Electric Vehicle (EV) Solutions

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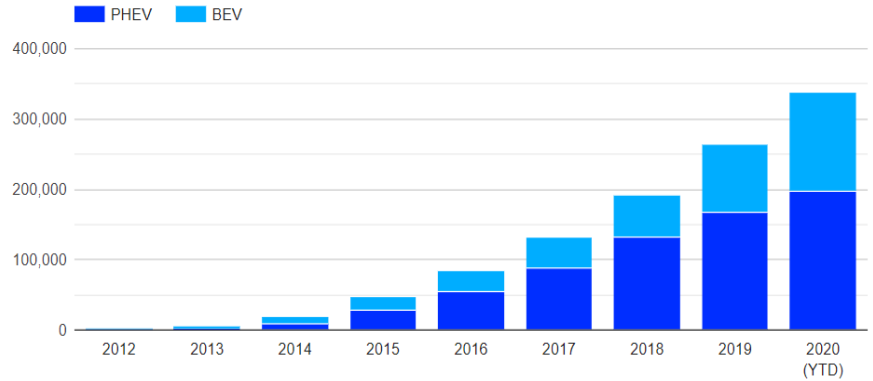
UK EV Market Overview

Vehicle Registrations

- To end of August 2020 c.**340,000** plug-in EVs with **142k BEVs** and **196k PHEVs** registered
- Despite Covid-19, **2020 is set to surpass 2019** performance of 72k vehicles
- EVs now hold **8.1% of market share** (2020 ave)

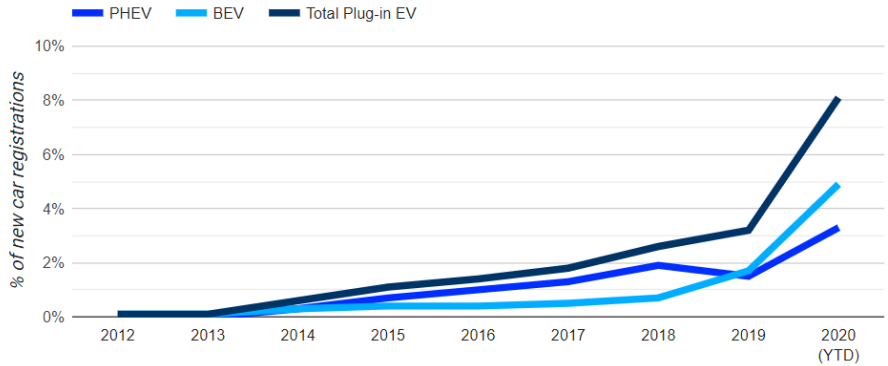
Cumulative number of plug-in vehicles registered in the UK (2012 to date)



Source: SMMT, OLEV, DfT Statistics. Updated: Sept 2020

ZAP MAP

Annual market share – plug-in vehicles market share of new car registrations (2012 to date)



Source: SMMT, OLEV, DfT Statistics. Updated: Sept 2020

ZAP MAP

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Source https://www.zap-map.com/statistics/

