Northern Powergrid

Clean Air Zones and Low Emission Vehicles Roundtable

Siobhan Barton
Head of Stakeholder Relations

Tuesday 7th May

Our Stakeholder-led Roundtables

- Today is an opportunity to hear from you, our stakeholders, as we discuss ‘complex issues’ we are thinking through
- We are hosting a series of 6 roundtables with a wide range of stakeholders from across our regions.
- We welcome your challenge, insight and guidance as today we discuss:
  - The introduction of Clean Air Zones around the cities in our region and the implications for companies such as utilities and retailers
  - How we transition our fleet of vehicles to ultra-low or zero emissions vehicles
  - How we enable and encourage drivers to switch to ultra-low emission vehicles
  - The challenges and opportunities of developing the optimal EV charging infrastructure
- There are no right or wrong answers and we will actively encourage your contributions throughout the day.
- Your feedback and challenge helps shape the priorities of our annual business plan and our future planning.

Meet the Team

Geoff Earl, Director of Safety, Health and Environment

Siobhan Barton, Head of Stakeholder Relations

Iain Miller, Head of Innovation

Anne-Claire Leydier, DSO Transition Manager

Gordon Walker, Environmental Manager

Alison Grimes, Fleet Contract Manager

Lin Walker, Logistics Manager

Anna Pearson, Fleet Innovation & Environment Manager, Royal Mail Logistics

Agenda

Agenda	Lead	Timings
Conference Welcome	Siobhan Barton	09:30 – 09:40
Northern Powergrid: Powering our region	Geoff Earl	09:40 – 09:55
The challenges and opportunities of transitioning a fleet to EV's	Anna Pearson, Royal Mail	09:55 – 10:15
Roundtable Discussion: The introduction of Clean Air Zones around the cities in our region and the implications for companies such as utilities and retailers	All	10:15 – 11:00
Break		
Roundtable Discussion: How do we transition our fleet of vehicles to ultra-low or zero emission vehicles? How do we enable and encourage drivers to switch to ultra-low emission vehicles	All	11:15 – 12:00
Roundtable Discussion: The challenges and opportunities of developing the optimal EV charging infrastructure	All	12:00 – 12:45
Summary and next steps	Geoff Earl	12:45 – 13:00

House keeping

No planned fire alarms

Mobiles to silent please

- We will have a break at 11am
- Please stay for lunch after the roundtable which will be served at 1pm

Northern Powergrid

Responding to the growth of Electric Vehicles

Geoff Earl
Director of Health, Safety and the Environment

Northern Powergrid – our business

Northern Powergrid is responsible for the electricity network that keeps the lights on for 8 million customers across the Northeast, Yorkshire and northern Lincolnshire.

Our dedicated team of more than 2,700 employees operate 24 hours a day, 365 days a year – no matter what the circumstances – to maintain a safe, reliable and efficient electricity supply.

Our customers pay their energy supplier for the electricity they use. A small proportion of the money they pay as part of their electricity bill comes to us to cover the cost of keeping the network running safely, reliably and efficiently.

126 substations
with APRS installed to improve performance.

