Executive Membership

LOGISTICS UK

Dispelling Preconceptions About Fleet Electrification

VEV

Executive Membership

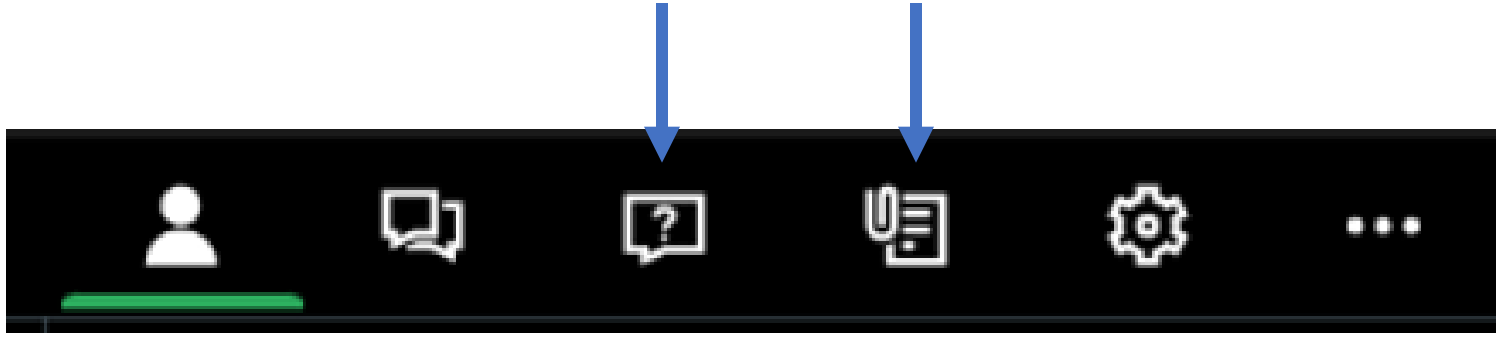
LOGISTICS UK

Chair’s introduction

Michelle Gardner
Deputy Director - Policy, Logistics UK

Housekeeping

- If you have any technical issues email events@logistics.org.uk
- The webinar will be available on demand for all registered delegates.
- Connect to **Sli.do** for interactive polls: **#VEV24**
- Don’t forget to download your handouts.
- Ask your questions throughout the event using Q&A facility and we will answer them at the end of the webinar.



Agenda

1. **Introductions and scene setting**
   Michelle Gardner, Deputy Director - Policy, Logistics UK

2. **Dispelling Preconceptions:**
   - High Costs of Electrification.
   - Limited Vehicle Range and Charging Challenges.
   - Overwhelming Power Demand and Infrastructure Costs.
   - **Grid Limitations Preventing Full Electrification**.

   Emma Durham, Energy Product Manager, VEV
   George Hobbs, eMobility Lead Product Manager, VEV

3. **Panel Discussion and Q&A: Addressing Industry Concerns**

Our speakers

Emma Durham
Energy Product Manager
VEV

George Hobbs
Data Lead
VEV

Executive Membership

LOGISTICS UK

Introduction and scene setting

Michelle Gardner
Deputy Director - Policy, Logistics UK

Executive Membership

LOGISTICS UK

Our mission

Logistics UK supports, shapes and stands-up for safe and efficient logistics.

Efficient logistics is vital to keep Britain trading. With Brexit, COVID-19, new technology and other disruptive forces driving change in the way goods move across borders and through the supply chain, logistics has never been more important to the UK.

A champion and challenger, Logistics UK speaks to Government with one voice on behalf of the whole sector, with over 20,000 members from the road, rail, sea and air industries, as well as the buyers of freight services.

Climate change and net zero

As net zero deadlines approach, the logistics sector must adapt to meet decarbonisation targets. Although progress is being made and greenhouse gas emissions are decreasing, there are still significant obstacles.

These include high costs for low carbon fuels, lack of sufficient infrastructure for electrification, and inconsistent regulations.

Of respondents to the Logistics Industry Survey 2024, 62.9% planned to invest the same in alternative fuels in 2024 as last year and 28.8% planned to invest more.

Climate change is causing more frequent and intense extreme weather events too, which affect operations across all modes of transport. It will be crucial to adapt and future-proof the transport and logistics system to ensure the continued delivery of goods.

