SIF Alpha Round 5 Project Registration

Date of Submission

Aug 2026

Project Reference Number

10179017 (1)

Initial Project Details

Project Title

Future Fleet

Project Contact

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Challenge Area

High energy demand point integration

Strategy Theme

Net zero and the energy system transition

Lead Sector

Electricity Distribution

Project Start Date

01/02/2026

Project Duration (Months)

8

Lead Funding Licensee

UK Power Networks

UKPN - Eastern Power Networks Plc

Funding Licensee(s)

UK Power Networks

UKPN - Eastern Power Networks Plc

Funding Mechanism

SIF Alpha - Round 5

Collaborating Networks

UK Power Networks

Technology Areas

Electric Vehicles

Project Summary

The UK logistics sector is rapidly transitioning to electric heavy goods vehicles (eHGVs) to meet Net Zero targets, mandating all HGV sales to be zero emission by 2040. This shift requires significant changes to operations, depots, and energy infrastructure. High charging demands at depots, hubs, and corridors risk overloading local grids. Future Fleet develops a geospatially-informed framework that combines fleet archetypes, smart energy schemes, and innovative business models such as shared depots and service-based offerings. By doing so, it will reduce costs, accelerate decarbonisation, and provide networks and logistics operators with actionable strategies for scalable, affordable, and grid-friendly freight electrification.

Add Third Party Collaborator(s)

Baringa Partners

Maritime Transport

Energy Systems Catapult

Voltempo

Voltloader

Project Budget

£555,350.00

SIF Funding

£499,815.00

Project Approaches and Desired Outcomes

Animal testing (not scored)

- ○ Yes
- ◉ No

Problem statement

Heavy goods vehicles (HGVs) currently emit 18.2 MtCO2e, 16% of all domestic transport greenhouse gas emissions despite accounting for only 4.9% of total road traffic mileage. The industry is undergoing substantial change as they decarbonise in support of the UK's Net Zero targets, which includes the mandate of all HGVs sold to be zero emission by 20401. The adoption of eHGVs at scale will require overhauls to operational models, depots, and presents huge challenges to the grid.
As fleets transition, the charging infrastructure required will introduce large electrical loads at depots, logistics hubs, ports, and motorway corridors. Energy System Catapult's (ESC) modelling indicates that by 2050 unmanaged eHGVs could add around 25% to today's peak. These clustered demands risk overwhelming local network capacity, long connection delays, high costs and operational inefficiencies. Without action, this will slow the decarbonisation of freight, particularly for smaller operators that cannot afford additional pressure on already thin operating margins.
Early demonstrators like Zero Emission HGV and Infrastructure Demonstrator (ZEHID) focus on proving the technical feasibility of deploying 300+ vehicles in fleets and 50+ chargers. Stakeholder engagement and trial reviews have shown that the energy system integration challenge, particularly grid access, site-level energy economics, and operational flexibility, remains underexplored. The problem is not just about installing chargers; it is about enabling scalable, affordable, and grid-compatible charging models that work across diverse fleets.
This project builds directly on insights from ZEHID and ESC's work which include the challenges of high truck costs, limited payload and ranges, and grid connection access, costs and timelines. This project targets the gaps identified in previous innovation work by focusing on smart energy management, business model innovation, and granular geospatial network impact. It aims to quantify business models that support the reduction of peak demand and infrastructure costs, the potential for flexible charging, behind-the-meter assets, and flexible connection products. It also explores how different fleet archetypes, based on duty cycles, depot types, and ownership models, can adopt these solutions.
This project addresses Challenge 3, Theme 2 by developing flexibility and efficiency strategies for managing eHGV charging demand, optimising reinforcement, and enabling smart energy management schemes that can reduce costs for fleets.
We build directly on ZEHID and ESC outputs by moving from technical feasibility to energy-system integration:
Understanding fleet types and site archetypes
Quantifying smart energy options (e.g., optimised scheduling, on-site storage and generation, flexible access agreements)
Mapping locational grid impact so distribution network operators (DNOs) can plan optimal interventions
We will also examine business models that lower barriers for small and medium-sized enterprises (SMEs). This is distinct from, and complementary to, ZEHID and ESC's work.
Users and their needs:
DNOs: need location-specific visibility of potential eHGV demand, understanding of how smart energy management can help decarbonise logistics and strategic options for where/when to reinforce.
Fleet operators: need timely, low-cost, low-risk access to charging infrastructure and an understanding of the smart energy opportunities and viable business models available to support their decarbonisation journey.
Site owners/developers and chargepoint operators: need clarity on connection options, charger utilisation risk sharing, and commercial frameworks that make charging hubs investable