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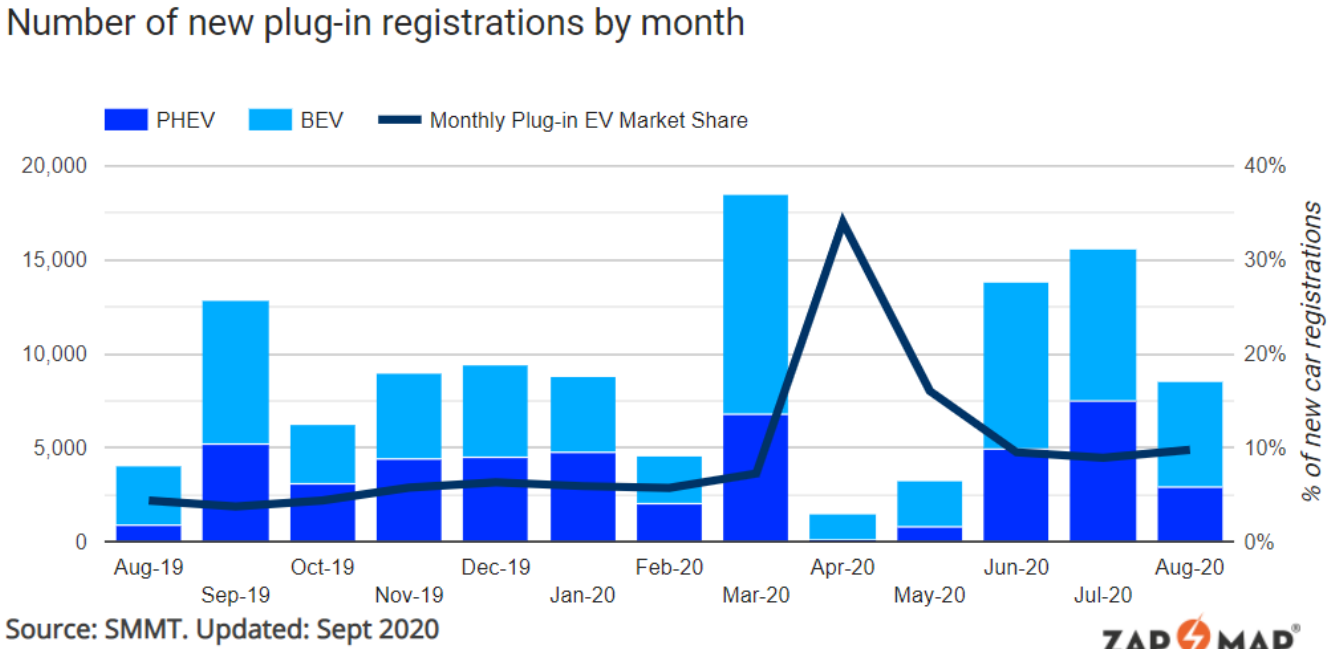
Covid-19 Impact on Vehicle Registrations

- **Significant impact in April and May, recovering in June**
- This is mainly due to Government **incentives on BIK tax** for fleet vehicles from April 20



Source https://www.zap-map.com/statistics/

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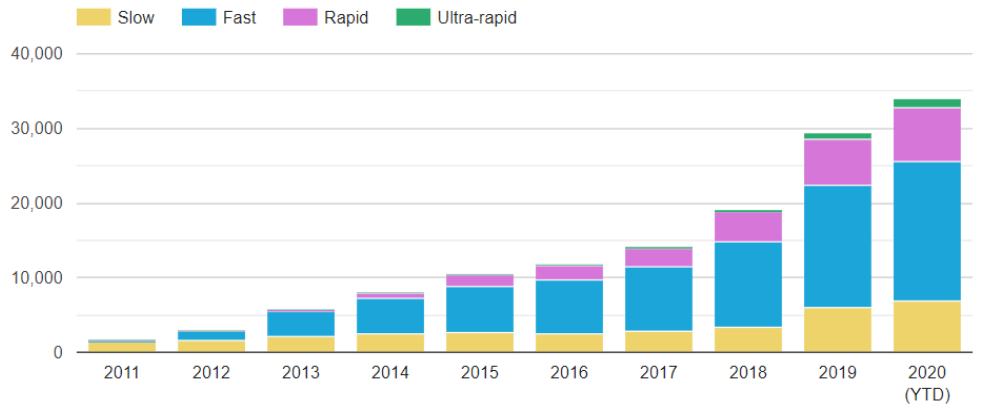
Public Charging Infrastructure

- **Infrastructure is increasing rapidly** with significant investment in both public and private sectors, driven more recently by a **post-Covid-19 recovery focus**
- **c.34k public sockets** as at Sept 20
- There are more public EV chargepoints than ICE forecourts in the UK

33983 CONNECTORS	19547 DEVICES
12292 LOCATIONS	416 LAST 30 DAYS

Number of public charging points by speed (2011-to date)



