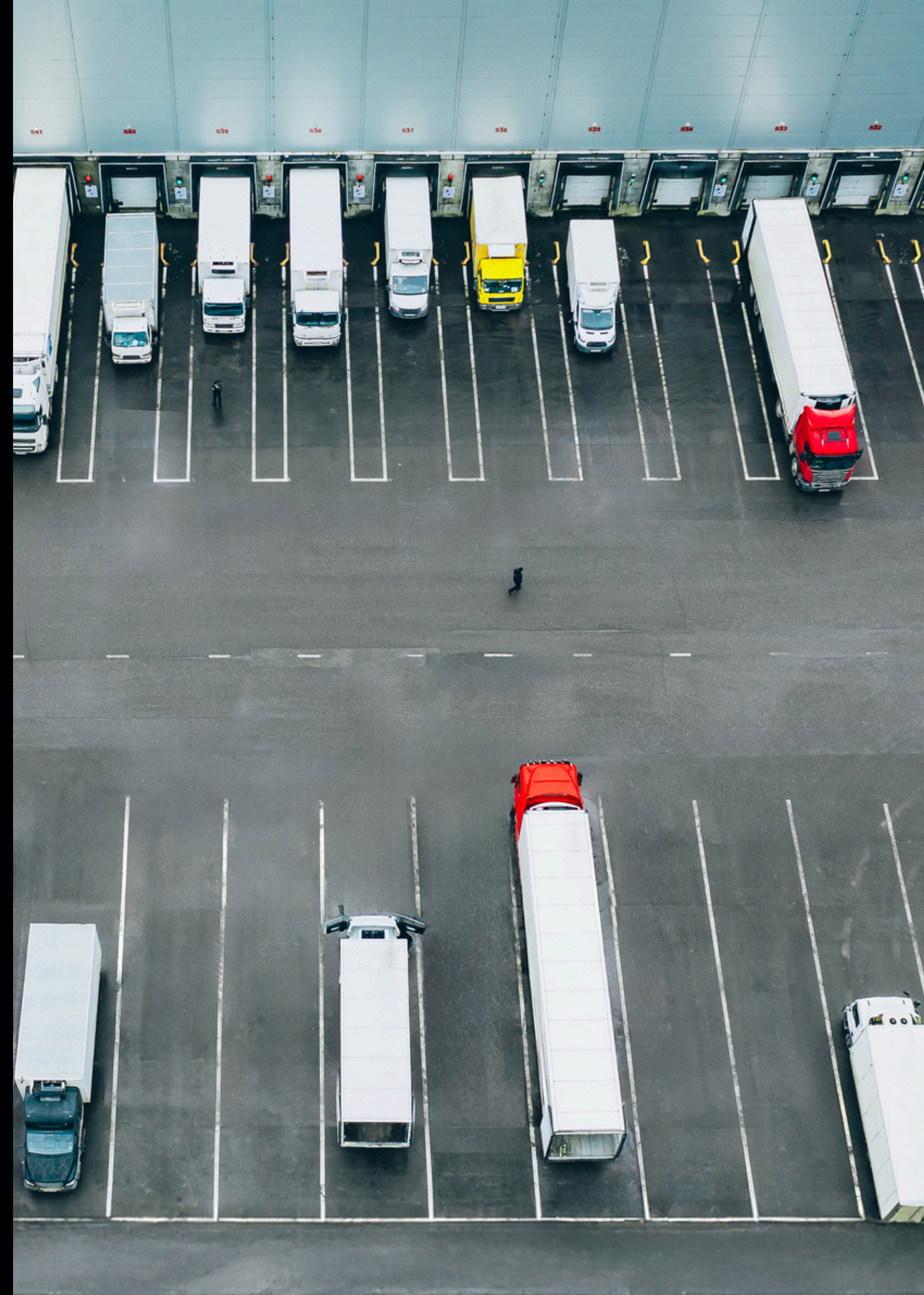





Start Smart: The Three Phases of Logistics Fleet Electrification

A strategic blueprint for turning electrification
ambition into operational reality

[Click to enter](#)







Executive Summary

Why starting electrification correctly is critical to cost, risk and long-term success.



[Find out more](#)

Introduction

The market, funding and operational pressures driving fleets to act now.