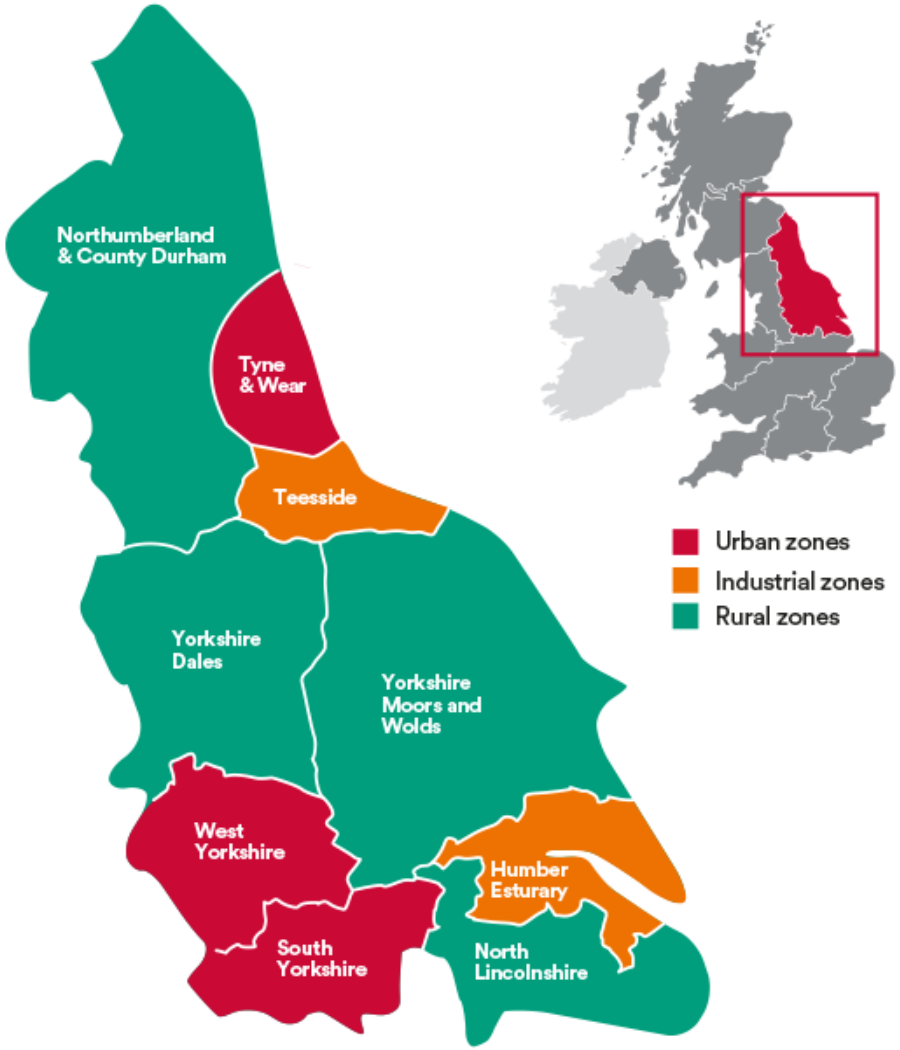
98 sites
added to our ED1 flood defence programme.

1.6GW
of capacity released for customers to connect generation via voltage reductions in the ED1 period to date.

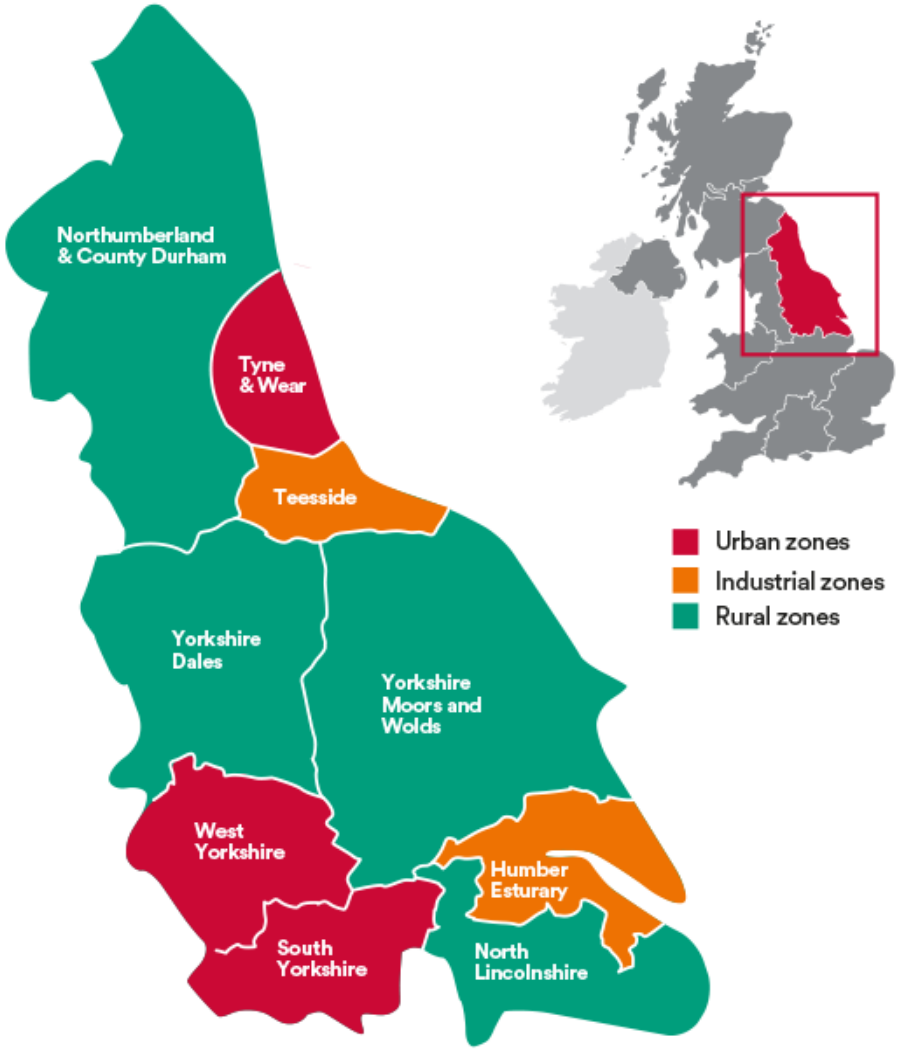
8 million
customers.