The project addresses these needs by developing archetype-specific strategies and quantifying their impact on cost, grid stress, and scalability. This will provide clarity, visibility, and provide a vital piece to de-risking logistics decarbonisation for all parties
Future Fleet tackles a clearly defined, energy-system problem: integrating eHGV charging so it is scalable, affordable and grid-compatible. This ensures that the transition to zero-emission freight is not constrained by the grid or commercial barriers, but enabled by cross-sector innovation.

International Collaboration (not scored)

Our project partners are UK-based organisations and will be undertaking their work within the UK. We therefore do not anticipate any international collaboration during the project.

Trusted Research And Innovation

We can confirm our work in this project do not relate to UKRI's TR&I principles.

Innovation justification

Future Fleet creates an innovative, cross-sectoral, integrated energy system and fleet operator approach to optimise costs and accelerate decarbonisation, therefore addressing Challenge 3.

This project's innovation is demonstrated through several advances:
New business models to drive eHGV total cost of ownership (TCO) reductions for decarbonisation;
Cross-sector integration of fleet operations, energy flexibility and network planning;
Exploring how restructuring duty cycles can unlock flexibility and reduce grid costs;
Quantifying smart energy scheme impacts for each archetype on peak demand, connections, and reinforcement costs;
Providing granular mapping of geospatial charging hotspots.
Building on the ZEHID programme, which proved the technical feasibility of eHGVs and chargers, this project addresses the next challenge: integrating eHGV charging into the energy system effectively and affordably. ZEHID showed that chargers can be deployed, but without smart integration, clustered loads create grid stress and cost barriers. Future Fleet aims to bridge the gap by developing a comprehensive framework for smart energy management, including flexible connections, behind-the-meter assets, and coordinated access models. It also builds on ESC's TCO and depot charging business models, extending them into actionable strategies for network planning.
From preceding projects, we learned that fleet operator SMEs face disproportionate challenges in accessing infrastructure, and that fleet duty cycles vary widely – creating opportunities for flexibility if properly understood. These lessons informed our plan with our work packages (WPs) structured to understand fleet and charging archetypes (WP2), then evaluate smart energy schemes (WP3), and model grid impacts and business cases (WP4), culminating in trial design (WP5).
The project concept was developed collaboratively between the consortium members and builds on extensive stakeholder engagement through the ZEHID programme. The consortium includes ZEHID stakeholders (Maritime, Voltempo, ESC), Voltloader (to bring additional insight into SME fleets) and Baringa (bringing expert energy system and asset optimisation modelling capabilities).
Highly granular geospatial demand mapping of eHGV demand and assessment against distribution-level network assets is new in GB. NESO's Impact of New Technology HGVs project provides high-level geospatial modelling for their Future Energy Scenario (FES), with our project adding distribution level granularity. This will clarify where and how eHGV charging will create concentrated loads, and how more dispersed charging might impact network infrastructure needs. The project will also investigate smart energy enablers that have not previously been evaluated in combination for the freight sector. By exploring how these solutions can be tailored to different fleet archetypes and operational patterns, we aim to find new ways to reduce peak energy demand and lower energy costs for operators.
These innovations will help define a new framework for eHGV integration, supporting both network efficiency and inclusive, cost-efficient access to charging for operators of all sizes.
This project cannot be funded within the price control or considered business-as-usual (BAU) as the scope is inherently exploratory and cross-sectoral, involving uncertainty and risk. It requires collaboration across DNOs, fleet operators, and infrastructure providers, and involves uncertainty that precludes standard investment mechanisms. The outputs will inform future BAU activities, but the work itself is pre-commercial and high-risk, making SIF the appropriate funding route.
Through Alpha, we expect to advance TRL from 2 to 4, IRL from 2 to 4, and CRL from 2 to 4.
The proposed size and scale are appropriate: the project is national in scope but focused on UKPN's area, with representative fleet and depot types. UKPN's area is large enough to capture diversity but targeted enough to deliver actionable insights. We considered more targeted approaches, including focusing only on depot charging or only on technical solutions, but rejected them as too narrow. Our integrated approach is necessary to deliver whole-system value and meet innovation challenge 3's objectives.

