

Diesel-free sites adoption programme

Application guidance



Purpose

This guide is here to help businesses prepare a strong application for our Diesel-Free Sites Adoption Programme, delivered by Connected Places Catapult, in partnership with Costain and Anglian Water and funded by Innovate UK.

Connected Places Catapult can provide objective feedback and advice on your application. Please contact us in good time before the deadline so that we have enough time to support you.

The application questions are designed to help assessors understand your solution, your business and your deployment ambitions. Make sure you answer the question being asked, cover all parts of the guidance and use clear, accessible language. The easier it is for assessors to understand your proposal and the evidence behind it, the stronger your application is likely to be.

The Diesel free Sites Adoption programme

The *Diesel-free sites adoption programme* is a four-month programme designed to help established UK SMEs deploy proven diesel-free solutions in a live infrastructure environment. Delivered by Connected Places Catapult in collaboration with Anglian Water and Costain through the Strategic Pipeline Alliance (SPA), the programme will support SMEs to test, validate and showcase technologies that can help reduce reliance on diesel across construction and infrastructure sites.

Below you can find information about our trial partners which will help you tailor your application to industry needs.

Costain

Costain has been improving the lives of people through infrastructure for more than 160 years. Today, they are involved in solving some of the UK's most complex infrastructure challenges across our four strategic markets of transport, water, energy and defence.

As engineering, construction, consulting, and digital experts, create sustainable infrastructure for a more prosperous, resilient and decarbonised UK. We focus on:

Driving inclusive economic growth and social opportunity, creating positive legacies and connecting people and communities.

Building resilience in a changing world, addressing challenges including climate change, energy supply and national security.

Creating a cleaner, greener future through low-carbon and nature-positive infrastructure.

Costain has recently launched the Decarbonising Construction Activities (DCA) framework, aimed at eliminating diesel use across our projects.

Anglian Water

Anglian Water supplies drinking water and provides water recycling services for the East Anglian region of the UK. There is an existing network of approximately 40,000km of water mains and 75,000km of sewers. Anglian Water has a strong focus on environmental sustainability; with the Love Every Drop campaign for maintaining water sources and a carbon reduction journey that started back in 2016.

The decisions made within the organisation must follow the Six Capitals framework, which incorporates natural, social, financial, manufactured, human, and intellectual considerations.

Anglian Water's region is highly vulnerable to climate change, with approximately 33% less rainfall than the UK average resulting in high risk of drought. Anglian Water's Water Resource Management Plan (WRMP24) projects significant population growth of approximately 918,000 by 2050, particularly in UK strategic growth areas e.g., the OxCam Arc. Water demand in parts of the region is expected to outstrip supply by 593 megalitres per day by 2050, which is why Anglian Water formed the Strategic Pipeline Alliance (SPA).

SPA is a two-phase interconnector programme for the purpose of transferring clean drinking water from regional areas of abundance to areas of deficit i.e., the north of the AW region towards the south. In total, this pipeline is expected to be approximately 580km in length.

Anglian Water have committed to ambitious carbon targets and were amongst the first companies to sign up to the Five Client Carbon Commitments (5CCCs), a client led initiative with the Construction Leadership Council. One of these commitments revolves around the need to remove diesel from construction sites, as Anglian Water aim to have fossil fuel free construction sites by 2030, and zero-emission construction sites by 2035. SPA are working towards these commitments by following their Fuel Emissions & Energy Transition (FEET) framework.

Trial opportunity

The Strategic Pipeline Alliance (SPA) is a joint-venture that Costain and Anglian Water have with Mott McDonald Bentley, Farrans, and Jacobs. This is a significant water infrastructure project that is installing pipelines, high-capacity storage tanks, and pumping stations.

Anglian Water can provide access to sites on SPA that will be constructing during the winter period. The SPA logistics hub in Norfolk has been flagged as the best environment to support a diesel-free construction trial due to the earthworks being conducted in the trial period.

SMEs would be able to support SPA in understanding the best approach to take when setting up sites and delivering construction projects without traditional fuels, generators, or plant. SPA would look to address all 4 challenge areas by establishing a complete solution trial, which may incorporate multiple suppliers. As an example, this could mean alternative generators (Challenge 2) powered by renewables/alternative fuels (Challenge 3) being used to charge Portable Battery Units (Challenge 1). These batteries are then used to charge BEV Plant (Challenge 4). All trials will need to comply to SPAs safety and procurement requirements.

The innovation challenges – Diesel free sites

Overview

UK infrastructure clients are committed to decarbonising their operations. Water sector infrastructure requires acceleration away from diesel dependency on remote and off-grid sites where mains power is unavailable. Proven solutions for electric plant, renewable power generation, and sustainable fuels exist, but their viability on transient construction sites with complex logistics has not been comprehensively tested at scale.

The barrier is adoption evidence: solutions need to demonstrate they work on real infrastructure projects with real operational constraints. Without this evidence, clients cannot confidently specify diesel-free alternatives or commit to decarbonisation targets.

This section outlines the challenges through this accelerator. Candidates are not limited in the number of areas they may be interested in and may choose to apply to one or more challenge areas. Where a particular solution is applicable to more than one of the challenge areas, this must be clearly communicated. We welcome solutions that address a specific part of a challenge as well as complete end-to-end solutions: the aim is to trial technologies, understand where they work effectively, and identify where further development is needed.