Over 2,700
employees.

3.9 million
homes and businesses powered.



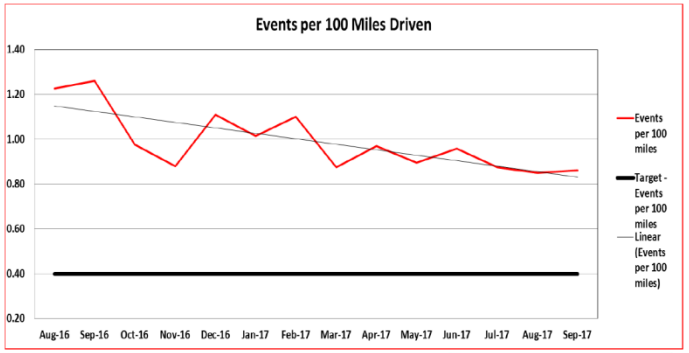
Northern Powergrid – our fleet

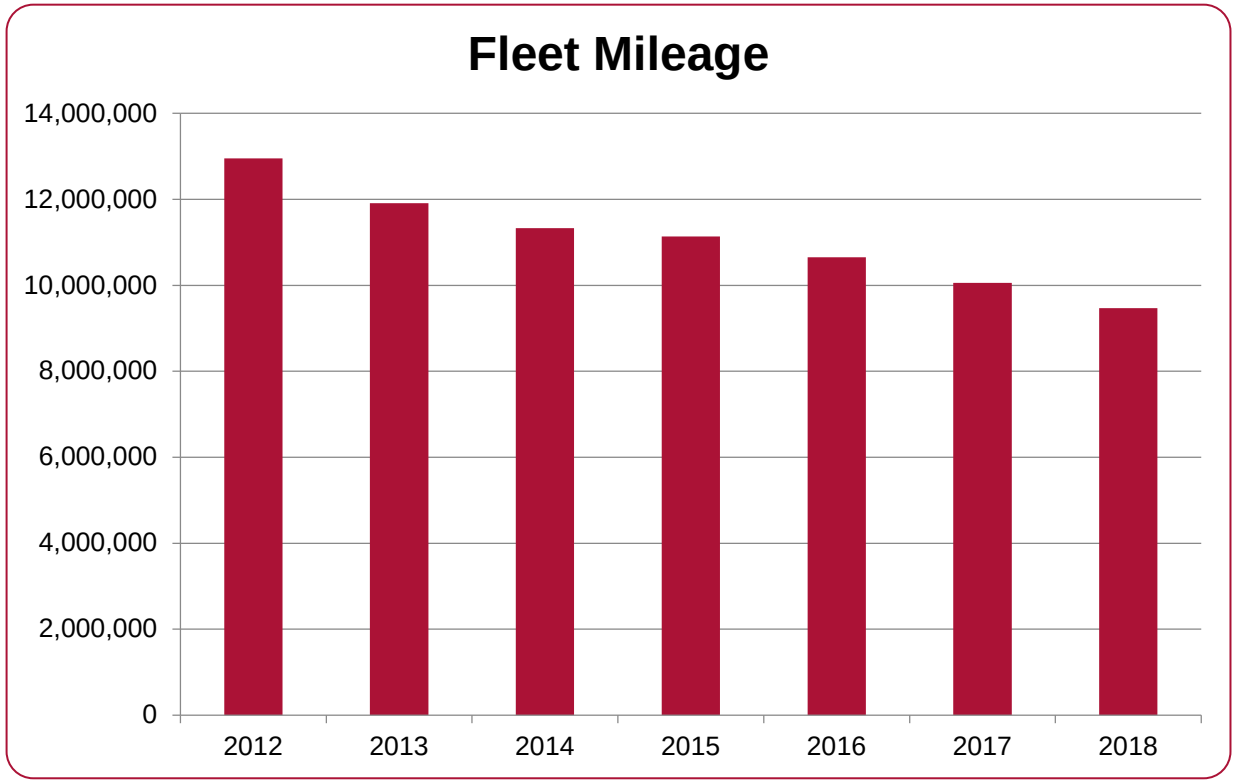


- 814 Fleet Vehicles monitored by Telematics
- 950 car users
- > 20m business miles p.a.

Northern Powergrid – our CO2 contribution

- 7,720t CO2e p.a.
- 42% of our total 18,573t CO2e BCF
- 27% reduction since 2012





The Road to Zero Strategy