Total connectors: 33983, Updated: 15 September 2020

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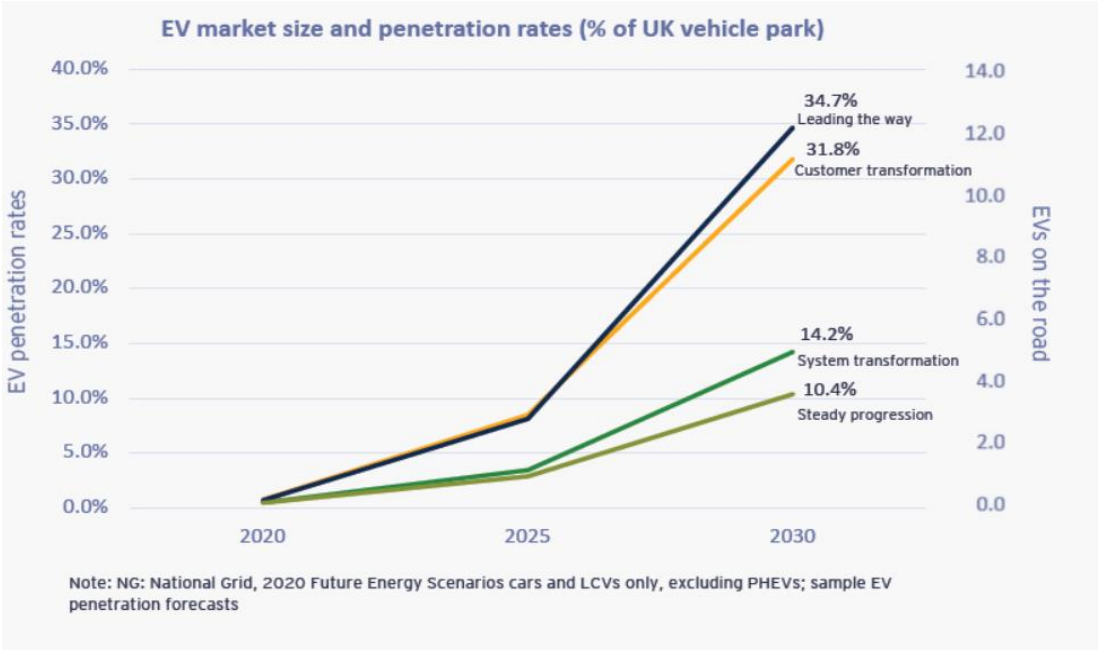
Source https://www.zap-map.com/statistics/

ZAP MAP EDF

Growth Forecast

- Number of **EVs** on the road is **forecast to grow at 0.2-0.5m p.a. until 2025** and then more quickly at **0.5-2.0m p.a. in 2025-2030**
- **2030 EV penetration** forecasts range from **10.4% to 34.7%**