Impact and benefits (not scored)

Financial - future reductions in the cost of operating the network

Financial - cost savings per annum for users of network services

Environmental - carbon reduction – direct CO2 savings per annum

Environmental - carbon reduction – indirect CO2 savings per annum

Revenues - improved access to revenues for users of network services

New to market – processes

New to market - services

Others that are not SIF specific

Impacts and benefits description

The pre-innovation baseline is for decarbonising HGV depots and operators to apply for a connection sized to meet their full charging capacity needs, without leveraging the most optimal smart energy management approaches, co-location of charging, or operational flexibility improvements. This means that for fleet operators there are high connection costs, high charging costs, and long-lead times. For DNOs there is a lack of detailed understanding of locational grid impacts, and very high reinforcement costs. By enabling smarter, more flexible integration of eHGV charging into the network, this project seeks to enable the eHGV transition at the lowest cost to networks, customers, and fleet operators.
We explored two deployment scales:
Option 1: UKPN Scale – NPV £94m, with benefits starting in 2029
Option 2: National Scale – NPV £234m, with benefits starting in 2030 to account for an extra year for other DNOs to transition into BAU.
The cost-benefit calculation was performed from 2026-2050.
Financial – Future Reductions in the Cost of Operating the Network
Optimised reinforcement by reducing peak loads of eHGVs and having an improved understanding of their locational impact, UKPN can reinforce more efficiently.
NPV of £59m.
Financial – Cost Savings per Annum for Users of Network Services
Fleet operators will benefit from decreased charging costs. The project will develop propositions such as shared hubs, flexible access models, and smart charging schedules that reduce maximum demand and associated capacity charges. Only the smart charging benefit was quantified due to data availability.
NPV of £26m.

Fleet operators will benefit from lower connection costs due to the right sizing of connections. Prior engagement has shown this to be a substantial benefit, but it has not been quantified due to a lack of reliable data. The project will address this specifically in WP4.
Environmental – Carbon Reduction (Direct COI Savings per Annum)
The project supports direct carbon savings from the accelerated displacement of diesel vehicles, enabling the transition by removing grid-related barriers. Smart charging and local renewable generation further enhance direct COI savings.
Environmental – Carbon Reduction (Indirect COI Savings per Annum)
Indirect carbon savings will be achieved through optimised reinforcement, which involves embodied carbon in materials and construction. Enabling flexible charging and storage also supports charging at lower carbon intensity times.
NPV of £8m.

Revenues – Improved Access to Revenues for Users of Network Services
Fleet operators participating in flexibility markets—such as demand response or vehicle-to-grid services—will gain access to new revenue streams. The project will explore how depot-side batteries and smart charging can be monetised creating opportunities for logistics businesses to become active energy market participants.
New to Market – Processes
The development of fleet archetype flexibility profiles and geospatial grid impact modelling introduces new planning processes for DNOs. These enable more accurate forecasting and targeted infrastructure investment.
New to Market – Services
The project supports the emergence of depot-as-a-service and charging-as-a-service models, particularly for SMEs. These services offer bundled access to vehicles, infrastructure, and energy, lowering barriers to entry and supporting broader electrification.
New commercial models, such as Voltloader's service-based offering, create revenue streams for infrastructure providers and aggregators. Shared charging hubs, depot-as-a-service models, and bundled vehicle-energy propositions represent new market

opportunities beyond traditional fleet ownership and energy procurement.
Other Benefits
The project supports inclusive innovation by addressing the needs of smaller operators and promoting scalable, replicable solutions. It also contributes to policy alignment by supporting the goals of ZEHID, eFREIGHT, and the UK's net-zero freight strategy.