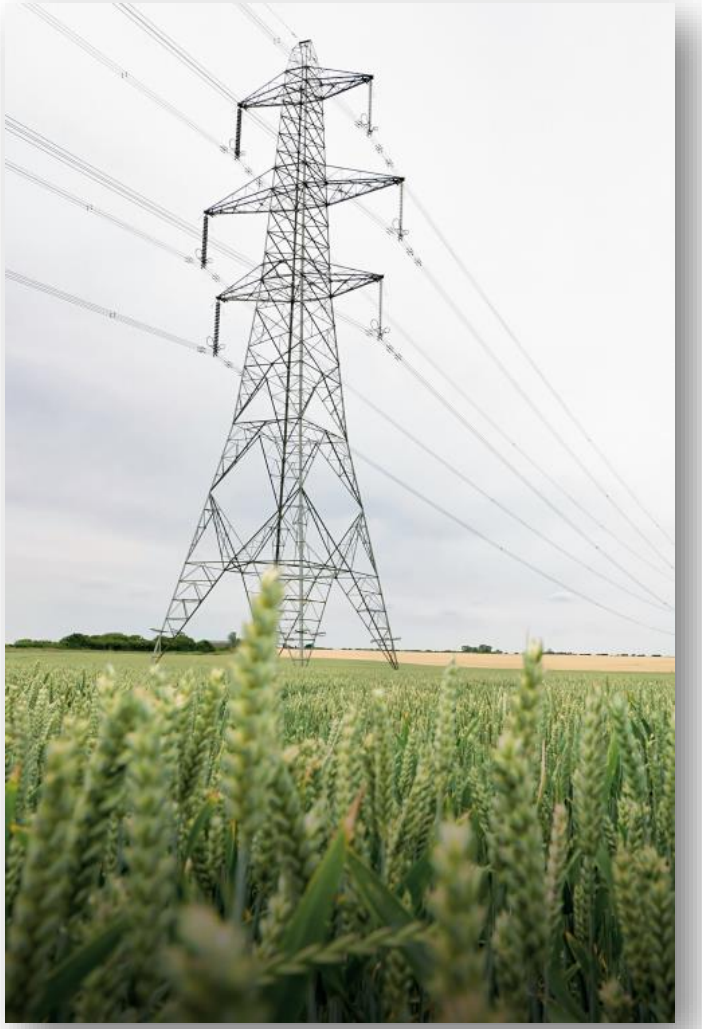
The report summary is available as a handout.

Logistics UK EV Report - Key findings

- 62% of those interviewed plan to decarbonise their van fleets by 2030.
- Electric van use is growing rapidly and is seen as the answer for the decarbonisation of most vans and lighter HGVs.
- Widespread recognition that adequate power supplies and public charging network are key to successfully electrifying fleets.
- Attitudes to vehicle capabilities are diverging; experienced operators work with the capability of the vehicles and recognise that like-for-like replacement of existing diesel vehicles is not always possible.

Logistics UK EV Report - Electricity supply

- A third of respondents cited power supply infrastructure as one of their biggest challenges.
- Some operators estimated costs of upgrading their energy supply to be over £1 million.
- There is also significant concern about the current volatility of energy prices.
- DNOs need to have a greater understanding of logistics operators' electrification plans.