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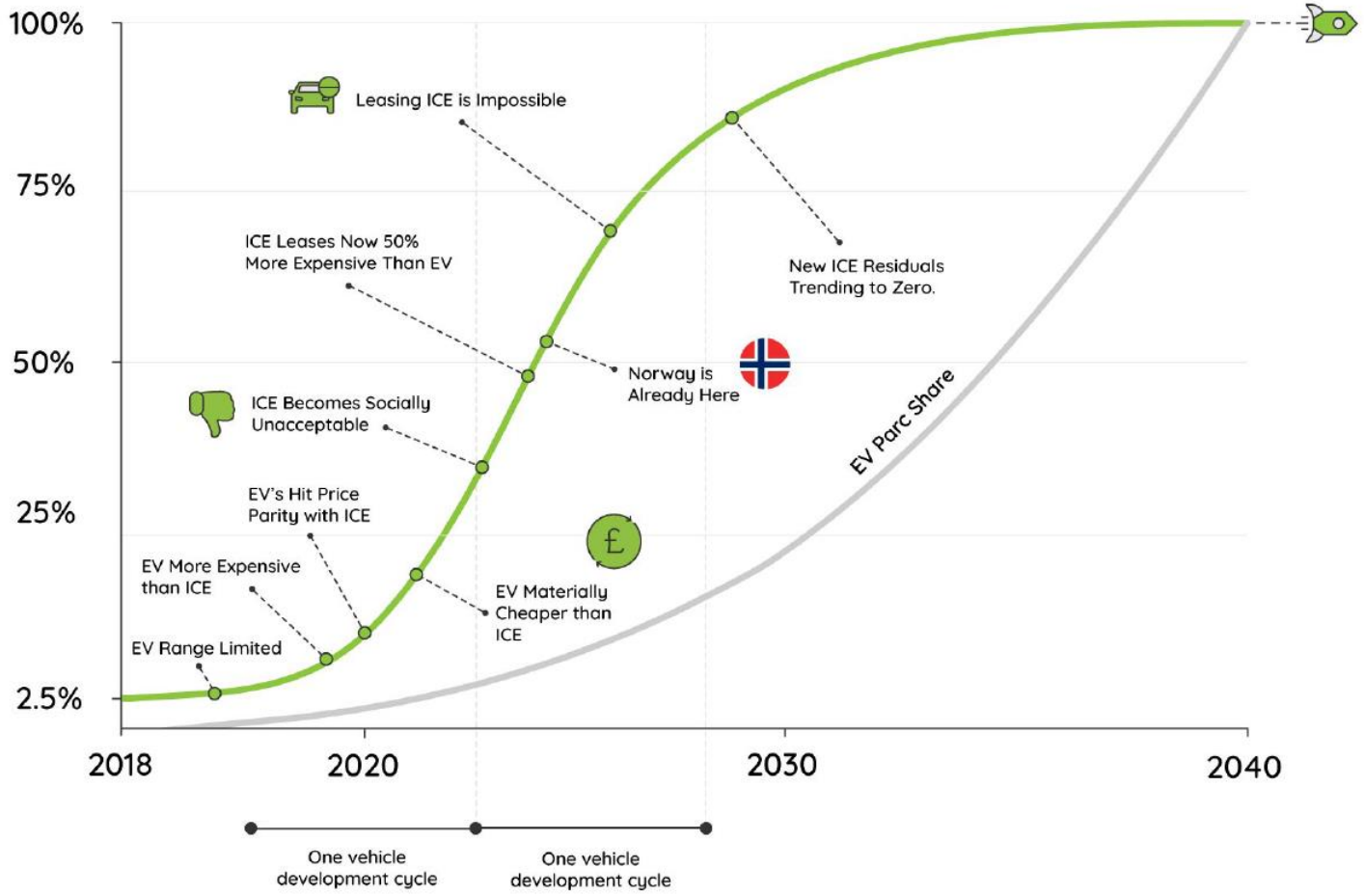
Market Direction



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Public Sector Fleet Insight - Organisation Behaviour

- **Councils aim to lead on electrification but are behind on plans**
  - Budget is not a major obstacle for electrification as it is seen as a priority
  - However, the department accountable for funding the project is often in dispute

- **Front-line emergency services are reluctant to electrify their blue-light fleet**
  - High risk associated with running out of charge
  - Large number of old locations with potentially unsuitable connections
  - Very short downtime due to shift pattern (1-2h / 24h) – rapid charging required

- **Available EVs have the range councils need**
  - Councils operate within small geographic areas that can be covered by current LCV battery ranges
  - Major opportunity for councils to catch up with plans over 2–3 years

- **Councils have unique influence on public charging**
  - Councils can influence the public charging infrastructure in their areas
  - Free parking with EV charge points is negatively affecting council income
  - Fleet managers need to manage stakeholders across the council

Public Sector Fleet Insight - Government & Regulation

- **Prerequisite for green credentials for public work is driving electrification**
  - Procurement policies incorporating sections on environmental impact
  - Also emerging in the private sector

- **Uncertainty around what government support is available**
  - Uncertainty around what type of support is available from government and how this would be accessed
  - Confusion over which grants are accessible and how

- **More government support is necessary to build charging infrastructure**
  - Public charging infrastructure is still lacking and cannot support operations reliably. More needs to be done to promote the development of public charging

- **Government support is perceived as unreliable as it could be withdrawn**
  - Concern that support could be removed leading to higher than anticipated costs. E.g. some fleet managers are doubtful the 0% BIK for BEVs will be valid until 2025

Project Delivery - Government Support

Government support is strong for businesses to make the switch

- **0% Benefit in Kind** company car tax on EVs Apr 20 - Mar 21
- Up to **£14,000 Workplace Charging Scheme** grant.
- **100% First Year Allowance** on expenditure on charge points or bought EVs
- Up to **£3,500 (car)** and **£8,000 (van)** grant off the cost of your business buying an EV with the **Plug-in Car Grant**
- **On-street charging grant (ORCS)** for residential projects. Up to **£100k OLEV funding per project**
- Exemptions from:
  - **Fuel duty / vehicle excise duty**
  - **Congestion charges / ultra-low emission zones**

HM Revenue & Customs

Office for Low Emission Vehicles

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Workplace Charging Scheme

The Workplace Charging Scheme (WCS) is a government scheme offered by the Office for Low Emission Vehicles (OLEV).