In 2017, the UK Government announced its plans to decarbonise the transport sector in its **Road to Zero Strategy,** outlining three key targets:

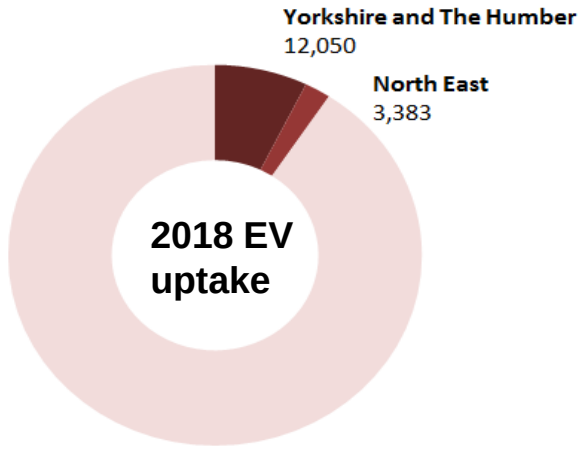
- At least 50% of new cars and 40% of new vans to be ultra low emission by 2030
- A ban on new petrol and diesel car sales by 2040
- Almost all cars on the road to be zero emission by 2050

What does that mean for us?

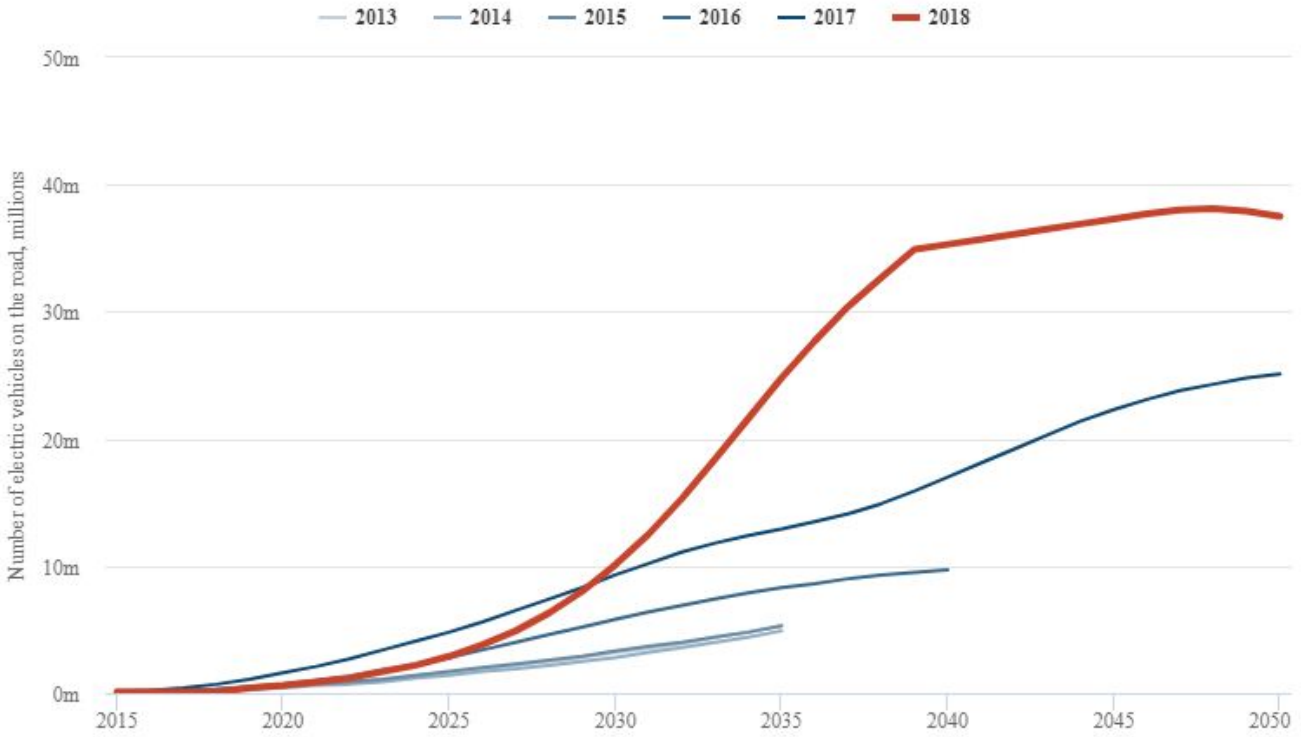
What does that mean for us?

