohibitive to the development of a robust private market in these regions, suggesting more needs to be done by the government in these regions.

Conclusions: at a force level

A series of questions should be asked around key inputs:

Total cost of ownership

Local regulatory policies

Operational preparedness

Infrastructure availability

ROI requirements

What is the true cost of owning an EV and when total cost of ownership parity can be achieved?

What are the current government tax incentives, rebates, and grants?

Is existing public EVCI adequate to support on route charging?

What are requirements (Level 2 or DC fast charging, quantity)?

What are the compatibility considerations for EVCI?

Are there additional planning requirements for EVCI?

What is the closest substation, and could it support the new electric load?

Is there a plan to pay for the utility infrastructure, or is there some sort of a utility program roll out?

Is the utility going to put in local storage or generation?

Does the utility have the bulk power capability to support full fleet electrification in each service area?

Does the utility want to offer charging as a service? Will the regulatory environment support it? If so, does it have the operational technology systems and contracts to support charging, including demand response measures?

Next Steps

Next Steps

- NPCC endorse a national strategy for sustainability (decarbonisation)
- Define and agree clear expectations and deliverables with NPCC and align to APCC
- Establish 3 principal Workstreams and define their scope:
 - Strategy & Policy
 - Energy & Carbon Descent Plan
 - Fleet & EV Infrastructure
- Establish Project Governance Board, designate Senior Responsible Owner and Workstream Leads/Teams defined, and Terms of Reference drafted
- Integrate intelligent expert analysis to validate direction of travel, Workstreams and deliverables (and establish any financial requirements).
- Workstream teams established and national working groups convened
- Workstreams determine objectives, deliverables, and timelines



Questions