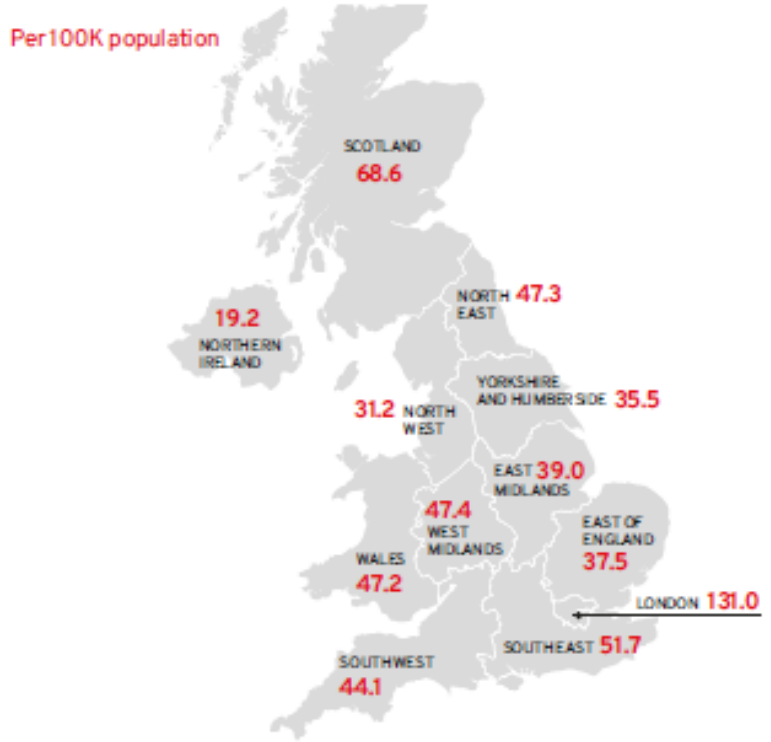


Logistics UK EV Report - EV chargepoint infrastructure

- 65% charge EVs at their depot.
- 78% are using a third-party provider to maintain and repair chargepoints.
- 30% use a mix of charging options.
- 5% use their business customers' chargepoints.

Of those respondents using public chargepoints, 53% reported difficulties in finding an available and accessible chargepoint space.

5 Publicly available electric vehicle charging devices by region and country – 1 January 2023



Logistics UK EV Report - Vehicles

Of those respondents who have introduced EVs into their fleet, 58% have done so in the last two years.

EV availability still a major challenge, as world events constrain supply chains.

Almost all respondents (95%) report higher total costs of ownership, with 64% reporting costs being two to three times more expensive than an equivalent diesel vehicle.

Those who invested, found maintenance to be:

Straightforward	Some initial challenges	Significant issues
>57%	14%	29%

Respondents did not rely on stated mileage range of vehicles – most deploying EVs on shorter routes to avoid range issues, especially during adverse weather.

ZE Van Plan Campaign

- Partnership with BVRLA, Recharge UK, AFP and The EV Café
- Launched on the Westminster Estate to MPs and Peers in February 2024

- ZE Van Plan calls for:
  - Increased fiscal support
  - Improved charging
  - Removal of regulatory barriers

How to support the campaign:
- 'Write to Your MP' tool here
- Share positive case studies
- Feed-in to guidance/FAQs on grid connections