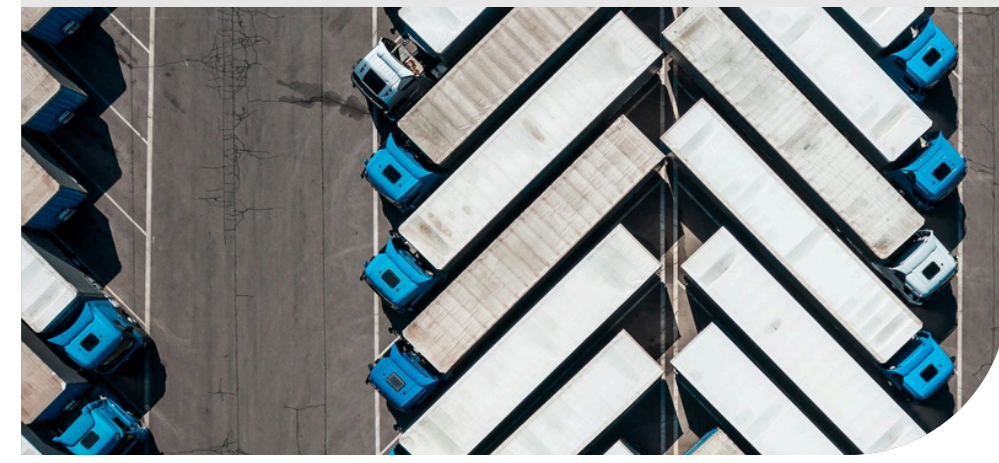

[Find out more](#)

Phase 1: Where to start

How to identify viable vehicles, infrastructure needs and a clear starting roadmap.



[Find out more](#)

Phase 2: Prove it works

How a structured pilot validates performance, cost and operational impact.


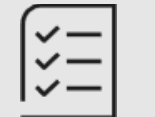
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Case Study

Real-world examples proving electrification in live logistics operations.



[Find out more](#)

Phase 3: Gain Approval

How to build a board-ready investment case using real-world data.



[Find out more](#)

From strategy to delivery

How to reduce risk through integrated delivery and infrastructure control.


[Find out more](#)

About VEV

How VEV delivers end-to-end electrification across vehicles, infrastructure and energy.

[Find out more](#)





Executive Summary

Fleet operators face mounting pressure to decarbonise. However, high capital expenditure, grid constraints, operational uncertainty and rising OEM penalties make electrification feel complex and risky.

Fleet electrification is no longer a future ambition, it is an operational necessity. However, the greatest risk is not selecting the wrong vehicles, it's getting the infrastructure, energy strategy and commercial structure wrong at the beginning. Poor early decisions can lock in unnecessarily high costs, extend payback periods, and ultimately turn electrification from a positive into a negative business case.

At the same time, government policy is actively accelerating the transition. Recent announcements, including a £1 billion funding package to support zero-emission trucks and depot charging infrastructure, alongside grants of up to £120,000 per electric HGV, are significantly reducing the upfront cost barrier for operators. These incentives are designed to unlock adoption at scale, but they are time-bound and competitive, favouring organisations that are ready to move with a clear, deliverable plan.

This guide outlines the three critical phases organisations must take to start their electrification journey strategically, avoiding stranded assets, reducing long-term Total Cost of Ownership (TCO), and building a foundation that can scale confidently.

Mike Nakrani
CEO, VEV



VEV



Introduction

Why Acting Now Matters

The market is shifting rapidly:

- Funding mechanisms, such as the Plug-in truck Grant and Depot Charging Scheme, can significantly improve the business case but access is limited and require early action
- Grid connection lead times are increasing
- Civil and infrastructure costs are rising year-on-year

Waiting does not reduce risk, it increases cost and limits optionality. Starting now allows fleets to control pace rather than react to pressure.

The Strategic Shift

Diesel fleets operate on a 'fuel-and-go' model. Electric fleets shift to 'park-and-power'. Where buying diesel is simple, managing energy cost and timing becomes far more complex.

This shift changes everything, from depot layout, grid demand and charging patterns to financial modelling and operational workflows. Organisations that treat electrification as a simple vehicle replacement programme often encounter avoidable delays and cost overruns.