The scheme enables any business, charity or public authority to claim a grant of up to £14,000 (£350 per charging socket, max 40 sockets) towards the cost of installing EV charge points, providing they have dedicated off-street parking for staff.

Office for Low Emission Vehicles

The maximum number of sockets is 40. These can be across several sites. Subsequent vouchers can be applied for, as long as the cumulative total does not exceed 40 sockets.

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EDF EV Capability & Service

Why EDF?

EXPERIENCED

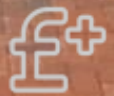
We installed our first EV charging points in London in 1999 and powered the EV charging network for the London 2012 Olympic and Paralympic games.

INVESTED

Substantial Investment in EV technologies in line with EDF Group's commitment to become Europe's leading e-mobility energy company by 2022.

TRUSTED

To help electrify the transport needs of our customers. For example at Decathlon's Northampton depot, and supporting Royal Mail's fleet upgrade.



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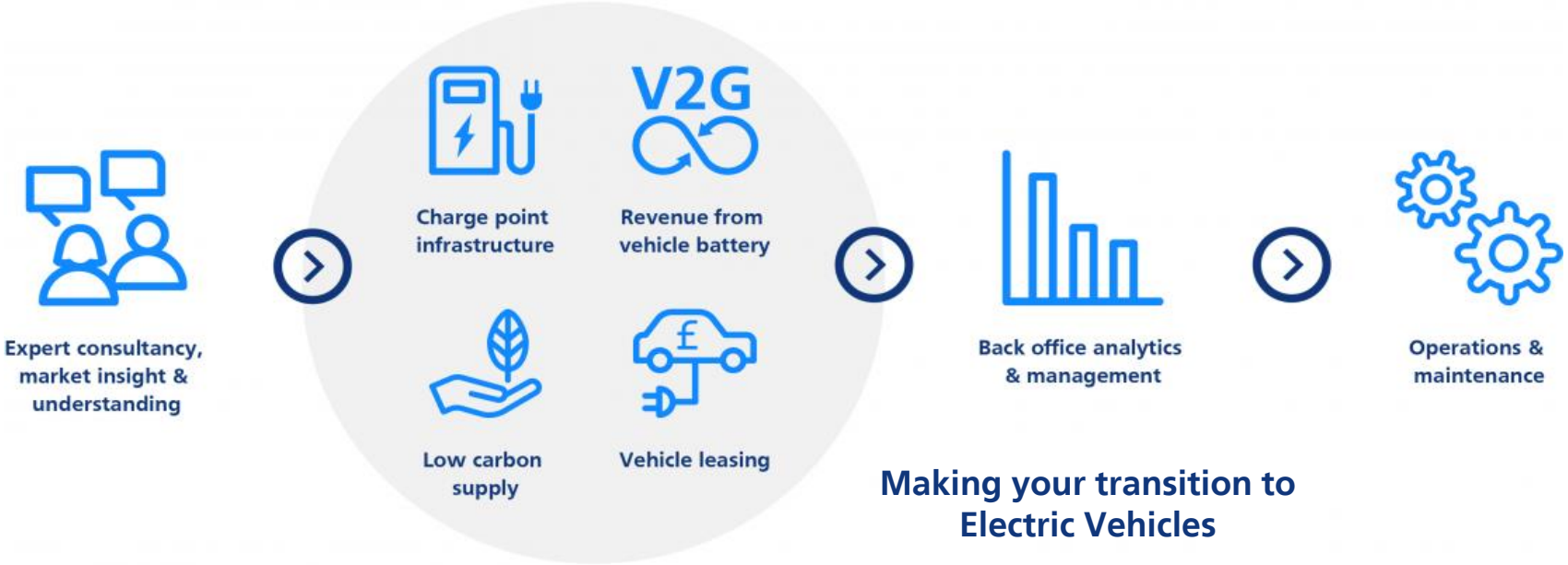
What we offer