Teams and resources

Alpha will be delivered by a consortium comprising UKPN, Baringa Partners, Voltloader, Maritime Transport, Voltempo, and the ESC. This team brings together expertise in electricity networks, freight logistics, charging infrastructure, commercial modelling, and energy systems innovation. It reflects continuity from the ZEHID programme and targeted additions to address the expanded Alpha scope. This project is progressing directly into Alpha, building on the insights, data, and relationships developed through ZEHID.
UKPN
Expertise: Electricity distributor delivering power to 8.5 million homes and businesses across the East of England, London, the South-East.
Role: Lead Partner and will oversee project management (WP1), provide network data and DFES assumptions, and lead integration of outputs into BAU planning. The Innovation, DSO, and Connections teams will contribute, supported by a senior sponsor from the Connections directorate who has been involved since project inception.

Baringa Partners
Expertise: Leading consultancy with deep expertise in energy system modelling, market design, and regulatory frameworks. This is a longstanding relationship, UKPN and Baringa have worked together previously on innovation projects, including SIF projects.
Role: Lead WP3 and WP4, covering smart energy management schemes, business model evaluation, grid impact modelling, and system-wide cost-benefit analysis.

Voltloader
Expertise: Operates an innovative e-fleet services model in which they own eHGVs and charging infrastructure, offering smaller logistics customers access via a service fee. This positions them uniquely to inform the development of shared infrastructure models, flexible access propositions, and commercial enablers for smaller operators.
Role: Co-lead stakeholder engagement, provide operational data, and test the feasibility of smart energy schemes and business models, particularly for SME fleet contexts.

The remaining partners, Maritime, Voltempo, and ESC, were all part of the ZEHID programme and bring continuity and sector knowledge:

Voltempo
Expertise: Building the UK's largest HGV-only EV charging network, with a national network of charging hubs with 1MW capacity. Their experience with charging infrastructure deployment and commercialisation strategy is critical for shaping Beta activities.
Role: Lead WP5, designing future trials and identifying technology enablers.

Maritime Transport
Expertise: One of the UK's largest privately-owned logistics companies, covering 97 million miles per annum and completing circa 20,000 jobs per week. They are currently starting their decarbonisation process and will be the largest hire and reward fleet on the UK roads. Their depots vary in size from ten to hundreds of vehicles.
Role: Co-lead WP5, using their vast array of depots as proxies for the wider industry, contributing fleet data.

ESC
Expertise: ESC was set up to accelerate the transformation of the UK's energy system and ensure UK businesses and consumers capture the opportunities of clean growth on the way to Net Zero.
Role: Lead the development of fleet and charging archetypes (WP2), building on their TCO model and depot charging business models developed during ZEHID.

No subcontractors are planned in Alpha. Additional resources required include access to geospatial data (e.g. HGV traffic flows, depot locations), network modelling tools, and stakeholder engagement. These will be accessed through UKPN's systems, Baringa's modelling environment, and consortium workshops. No specialised equipment is required, but data sharing agreements and secure tools will be established to facilitate joint analysis.
External parties identified for successful delivery include chargepoint operators, infrastructure developers, site owners and other

fleet operators, who will be engaged to validate technical feasibility, commercial models, and operational assumptions. Their input will help refine smart energy schemes and ensure trial designs are grounded in real-world needs.
This project meets Eligibility Criterion 6 by involving a diverse range of stakeholders across energy, transport, and infrastructure sectors. The consortium includes both incumbents and innovators, and the project design ensures that user needs are central to every work package.

Project Plans and Milestones

Project management and delivery

Project management is led by UKPN using standard best practice methods and tools, including regular management meetings and status reporting. UKPN has an effective innovation governance procedure with robust financial and project controls in place. This approach provides transparency, facilitates cohesion and collaboration amongst the partners, and avoids duplication of work.
Control tools include a single RAID log, decision register, change log and action tracker. Quality assurance is built in with each major deliverable receiving an internal peer review.
This project is made up of five work packages:

WP1: Project Management – UKPN
Aim: Deliver the project on time, to budget, ensuring that project objectives and learnings are successfully achieved.
Success criteria: Project delivered on time, to budget and to quality.