The most successful operators design infrastructure first and buy vehicles second.





Phase 1: Where to Start

Every fleet is different. Route profiles, dwell times, payload requirements, depot constraints and grid capacity all vary, meaning not all vehicles and routes are suitable for electrification today.

Starting electrification without precise analysis risks over-investment, under-performance, or stalled infrastructure delivery.

Phase 1 replaces assumption with evidence. Using real operational data, we identify exactly where electrification will work first and why.

Fleet & Route

Energy & Infrastructure

Commercial & TCO

How do you know which vehicles are suitable for electrification?

We assess:

- Daily mileage and energy demand
- Route predictability and dwell windows
- Payload sensitivity
- Operational intensity

This identifies a viable “first wave” of vehicles that can transition with minimal disruption and maximum operational confidence.



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Energy & Infrastructure

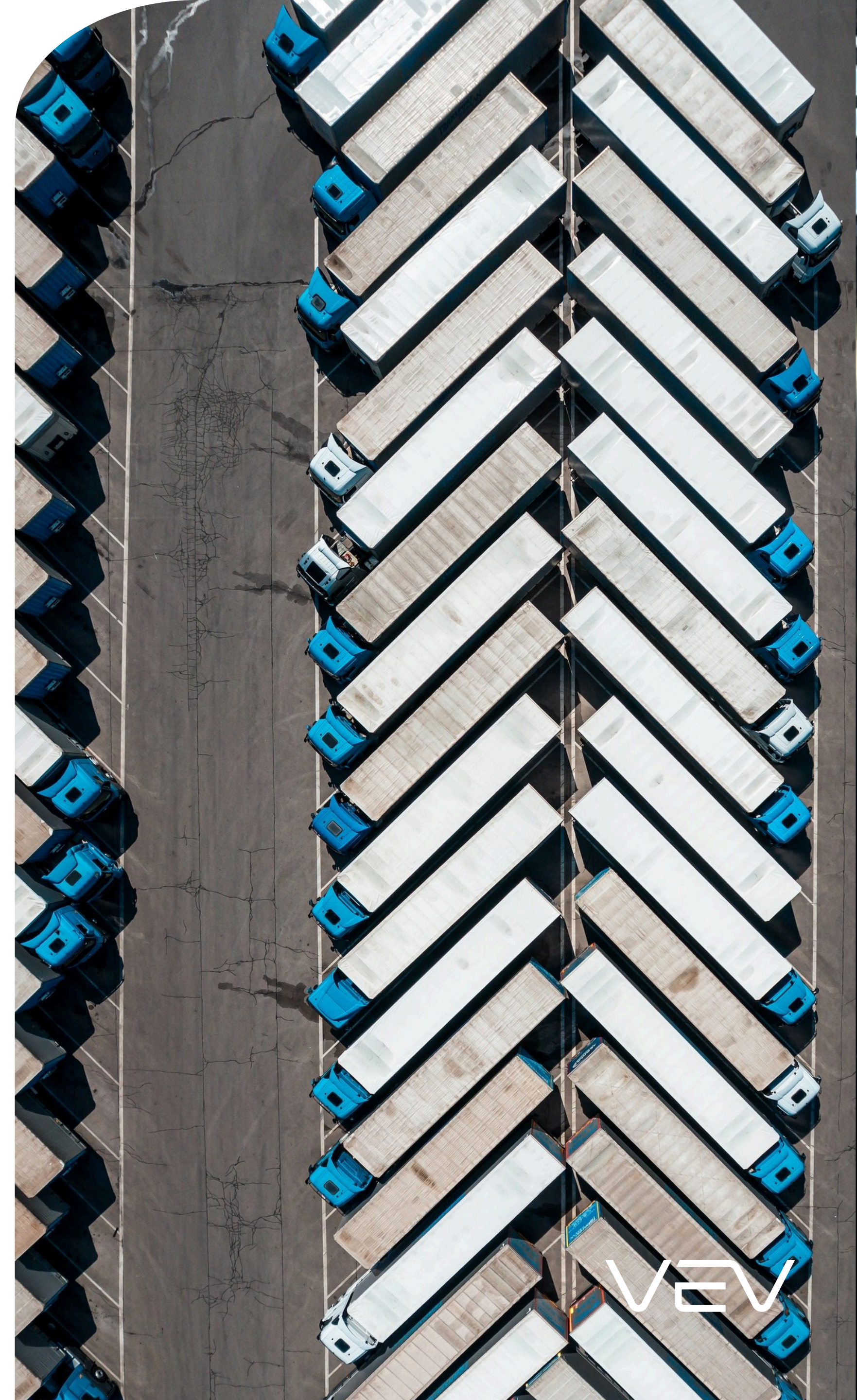
Commercial & TCO

Electrification is fundamentally an energy question. Operators should ask themselves: how much power do we need? Does our site need a grid connection upgrade? What infrastructure is needed?

We model what would be required for you to reach your electrification goals:

- Total site energy demand and charging patterns
- Existing grid capacity and peak load exposure
- Optimisation strategies to reduce upgrade costs
- Infrastructure requirements, timelines and a phased roadmap

This prevents fleets from committing to vehicles that depots cannot reliably power.



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Fleet & Route

Energy & Infrastructure

Commercial & TCO

Board approval depends on financial clarity.

We produce scenario-based modelling that includes:

- CapEx and infrastructure investment
- Total Cost of Ownership (TCO) comparison vs diesel
- Power costs and sensitivity to energy pricing
- Grant eligibility and funding impact
- Revenue opportunities from shared infrastructure

Outcome of Phase 1: A data-backed roadmap identifying which vehicles to electrify, what infrastructure is required, and the expected financial profile.



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Phase 2: Prove it Works

Data builds confidence. Real-world performance builds belief.

Phase 2 implements a structured pilot. Typically a small number of electric trucks will be deployed, supported by managed charging and real-time monitoring. The objective is not scale, it is validation.

This phase converts modelling into operational proof.

Controlled Deployment

Performance & Monitoring

Risk & Validation