Our end to end EV solution for your business

– advice and services all under one roof



Making your transition to Electric Vehicles

EASY+SIMPLE

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EDF can support your whole EV journey

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Contract Routes & Finance Options

- CCS EV Infrastructure Dynamic Purchasing System - RM6213
  - Enables the procurement of feasibility services hardware, installation, maintenance and back office.
- Direct purchase (sub-£50k project spend).
- Other relevant frameworks as appropriate for your organisation.

- Finance options can include:
  - Direct purchase (capex).
  - Leasing.
  - Financing – full or part funded.

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Fleet Feasibility Tool

EV Fleet Feasibility Tool

Fleet Summary Report

	Pattern 1 6 vehicles	Pattern 2 4 vehicles	Pattern 3 5 vehicles	Pattern 4 5 vehicles	Pattern 5 3 vehicles	Pattern 6 3 vehicles
Total trips 1250	125	120	155	140	230	255
Total fleet mileage 369,000 ml	40,000ml	60,000ml	25,000ml	65,000ml	94,000ml	85,000ml
Suitability to electrify ● Suitable for 100% of all trips (A) Seek advice	●	●	●	(A)	●	●
Suitable battery capacity	40 kWh	60 kWh	40 kWh	More than 90 kWh Consider PHEV solution or en-route charging	90 kWh	74 kWh
Environmental impact (CO_2 savings) 20T CO_2	3T CO_2	4T CO_2	2T CO_2	3T CO_2	5T CO_2	3T CO_2

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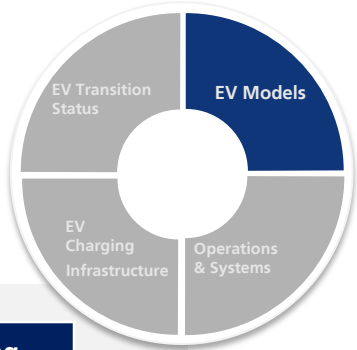
EV Fleet Feasibility Tool

Electric Vehicle Recommendations

for your fleet



Model	Battery Capacity	Range	Price (Lease)	Fuel Saving per Pattern
Nissan Leaf	60 kWh	X	X	X
Renault Zoe II	52 kWh	X	X	X
Peugeot e208	50 kWh	X	X	X
Nissan ENV 200	40 kWh	X	X	X
Mercedes eVito	41 kWh	X	X	X
Arrival T4	74 kWh	X	X	X
Mercedes eSprinter	55 kWh	X	X	X
LDV EV80	56 kWh	X	X	x

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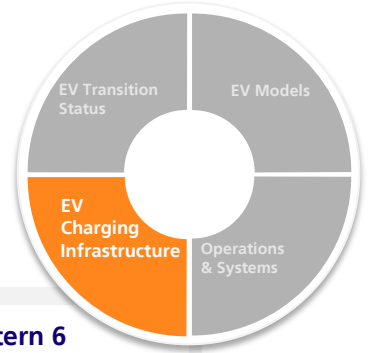
EV Fleet Feasibility Tool

EV Charging Infrastructure

Recommended charge point types and volumes for your EV fleet



	Pattern 1 6 vehicles 40 kWh Nissan Leaf	Pattern 2 4 vehicles 40 kWh Nissan Leaf	Pattern 3 5 vehicles 40 kWh Nissan e-NV200	Pattern 4 5 vehicles 40 kWh Nissan e-NV200	Pattern 5 3 vehicles 74 kWh Arrival T4	Pattern 6 3 vehicles 74 kWh Arrival T4
At work	2x 11kW	3x 7kW	4x 7kW	2x 22kW	2x 22kW	1x 50kW
At home (per employee vehicle)	4x 7kW	4x 7kW	5x 7kW	2x 11kW	Not applicable	Not applicable