WP2: eHGV Fleet Charging Archetypes – ESC
Aim: To define fleet and charging location archetypes.
Success criteria: Fleet and charging location archetypes are defined and tested with wider stakeholders and are suitable for use in WP3.

WP3: Smart energy management schemes and business models – Baringa
Aim: Shortlist and prioritise energy management schemes and business models against fleet archetypes.
Success criteria: Opportunities for energy management schemes and business models are defined and suitable for use in WP4.

WP4: Grid Impacts and business case – Baringa & ESC
Aim: Understand the grid impact and business case for the opportunities identified in WP3
Success criteria: Identification of costs and benefits for fleet operators and network operator.

WP5: Future opportunities, trial requirements & stakeholder engagement – Voltempo
Aim: Define trial requirements and enablers, as informed by wider work packages and stakeholder engagement.
Success criteria: Beta requirements are outlined and agreed across partners.

The archetypes produced within WP2, will be validated with the stakeholder engagement in WP5, and this directly feeds into WP3's scheme shortlisting. This will ultimately feed into WP4's grid impact and CBA analysis. Similarly, WP4 insights will feed into the trial design in WP5. Project milestones are outlined in the Gantt tab of the PMT.
The project will use a standard risk management approach including a RAID log regularly maintained and reviewed by the project partners and monthly by senior managers. The project has identified several risks as well as associated mitigations (see PMT), however an example risk and mitigation includes:

R9: Delays in data sharing agreement signatures: If there are delays in signing data sharing agreements to access ZEHID data, then there are risks that there is insufficient detail for modelling required in this project..
Mitigation: Data request for partners are being prepared ahead of project start to allow more time to prepare and data acquisition will begin at the outset of the project. Project partners have specifically been recruited for good access to ZEHID data and have been engaged throughout to ensure timely access to data. Using addendums to existing, live agreements will help to ensure a streamlined process.

We do not anticipate any planned or potential unplanned supply interruptions for consumers given the nature of the project. Direct interaction with end consumers is limited in Alpha; engagement focuses on fleet operators, logistics developers and market actors. Future consumer benefits are addressed through analysis that: reduces peak demand and avoids inefficient reinforcement, supports faster, lower cost connections for eHGV charging and safeguards service quality through least regret planning.

Key outputs and dissemination

By the end of Alpha, Future Fleet will have:
Established smart energy management schemes and relevant business models for each fleet operator and depot archetype;
Assessed the grid impact, wider benefits and costs of the above;
A clear, trial-ready plan for Beta, including sites, roles, data, and success measures.

These outputs will enable UKPN and other stakeholders to plan, design, and trial scalable, flexible, and commercially viable eHGV charging schemes. They will address both technical and commercial barriers to electrification and provide a foundation for future Beta trials and BAU integration.
The key outputs will be:
WP1: Mid-point Report, End of Phase pack and Show & Tell webinar – UKPN
Summary of key findings, recommendations, and next steps. Where appropriate, anonymised data and modelling tools will be made available to support replication and further research.

WP2: Fleet and Charging Location Archetype Framework – ESC
Definition of operational characteristics, duty cycles, and energy needs of different types of fleet operators and depot configurations. It will include segmentation of fleet types and charging behaviours, enabling targeted infrastructure planning and commercial model development.

WP3: Smart Energy Management Schemes and Business Model Options – Baringa
Identification and evaluation range of smart energy solutions including flexible connections, depot-side battery storage, behind-the-meter generation, and vehicle-to-grid (V2G) capabilities. Each scheme will be assessed for technical feasibility, commercial viability, and impact on peak demand and grid reinforcement requirements.

WP4: Grid Impact Modelling – Baringa
Quantification of the network impacts of clustered eHGV charging under different scenarios. It will include geospatial mapping of high-impact zones and recommendations for least-regret infrastructure strategies.

WP4: Energy System Cost-Benefit Analysis – Baringa
Assessment of the cost-benefit of smart energy schemes compared to BAU reinforcement. It will evaluate system-wide impacts including avoided reinforcement, flexibility value, and operational efficiency.