- Planning and executing a cost effective phased transition to Ultra Low Emission and Electric Vehicles across our fleet
- Developing an infrastructure capable of supporting the region's charging needs
- Operating the network efficiently, day and night, 365 days per year

Electric Vehicles – expected growth



At the end of 2018, there were 166,243 plug-in vehicles registered in England. Of these, 2% were registered in the North East and 7% in Yorkshire and The Humber, with more than 3,000 charging points installed across our DNO area.

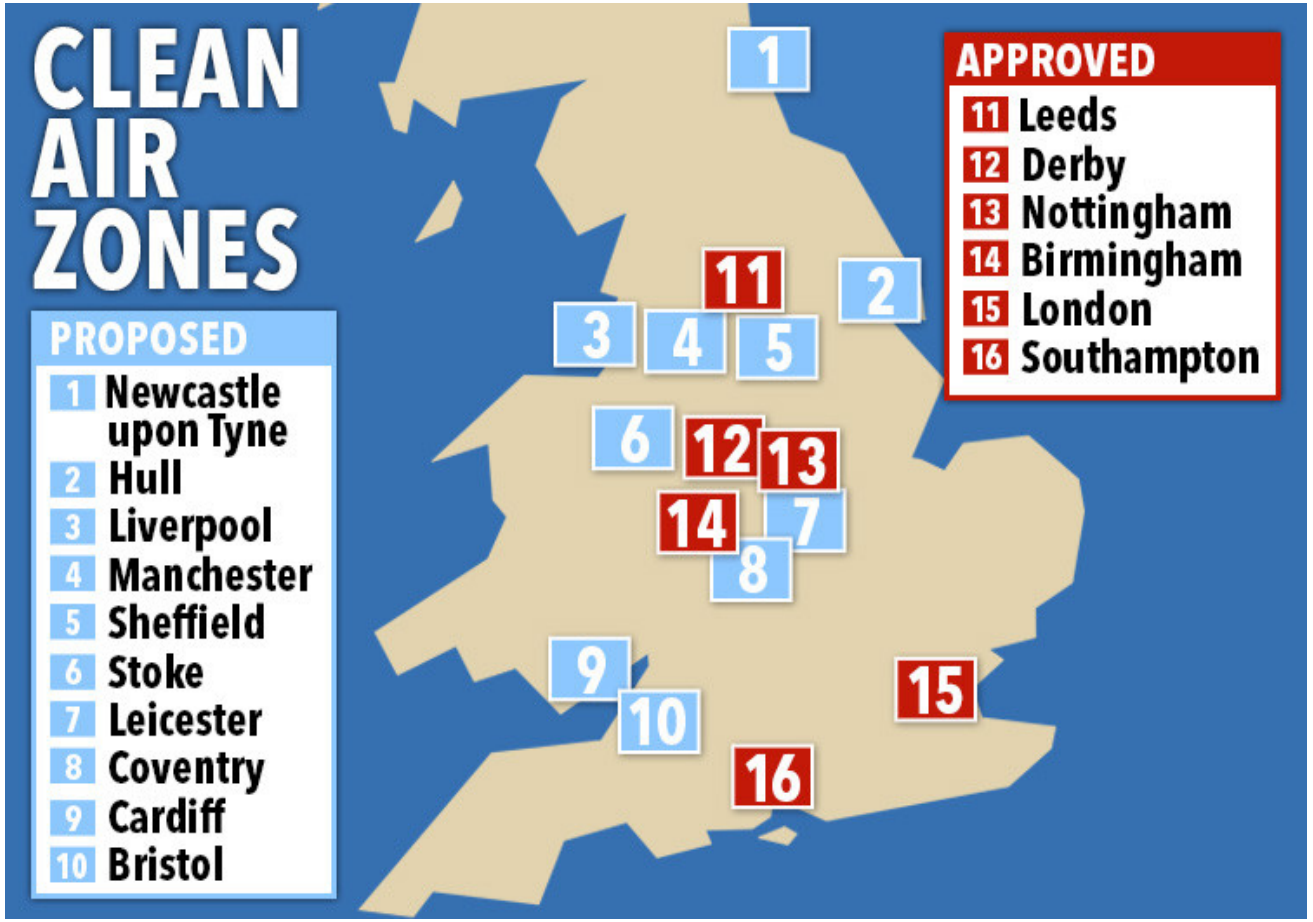


- We expect the number of EVs to rise dramatically over the next few decades in line with Government ambitions.
- We now think that EV uptake will have a steeper trajectory and much sooner than previously predicted – as shown by the red line on the graph opposite.
- That means that overall demand on our network will rise much faster than we previously thought.

Clean Air Zones

Government's **Road to Zero Strategy** and **Clean Air Strategy** requires Local Authorities to introduce clean air zones to incentivise residents and businesses to switch to zero emission vehicles through penalties and incentives.

- Leeds Clean Air Zone will come into force on 6 January 2020, for buses, coaches, HGVs and taxis.
- Vehicles below either Euro 4 petrol or Euro 6 diesel specification will pay a daily charge to enter the zone.
- Petrol-hybrid and electric vehicles will be exempt.



In summary

- We have a modern “clean” fleet so we are well placed to support the Low Emission Zones.
- We’re taking cautious yet deliberate steps towards our fleet transition.