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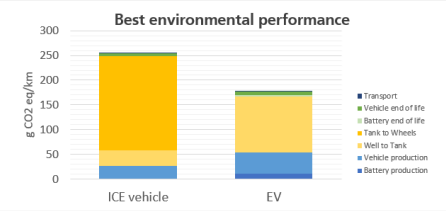
EV Fleet Feasibility Tool

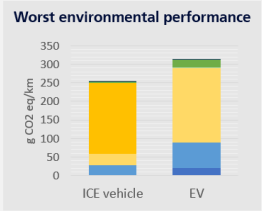
Annexe 1

Environmental assessment

The environmental analysis calculation compares the Green House Gas (GHG) emissions of the vehicles over their whole life cycle. The unit is equivalent carbon dioxide, or "CO2 eq": this unit captures emissions of all GHG, converted to a CO2 amount depending on their global warming potential. The diagram presents the potential GHG savings per km on a like for like usage basis if the current vehicle is replaced by its EV equivalent. We present the environmental analysis for each pattern of vehicle.

In the below diagrams presenting the lifecycle overview, "Well-to-Tank" means emissions from the extraction of the fuel to its distribution (or the production and distribution of the electricity). "Tank-to-Wheels" represents the vehicle tailpipe emissions (equals to zero for EVs).

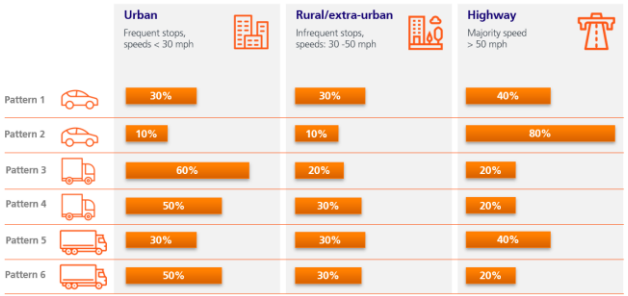




Annexe 2: Benchmarking

(charging power * battery capacity)

Driving Pattern Analysis: Journey Types



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Case Studies

Royal Mail Group signed a Framework contract

for EDF Energy to become a provider of EV charging solutions for RMG.

This includes a catalogue of electric vehicle charging solutions to support the **electrification of the first 1,000 vehicles** in their 50,000 vehicle fleet (the largest fleet in the UK).

The first 200 sockets have already been installed.

Framework contract also includes option for V2G chargers.

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Charge Point roll-out at EDF Sites

More than 300 Pod Point charging points to be installed across 32 sites, including all EDF Generation sites, as part of our commitment to the **EV100 program**.

CLIMATE GROUP
EV100

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On-street Residential Chargepoint Scheme (ORCS)

On-street Residential Chargepoint Scheme (ORCS)

£20m of OLEV funding, for projects installed and commissioned by **31st March 2021**

Scheme grants 75% of the capital costs of procuring and installing the chargepoint and an associated dedicated parking bay (where applicable)

Maximum cost per chargepoint no greater than **£7,500**, and is limited to extra costs related to electrical installation or grid connection constraints

Chargepoints costing over **£6,500** attracted higher application scrutiny

Previously capped at **100K**/project of OLEV funding, however OLEV is now encouraging large projects. 50% of successful applications during 2020 have been larger than £100k