Zero Emission Van Plan

BVRLA LOGISTICS UK RECHARGE UK AFP THE EV Café

Executive Membership

LOGISTICS UK

Dispelling Preconceptions About Fleet Electrification

Emma Durham, Energy Product Manager, VEV
George Hobbs, Data Lead, VEV

For interactive polls please connect to: Sli.do
#VEV24

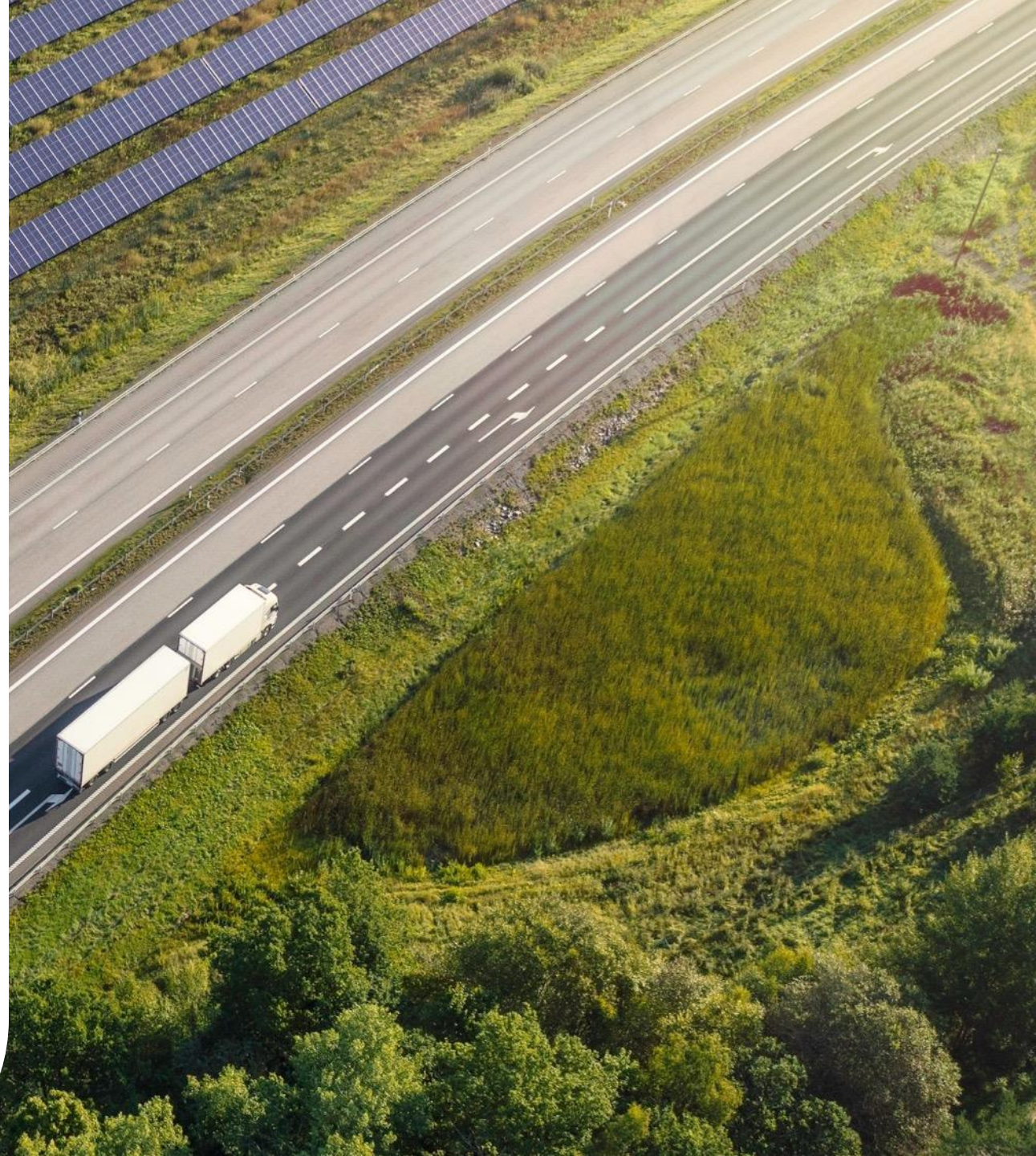
VEV

Dispelling Preconceptions about Fleet Electrification:

Insights from Real-World Data

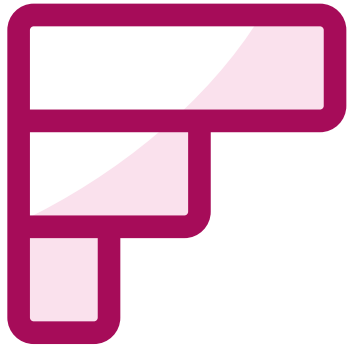
Emma Durham
VEV - Product Lead, Energy

George Hobbs
VEV - Data Lead



slido

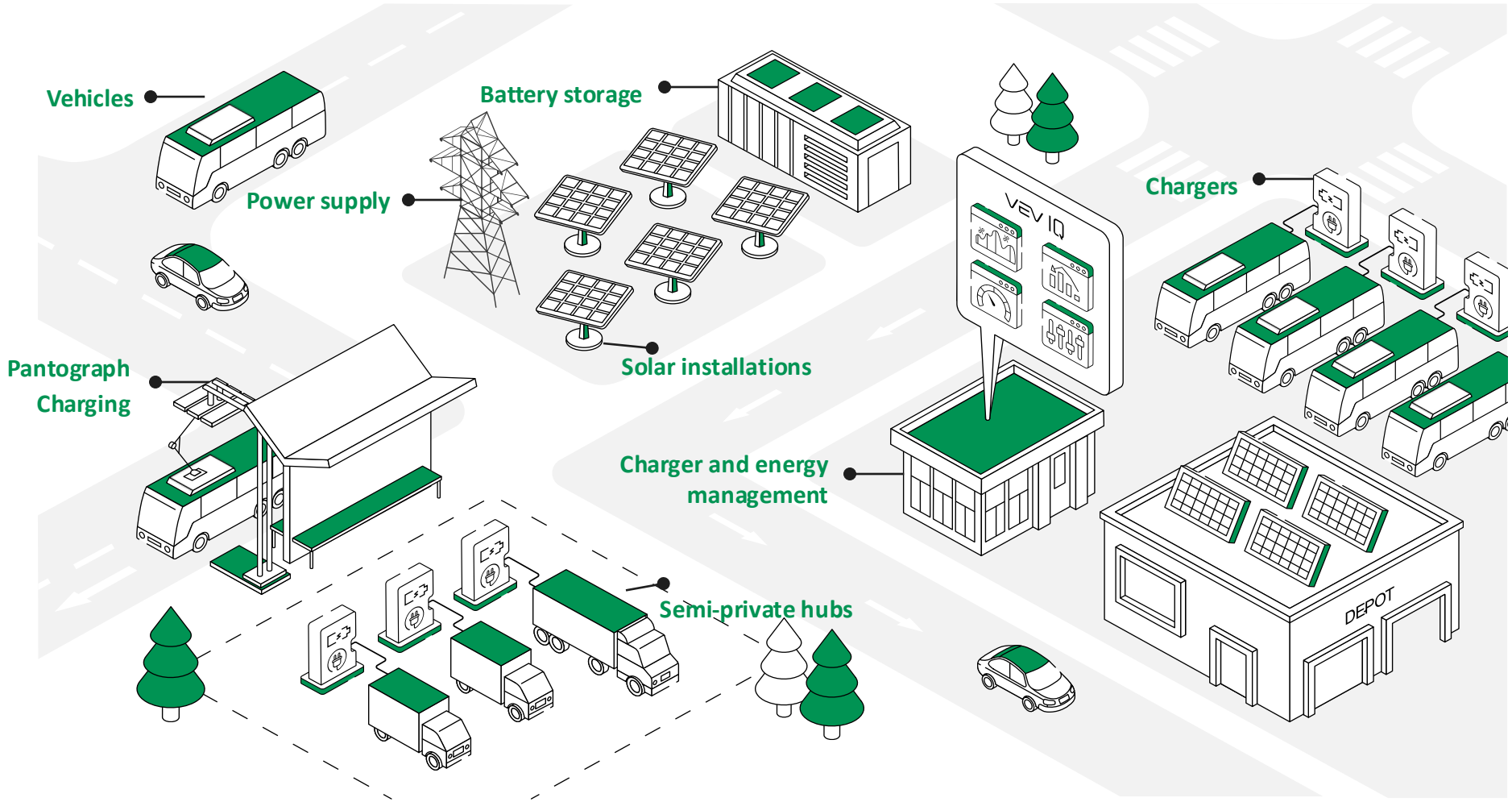
Please download and install the Slido app on all computers you use



Please rank these barriers to fleet electrification in terms of your biggest concern

ⓘ Start presenting to display the poll results on this slide.

VEV builds electrification solutions for commercial fleets - LCVs, Buses, HGVs



Owned by Vitol

World leader in energy

Deep connections into global energy markets

1.3GW
renewable capacity

$400bn
turnover

58 Years
in operation

Investing heavily in the energy transition

$2.5+bn
committed to sustainable investments

Fleets know they need to move to electric, but the path to get there can feel…

Hard

- Complex implementation & change
- Skill / capability development

Expensive

- Higher vehicle costs vs ICE
- Upfront infrastructure investments
- TCO Risk

Uncertain

- Operational disruption
- Rollout miscalculations
- Technology risk

Cost Preconception

“Fleet electrification is too expensive and not cost-effective.”

slido

Please download and install the Slido app on all computers you use

Have you already modelled ICE TCO and EV TCO for your fleet?

ⓘ Start presenting to display the poll results on this slide.

Cost Preconception

"Fleet electrification is too expensive and not cost-effective."

The Reality

Declining Vehicle Costs across all vehicle types

Up to

60%

Savings on Fuel vs electricity

Promising regulatory landscape including ZEV mandate

Tax and Subsidy Benefits dependant on vehicle type

Real time feedback loop on energy efficiency

Maintenance Savings of up to

40%

Smarter energy offerings

Better driver experience

Real Life Customer Cost Examples

£2.6m

Cost saving across 47% of a 500 strong van fleet, with no operational change required.