- Despite being in an envious position, our geography and 24/7 operations presents a challenge to our transition.
- Our challenges are no doubt mirrored by those faced by our customers and stakeholders.

Transition to Electric Vehicles

Challenges & Opportunities

The UK's largest vehicle fleet

41,756 LCVs

6,005 LGVs & Trailers

4,582 Cars

Operating from 1,400+ sites

Supported by

Royal Mail

Royal Mail's fleet challenges

- Universal Service Obligation (USO).
- Nationwide coverage.
- Infrastructure, buildings and space.
- Growing parcels business, larger vehicles.
- Rented versus owned buildings.
- Mileage ranges from 10 miles to 1,000 miles per day.
- Utilisation – a vehicle can be in use for up to 20 hours a day.
- Seasonality (e.g. Christmas nearly 7,000 vehicles hired).

Deliver to over 30m addresses, 6 days a week

Handle 14.3bn letters and 1.4bn parcels a year (2018-19)

Corporate fleet challenges

- Legislation:
  - Inconsistency in dates – they keep moving!
  - Local versus National – different levies and penalties.
- Vehicle availability – Not enough now, so when?….Manufacturers aligning to introduction of Clean Air For Europe (CAFE) in 2020.
- Investment cost – nearly all grants are geared for home user, driver and public services (taxis), upgrading depots authorised supply capacity can be cost prohibitive and can penalise early adopters.
- Vehicle charging infrastructure:
  - Inconsistency – different cables, payment cards, rates.
  - Reliability and availability.
- Behaviour and Planning – no longer “here is the key, off you go”.