We deploy a defined wave of assets aligned to Phase 1 analysis.

This includes:

- Electric vehicle supply & deployment
- Charging infrastructure provision
- Smart charging configuration
- Operational integration support

The pilot is intentionally structured, not ad hoc, ensuring measurable outcomes.



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Controlled Deployment

Performance & Monitoring

Risk & Validation

Electrification success depends on operational consistency.

Using VEV IQ, we monitor:

- Vehicle performance and uptime
- Charging patterns and peak load behaviour
- Energy cost per mile
- Operational impact on drivers and planners

This replaces uncertainty with measurable evidence.



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Controlled Deployment

Performance & Monitoring

Risk & Validation

Beyond vehicle performance, the trial validates:

- Depot workflows
- Driver adoption and training needs
- Maintenance implications
- Energy cost control strategies

Outcome of Phase 2: Demonstrated viability, real energy data, and operational confidence.



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Maritime

Electrifying Heavy Logistics at Scale

Maritime appointed VEV to deliver the first phase of high-powered truck charging infrastructure across three major UK logistics hubs.

VEV deployed 18 high-powered chargers across Wakefield, Tilbury and Doncaster, with a combined capacity of up to 5MW, enabling simultaneous charging for up to 36 electric trucks and creating a scalable foundation for nationwide rollout.

The solution integrates site design, power systems, software and ongoing analysis to optimise charging performance and ensure reliability for high-duty-cycle logistics operations.

“They’ve been our trusted experts throughout our high-powered electrification journey.”

Tom Morgan, Managing Director, Kinchbus

[View The Case Study](#)



AV Dawson

Proving Electric HGVs in Real-World Operations

AV Dawson partnered with VEV to deliver a structured electric truck trial, designed to move from early exploration to a data-backed investment decision.

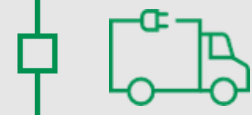
VEV supported the deployment of electric HGVs alongside charging infrastructure and energy management, enabling the fleet to operate under real-world conditions and validate performance across daily operations.

The trial provided detailed insight into energy consumption, charging behaviour and cost per mile - giving AV Dawson the confidence to build a board-level case for scaling electrification.

A structured, real-world pilot transformed electrification from a concept into a proven, investable strategy.

[View The Case Study](#)





Phase 3: Gain Approval

Scaling electrification requires capital. Capital requires conviction.