3x reduction

In spare capacity across the vehicles in your fleet allowing you to reduce total fleet cost of ownership

£2,000 saved per month for 10 vans

Even with a relatively high energy tariff one fleet managed to identify a “first phase” of the transition with a large cost saving

Best practice with buses in Bogotá, Colombia

The Reality

- ✓ 3 depots
- ✓ 400+ buses
- ✓ 21 superchargers 360W - each with 8 sockets
- ✓ Fully financed over 15 years
- ✓ 40% less maintenance
- ✓ Lower vehicle redundancy - 4-7%
- ✓ Cleaner and Quieterr depots

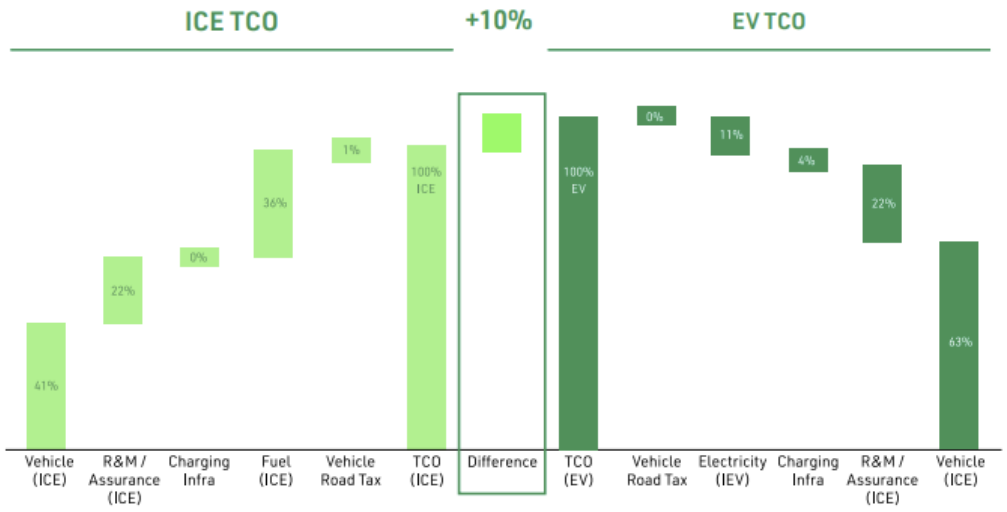
Recent Trial with Electric Refuse Collection Vehicles

EVs deliver net zero emissions for net zero cost increase

1. Conservative TCO Comparison: Electric **= +10%**
2. Optimised TCO Comparison: Electric **= -2%**
3. With Further Optimisation: Additional **14% TCO saving**
   - Modelling across service, maintenance & repair strategy, vehicle technology advances and fuel regulatory policy.
   - Excludes fuel price increases and government subsidies that can make the TCO even more beneficial.

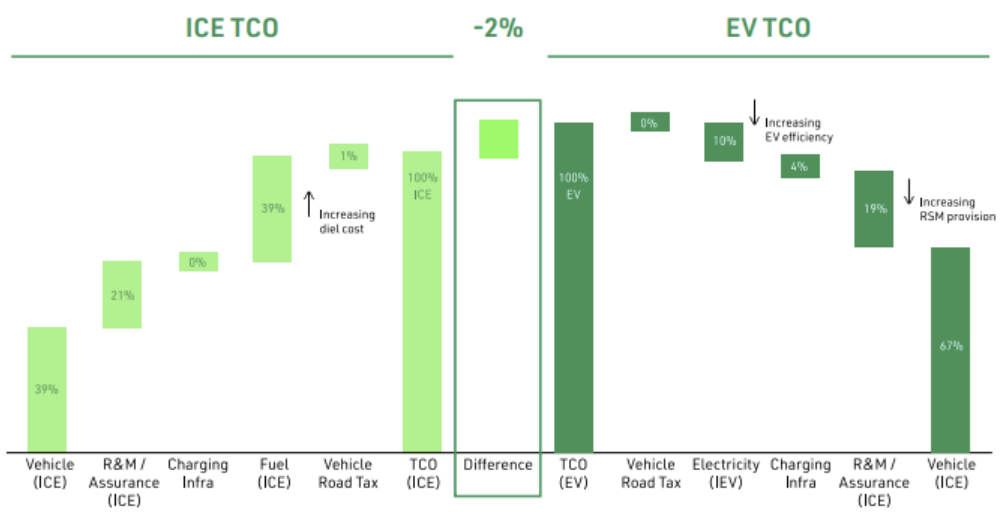
Conservative RCV TCO: ICE vs Electric

(% of ICE TCO, % of EV TCO)



Optimised RCV TCO: ICE vs Electric

(% of ICE TCO, % of EV TCO)



Operational Preconception

“My vehicles travel too far and can’t charge enough.”

slido

Please download and install the Slido app on all computers you use

What % of your fleet do you believe is ready to electrify operationally today

ⓘ Start presenting to display the poll results on this slide.