Applicable to On-Street parking and Council owned car parks

I don't buy petrol stations

40,000

illness

Council budgets are stretched

DECLARE A CLIMATE EMERGENCY

Clean your air

Provide an amenity that levels the playing fields

40 : 60

272 / 408 councils
8 city regions

NET ZERO 2050

Seize their subsidies

2020/21	£20m
Project	£100,000
Charge point	£6,500

ubitricity

Introducing Ubitricity

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anywhere
ubitricity

existing capacity

minimal civils

retain flexibility

low maintenance

convenient places

low carbon friendly

road + energy + lifestyles

ubitricity

Introducing Pod Point

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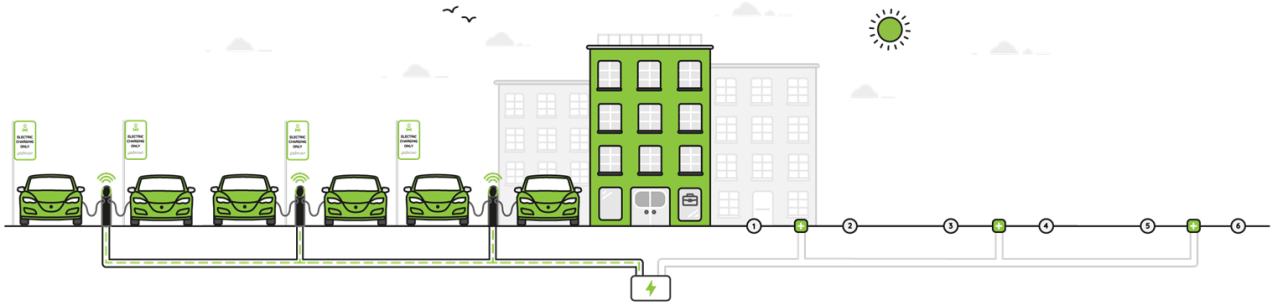
Benefit Summary: Driver & Host



Driver

Always available; easy to use.

1: Always Available:
Ready to charge - always available

2: Easy To Use:
ICE free zone, appropriate signage and baymarking

3: Smart:
Digital wayfinding and live unit status

Host

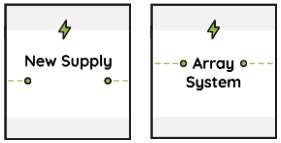
Easily scalable & cost effective.

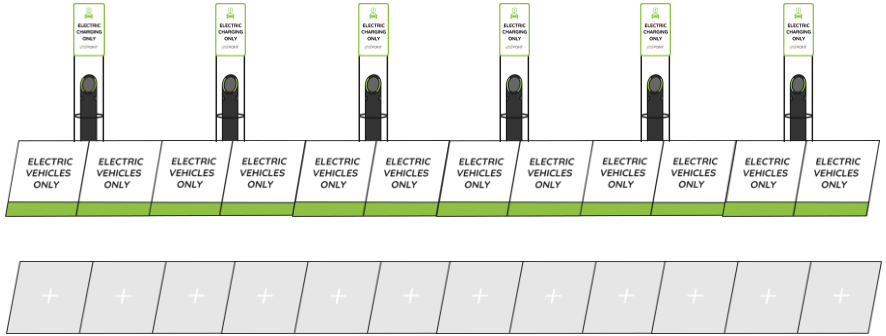
1: Positive Brand Experience:
Referred positive charging experience

2: Customer Retention:
Drive habitual behaviour and loyalty

3: Increased Dwell Time:
Affinity drives a longer stay

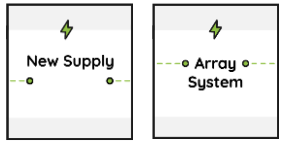
Existing Typical Pod Point Package

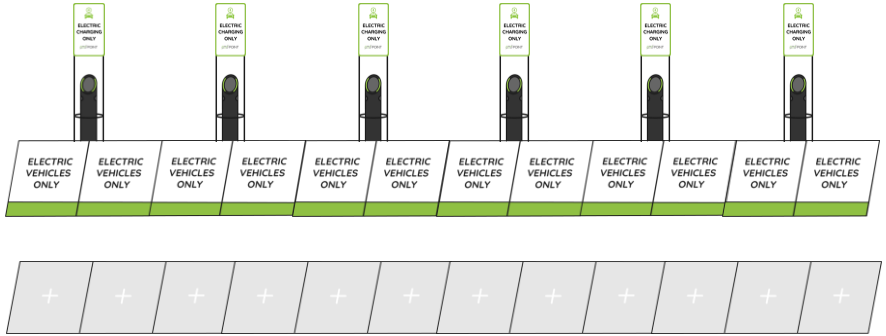




£60k v £100k
£10k v £6.5k

Proposed ORCS-Compliant Package





£76k v £100k
£6,336 v £6.5k

£2.5k £2.5k £2.5k £2.5k £2.5k £2.5k

pod POINT

Act now to beat the deadline!

No matter what stage of your organisation's EV journey, EDF can support you.

Speak to your Account Manager

email the EV team directly at **evsolutions@edfenergy.com**

Website: https://ccs.edfenergy.com/content/framework-ev

Thank You