Royal Mail

The good stuff

- Momentum is gathering and more public charging places are on offer.
- Government grant extended now for workplace charging posts.
- More innovative projects with DNOs and private companies resulting in shared learning e.g. Optimise Prime, wireless charging.
- More sustainable innovative solutions for fleet problems e.g. mobile battery charging.

Royal Mail

More help is needed

- One charging mechanism and infrastructure – interoperability (OCPP & OSCP) e.g. ATM machine and the Link network.
- Some logic behind how authorised supply capacity at sites is managed
- Risk management for brown-outs at key locations e.g. Heathrow
- Clarity on pathway engagement with DNO, standard routes and communication, how long will an upgrade take if it is necessary?
- More communication / assistance on what an operator can and can't do on site. "I'm a fleet manager not a property and energy expert."

Royal Mail

Our current programme

Positive impact of our electric vans

Fuel saving

Avoided CO_2 emissions & NO_x emissions

Avoided £3.9k/year per vehicle on ULEZ/CAZ charges

50% reduction in maintenance costs per mile

Really positive driver feedback

Royal Mail

Health and safety

- **300v system**
  - Vehicle checks
  - Flood water
- **Vehicle charging**
  - Forward parking
- **Regenerative braking**
- **Acceleration**
- **Automatic gearbox**
- **Maintenance**
- **Breakdown procedures**

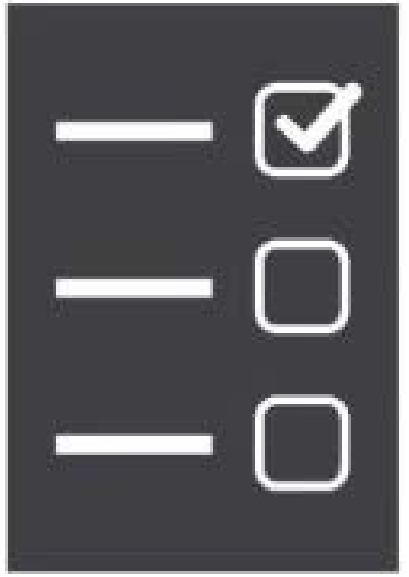
Our 12-point plan

Stakeholder engagement	Initial trials	Selection of vehicle supplier	Selection of charging-post supplier/installer
Maintenance & breakdown provision	Operational site selection	Groundworks	Health & safety
Driver training	Coordinating deployment	Operational feedback	Knowledge share

Royal Mail

Learning points from our EV deployment

- ☑ Buying the vans is the easy part – deploying the infrastructure will take most of your time.
- ☑ Check your authorised supply capacity.
- ☑ Appoint a dedicated project manager - don’t try to do it all. yourself, especially if you have a day job.
- ☑ Expect it to take longer than you thought.
- ☑ Expect it to cost more than you thought.
- ☑ Secure a dedicated budget – don’t assume business-as-usual budgets will cover the cost.
- ☑ Work closely with your suppliers – they won’t want to be associated with a failed deployment.
- ☑ Manage stakeholder expectations and try to be realistic.



Royal Mail
Fleet


Royal Mail

Roundtables

The introduction of Clean Air Zones around the cities in our region and the implications for companies such as utilities and retailers

Break

Roundtables

How do we transition our fleet of vehicles to ultra-low or zero emission vehicles?

How can we enable and encourage drivers to switch to ultra-low emission vehicles?

What are the challenges and opportunities of developing the optimal EV charging infrastructure?

Summary and next steps

Forthcoming Events

The challenges and interdependencies of decarbonising heat

- Join us as we discuss what strategy / plans you have in place to begin the decarbonisation of heat? How can we best support you in this transition? What is missing to enable you to begin switching to low carbon heat? Friday 10th May, 09:00 - 12.30 at the Park Plaza, Leeds

Climate Change: the impact on regions and organisations

- Join us as we discuss the nature of the issues and risks organisations face as part of their climate change adaptation strategy and how they are planning to respond to those issues and risks. Monday 13th May

How do we build a smart energy system centred around the needs of our customers?

- Join our roundtable as we bring together energy retailers and providers of energy services to initiate the sharing of the vision for the future of energy markets, their mechanisms, and their priorities. Wednesday 15th May, 09.30 – 13.00 at the Barbican Centre, London

Annual Stakeholder Summit

- Friday 29th November at Cloth Hall Court, Leeds

Thank you