Range Preconception

"Electric vehicles don't have enough range for our operations."

The Reality

Improving vehicle performance with an almost 100% rise in observed miles/kWh

Faster charging speeds moving away from single phase charging

More capacity in operations to charge in day

Ability to shift operations to enable charging

More real time fleet interventions with better data

Semi-private reliable out of depot charging solutions

Real Life Customer Range Examples

8.8X

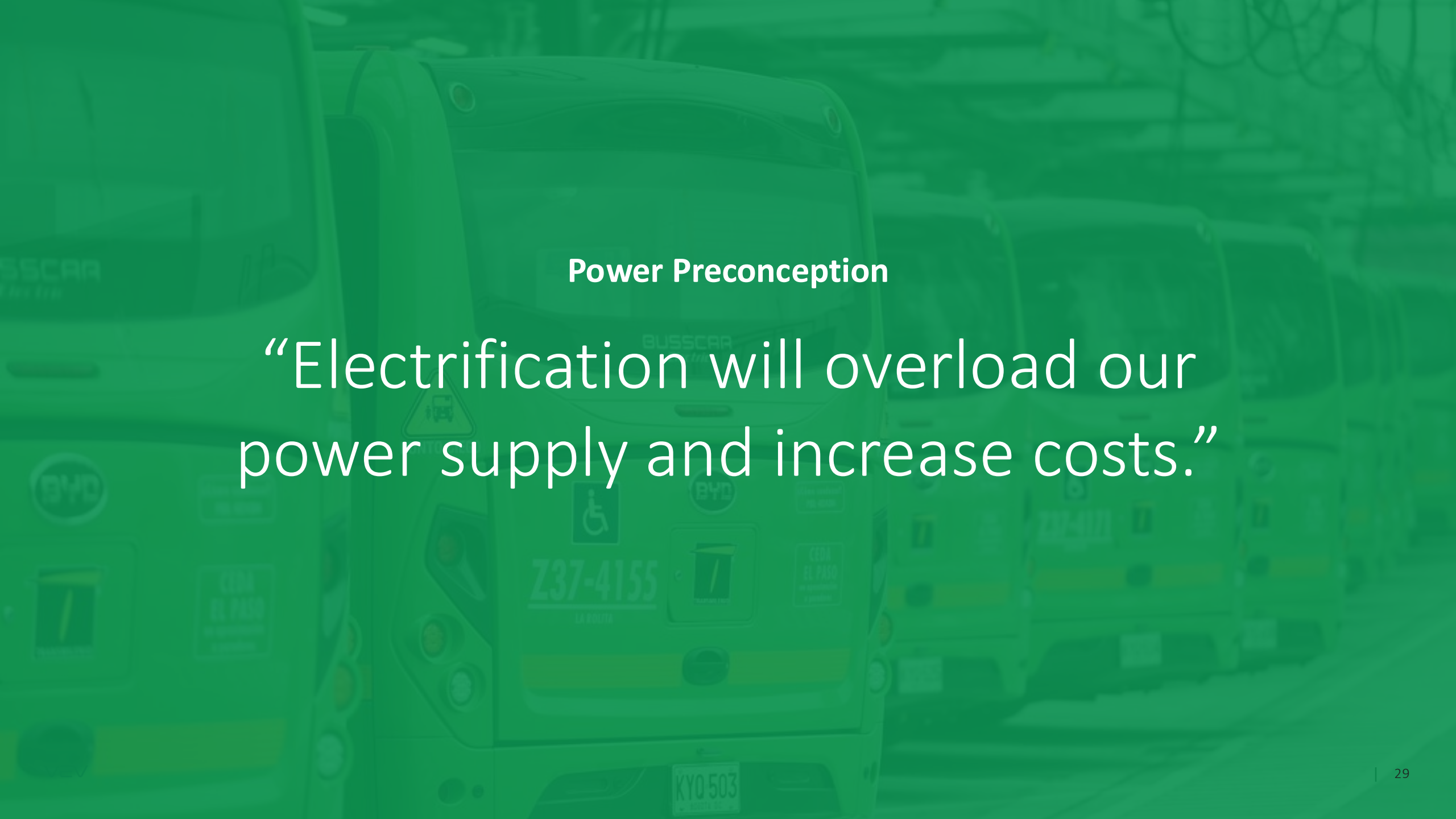
A fleet of ~vehicles increased its readiness to electrify by modelling in depot DC charging