WP4: Fleet Operator TCO Cost-Benefit Analysis – ESC
Assessment of financial implications of different charging models and energy strategies for fleet operators. It will build on ESC's existing TCO model and incorporate insights from smart energy schemes and operational flexibility.

WP5 :Trial Design and Future Opportunity Roadmap – Voltempo
Definition of the requirements for Beta trials, including site selection, technology readiness, and stakeholder roles. It will also outline future opportunities for scaling and replication across other networks.

Dissemination of these outputs and lessons learned will be coordinated across the consortium. UKPN will lead dissemination within the DNO community, including through ENA working groups, internal planning forums, and cross-network collaboration platforms. Public-facing outputs will be shared via UKPN's innovation website and consortium partner websites.
The project will also engage with other SIF projects, the ongoing ZEHID consortia and NESO project to share lessons learned and avoid duplication. Insights from ZEHID and eFREIGHT will be referenced and built upon, and findings will be shared with other DNOs exploring transport electrification.
Importantly, the project is designed to support the development of competitive markets. All outputs will be shared openly, and the project will not create proprietary solutions or exclusive access arrangements. Instead, it will identify enablers for open-access infrastructure, shared charging hubs, and flexible connection products that can be adopted by a range of market participants. The inclusion of SME-focused models and service-based propositions ensures that smaller operators can participate in the transition, supporting market diversity and innovation. All outputs will be published and shared openly, supporting transparency and replication.

Commercials

Intellectual Property Rights (IPR), procurement and contracting (not scored)

The project will follow the standard approach to IPR management as set out in the SIF Governance document Chapter 9.
We do not anticipate any subcontract arrangements, tenders or procurements to be run by any Project Partner during Alpha.
Equally, we will not issue any requests for information or requests for proposals during the project lifetime.

Commercialisation, route to market and business as usual

This project is designed to deliver a scalable, commercially viable framework for integrating eHGV charging into electricity networks – one that can embed into BAU within UKPN and be easily replicated across other DNOs. The commercialisation plan is structured around three key pillars:
enabling BAU deployment of smart energy management schemes and flexible connection products,
supporting fleet operators and infrastructure providers with viable business models, and
informing national planning and regulatory frameworks to support replication.

Alpha will produce the following building blocks:
Fleet and site archetypes including geospatial mapping
Shortlist of smart energy schemes and business models
Grid-impact modelling and CBA
Trial-ready specification for Beta including flexible connection arrangements, shared hub models, and behind-the-meter energy solutions

UKPN's governance will adopt proven elements into BAU, such as using insights to refine its connections strategy for this customer segment, Distribution Future Energy Scenarios (DFES) assumptions, and flexibility participation guidance. For example, flexible connection products tailored to eHGV depots could be offered as standard, supported by new guidance and commercial terms.

Beyond UKPN, the project outputs will be shared with other DNOs through ENA working groups and cross-network collaboration. The archetype framework and smart energy scheme catalogue will be network-agnostic, allowing other DNOs to leverage them with minimal adaptation. The project also aligns with national freight decarbonisation programmes (e.g. ZEHID, eFREIGHT), creating opportunities for integration into wider infrastructure planning and funding mechanisms.

Project partners have clear strategies for commercialisation, as well as demonstrated commercial readiness:
Voltempo, a chargepoint technology provider, is actively developing megawatt-scale charging hubs and has a roadmap for scaling deployment across logistics corridors. To date, they have deployed high-power charging systems and are engaging with investors to scale infrastructure
Maritime and Voltloader, as fleet operators, are exploring new business models for depot electrification, including shared infrastructure and flexibility participation. They are participating in ZEHID and have operational experience with eHGVs.
Baringa has supported multiple SIF and NIC projects and has a track record of translating innovation into BAU. As the lead analytical partner, they will support commercial model development and has experience advising on market design and regulatory frameworks.
ESC brings expertise in fleet-level TCO modelling and is well-positioned to support operators in building investment cases.

Investment requirements for scale will be assessed in WP5, with trial designs capturing cost envelopes and stakeholder roles.