Phase 3 converts trial evidence into a board-ready investment case - structured, defensible, and grounded in real performance data.

This is where electrification moves from pilot to programme.

Business Case

Risk Mitigation

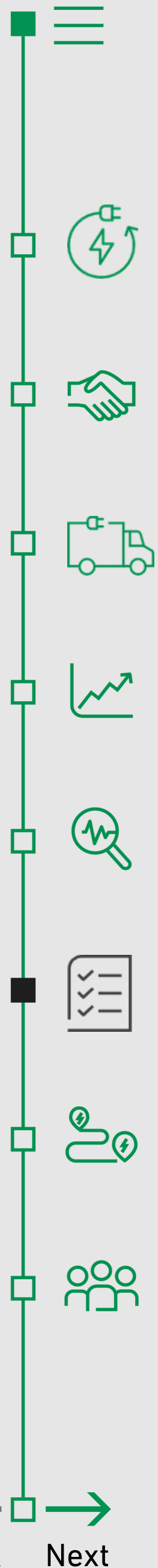
Scalable Roadmap

Using live pilot results, we develop:

- Commercial model options
- Investment phasing
- Revenue & cost recoveries
- Total costs - charging infrastructure, vehicles, electrical infrastructure, opex

This replaces hypothetical modelling with validated financial assumptions.





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Business Case	Risk Mitigation	Scalable Roadmap
	<p>Boards focus on downside exposure.</p> <p>We outline:</p> <ul style="list-style-type: none">• Grid connection delivery plans• Infrastructure ownership structure• Operational resilience strategy• Long-term energy cost management <p>This ensures electrification is presented as a controlled transformation, not a speculative transition.</p>	



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Business Case

Risk Mitigation

Scalable Roadmap

Electrification should align with wider strategy.

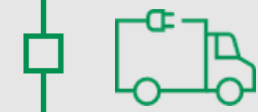
We build:

- A phased expansion plan
- Infrastructure future-proofing considerations
- Alignment with ESG and customer commitments
- Clear milestones toward 2030 targets

This positions electrification as a strategic growth enabler.



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From Strategy to Delivery

Taking Control of Execution

Electrification doesn't fail at the point of planning, it fails at the point of delivery. Fragmented models, multiple suppliers and reliance on third parties, create delays, cost uncertainty and unclear accountability.

A more integrated approach, combining end-to-end ownership with direct control of infrastructure and grid delivery, enables faster decision-making, greater certainty and a more reliable path from initial strategy to operational reality.

End-to-End Accountability

One partner. One outcome.

Electrification spans multiple disciplines and when these are delivered separately, risk increases.

An integrated approach ensures:

- Clear ownership across all phases
- Faster decision-making
- Reduced interface risk between suppliers

Control of Infrastructure Delivery





From Strategy to Delivery

Taking Control of Execution

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End-to-End Accountability

Control of Infrastructure Delivery

From dependency to control.

By combining infrastructure delivery with ICP capability, delivery becomes faster, more predictable and fully aligned to your electrification strategy.

- Direct delivery of substations, cabling and grid connections
- Faster, more predictable timelines with reduced third-party dependency
- Greater control over cost, design and delivery from day one





About VEV

VEV helps organisations accelerate fleet electrification and achieve their carbon reduction goals with an end-to-end solution spanning strategy, infrastructure, energy and ongoing operations. Integrating across vehicles, charging and power, VEV designs and delivers electrification programmes tailored to each fleet's operational and energy requirements, ensuring better performance, resilience and cost control over the long term.

At the core of VEV's offering is VEV IQ, its intelligent charging and energy management platform. Now deployed across more than 65 operational sites, managing over 1,500 charging connectors and over 40 GWh of annual energy throughput, VEV IQ provides real-time visibility and control across vehicles, chargers and on-site energy assets. This enables smart charging optimisation, reduced energy costs and reliable fleet performance at scale, already delivering over 25,000 tonnes of CO₂ savings per year.

Owned by Vitol, a global leader in energy, VEV combines deep energy expertise with advanced digital capabilities to help organisations reduce emissions, optimise total cost of ownership and transition confidently to an electrified future.

More information at [VEV.com](https://www.vev.com)

Contact us ask@vev.com

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