42% increase

Across a fleet of over 2000 vehicles, we modelled ‘charging at operations’ where AC chargers could be installed to top up vehicles in shift

2X increase

For a specialised HGV fleet, in-day charging was modelled, and tasks were reassigned to other vehicles with available capacity



Power Preconception

“Electrification will overload our power supply and increase costs.”

slido

Please download and install the Slido app on all computers you use

Have you looked at the grid requirements to enable you to start electrifying?

ⓘ Start presenting to display the poll results on this slide.

Power Preconception

"Electrification will overload our power supply and increase costs."

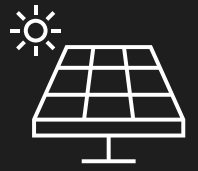
The Reality

Your vehicles may not need to charge as intensely or as much as you think

Small shifts in operations can massively reduce peak demand

Load management and smart charging manages peaks and costs

TOU tariffs are an important tool



Microgrids can reduce total grid demand

Long term planning will help you avoid pain points

Real Life Customer Power Examples

2.3x

Modelling smart charging and vehicle energy demand, we reduced grid connection requirements by a factor of x2.3 leading to potential saving of **£150k**

17%

A major UK fleet modelled TOU tariffs and smart charging into its strategy and identified huge cost savings within its operating model

Microgrids

By installing solar power generation and battery storage for >50 vehicles, we created a charging solution that allowed 30 vans to go electric when the grid connection would only support 11

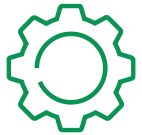
Fleets must be willing to embrace the change and adjust operations to achieve net zero emissions for net zero cost increase

Strategy & Plan

- Analyse fleet, depot operations, and power data
- Phased transition programme
- Finance & business case

Design & Build

- Grid upgrade, solar & battery storage
- Vehicles
- Charging infrastructure
- Control Platform



Optimise Operations

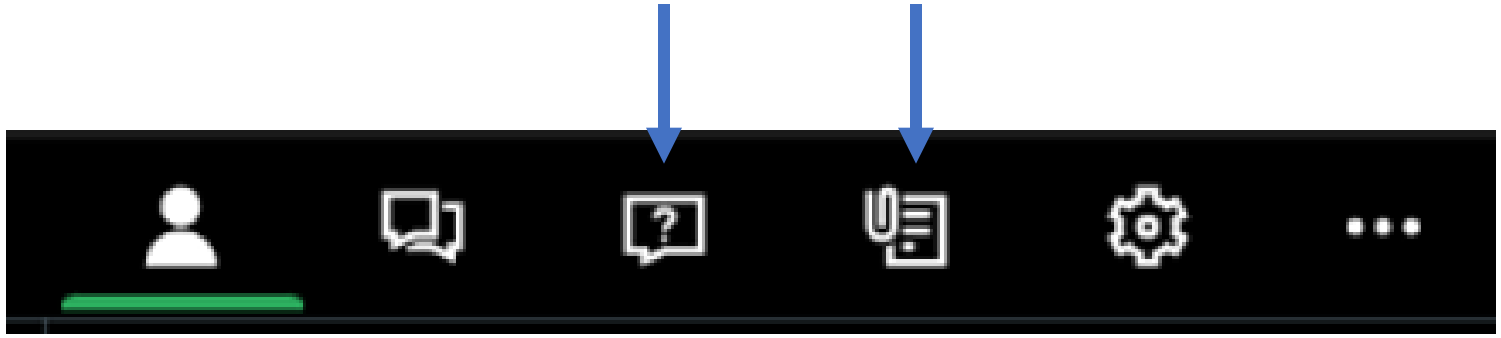
- Smart energy management
- Charging scheduling
- Driver training

Thank you

Contact us at ask@vev.com

Panel conversation and Q&A

- The webinar will be available on demand for all registered delegates.
- Don’t forget to download your handouts.
- Ask your questions using Q&A facility.



Executive Membership

LOGISTICS UK

THANK YOU!