UKPN has senior sponsorship in place for this project. The Innovation team is leading, with support from the DSO and Connections teams. A senior sponsor from UKPN Connections directorate has been involved in shaping the project scope, ensuring alignment with strategic priorities and BAU integration pathways. This sponsorship ensures that outputs will be embedded into UKPN's planning and operational frameworks.
In summary, this project is well-positioned to transition into BAU. It delivers actionable insights for DNOs, fleet operators, and infrastructure providers, supports scalable commercial models, and aligns with national policy. Alpha will produce the foundational analysis and stakeholder engagement needed to define trial-ready propositions, setting the stage for Beta deployment and long-term impact. The size and scope are appropriate to deliver meaningful change, and the consortium is equipped to support

commercialisation and replication across the sector.

Policy, standards and regulations (not scored)

For Alpha, we do not consider there to be any barriers surrounding meeting regulatory, policy or standards requirements. Additionally, at this phase, we remain at a research stage only and therefore do not anticipate any barriers to successfully carrying out the project.

We therefore do not anticipate this phase or any future phase to require a derogation or exemption.

Value for money

Alpha will cost £555,350 in total project costs and the total SIF funding request is £499,815. This is balanced across the project partners as follows:

UKPN
Total costs: £63,060
Total contribution: £6,306 (10%)
Total SIF funding request: £56,754

Baringa
Total costs: £235,200
Total contribution: £23,520 (10%)
Total SIF funding request: £211,680

ESC
Total costs: £124,490
Total contribution: £12,449 (10%)
Total SIF funding request: £112,041

Voltempo
Total costs: £74,600
Total contribution: £7,460 (10%)
Total SIF funding request: £67,140

Maritime Transport
Total costs: £33,000
Total contribution: £3,300 (10%)
Total SIF funding request: £29,700

Voltloader
Total costs: £25,000
Total contribution: £2,500 (10%)
Total SIF funding request: £22,500

All partner contributions will be labour in-kind. There are no subcontractor costs anticipated in this phase. There will be no additional funding from other innovation funds.

This project represents good value for money as:
Project consortium consists of specialists with existing core expertise.
Three partners are on the ZEHID programme, meaning existing funding and learnings can be leveraged to avoid duplication, with no wasted effort on initial learnings, and these learnings can be built upon. This also avoids the need for completing a Discovery Phase for this project.
The transition from technology-focussed innovation in ZEHID to business model innovation in this proposed project will accelerate development of commercially ready propositions for real-world deployment, increasing speed-to-market of the learnings from ZEHID.
Our initial CBA predicts a NPV of £94m, equating to a high ratio of value per SIF pound invested, with further refinements to be

made via WP4 in project delivery, against a counterfactual where operators are applying for firm connections of full required capacity, leading to high costs, long wait times, and potentially affordability barriers for smaller fleets.
The use of specialist project partners (ESC and Baringa) will enable an accelerated approach to identify smart energy management and business model opportunities, drawing on their existing experience with clients in the integration of large new demands into the grid, as well as existing IP in modelling and commercial appraisal techniques.
We will leverage UKPN systems and data, partner operational datasets from ZEHID, and Baringa's established modelling environment to minimise new build and maximise reuse.
Costs are distributed proportionately to each partner's role and work packages: Baringa (lead for analytical work and modelling in WP3/WP4), ESC (archetypes, TCO, and CBA), UKPN (project management, data provision, BAU integration), Voltempo, Maritime Transport, and Voltloader (stakeholder engagement, operational data, trial design).

Associated Innovation Projects

- (•) Yes (please remember to upload all required documentation)
- ( ) No (please upload your approved ANIP form as an appendix)

Supporting documents

File Upload

Future Fleet Alpha Show and Tell 17-09.pdf - 2.9 MB
D1.3.1 Future Fleet Alpha End-of-Phase Review.pdf - 3.3 MB
D1.2.1 Future Fleet Alpha Mid-Point Review.pdf - 2.6 MB
D1.1.1 Future Fleet Alpha Kick-Off.pdf - 1.2 MB
SIF Alpha Round 5 Project Registration 2026-08-18 10_06 - 81.8 KB
Future Fleet - ANIP Form [FINAL].pdf - 272.8 KB

Documents uploaded where applicable?

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