Challenge areas

Challenge A – How might we enable diesel-free operations on transient sites?

Focus Areas:

- Battery units that can be moved between sites as construction work progresses
- Logistics and positioning of battery storage so plant can remain charged during the working day
- Solutions that work with rapid site movement (250-300 metres of pipeline per week)

Water sector infrastructure construction is transient. Sites move constantly as pipeline lays progress or as work shifts between static assets. Battery storage and charging infrastructure must move with the work. Current diesel generator solutions are portable, but electric alternatives that maintain the same mobility are unproven. The challenge is demonstrating that battery systems can be relocated rapidly, deployed effectively on new sites, keep plant charged throughout working days, and do so without creating logistics bottlenecks or additional diesel use for transport and setup.

We are inviting businesses to propose solutions that enable diesel-free electric plant on transient infrastructure sites. Your solution should work with rapid site movement and complex logistics, not require fixed installations or infrastructure.

Example innovation areas may include (but are not limited to):

- Portable battery storage systems: units designed to move between sites rapidly; systems that can be relocated within days rather than requiring weeks of setup; modular configurations that adapt to different site layouts and power demands
- Logistics and positioning solutions: technologies or processes that keep charged plant within optimal charging distance; solutions that minimise transport distances for battery relocation; systems that reduce site setup time for new power installations

- Integrated charging management: rapid-charge technologies that support multiple plant on a single battery system; solutions that manage energy distribution across a transient site; systems that maintain charge efficiency across relocation cycles

Challenge B – How might we deploy renewable power as viable alternative to diesel generators?

Focus areas:

- On-site renewable power generation without mains connection
- Battery-electric and solar-hybrid systems as alternatives to diesel generators
- Power generation systems for both infrastructure sites and non-infrastructure sites
- Viability and reliability under varying site conditions and climate
- Telematics and real-time monitoring across power generation, battery storage and battery-electric plant
- Capturing performance data to compare diesel-free solutions against existing diesel operations

Most water sector infrastructure sites lack mains power connection. Diesel generators are currently a popular and industry wide technology, but they are incompatible with decarbonisation targets. Battery-electric and solar-hybrid systems exist but have not been validated on remote water infrastructure projects under the full range of operational conditions they will face. Clients need evidence that renewable alternatives are as reliable as diesel, can deliver the power required, and can operate effectively during low-sunlight periods and across seasonal variation.

We are inviting businesses to propose solutions that deploy renewable power generation as viable alternative to diesel generators on off-grid water sector sites. Your solution should address power demands on both static and transient sites.

Example innovation areas may include (but are not limited to):

- Battery-electric power systems: units that can operate reliably for full working days; systems that deliver the power output required for site operations; solutions that maintain performance during extended low-charge periods
- Solar-hybrid systems: renewable generation combined with battery storage; systems designed for UK climate conditions and seasonal variation; solutions that maintain reliability during low-sunlight periods; a sustainable generator charging a portable battery that can be transported to point of use
- Power generation systems for site operations: solutions for powering site offices and welfare facilities; systems for powering tools and small plant; technologies that scale from site cabins to site-wide electrical demands
- Performance validation and monitoring: systems that track power output and reliability; solutions that evidence performance against diesel baselines; tools that measure uptime and operational constraints
- Telematics and performance monitoring: systems that capture real-time data across renewable power generation, portable battery units and battery-electric plant; track energy use, uptime and operating conditions; and compare performance against diesel baselines. Solutions should help produce clear evidence of reliability to support future adoption

Challenge C – How might we enable transition to zero-emission and sustainable fuels?

Focus areas:

- Transitional fuels that bridge gap from diesel (blue hydrogen, HVO, biofuels)
- Cost-effective sourcing and availability of sustainable fuels
- Supply chain reliability for remote infrastructure sites
- Fuel efficiency solutions that reduce the fuel requirements on site.

Not all plants can transition to battery-electric immediately. Hydrogen and sustainable biofuels offer transitional routes for equipment that cannot be electrified in the short term, or for applications where battery technology is not yet mature. However, zero-emission and sustainable fuels face two barriers: cost (green hydrogen is significantly more expensive than diesel) and availability (supply chains are immature, particularly for remote infrastructure sites). Clients cannot commit to sustainable fuels without evidence that they are

economically viable at scale and that supply is reliable.

We are inviting businesses to propose solutions that enable cost-effective transition to zero-emission and sustainable fuels. Your solution should address either the cost barrier or the availability barrier (or both).

Example innovation areas may include (but are not limited to):

- Green hydrogen production and supply: on-site hydrogen generation from renewable power; solutions that reduce hydrogen production costs; supply chain models that serve remote sites.
- Sustainable biofuel sourcing: HVO and biofuel supply partnerships; models that make sustainable fuels cost-competitive with diesel; supply systems designed for construction sites.
- Hydrogen fuel cell systems: fuel cell technology that powers site equipment; systems that integrate with existing plant; solutions validated on comparable projects.
- Cost reduction and economics modelling: solutions that reduce the cost of sustainable fuel production; business models that improve ROI on alternative fuels; analysis that demonstrates cost parity with diesel at scale.

Challenge D – How might we build operator confidence and capability in battery-electric plant?

Focus areas:

- Evidence that BEV plant is as capable and reliable as diesel equivalents
- Operator training and support on using and handling BEV plant
- Communication of battery range and reliability to build confidence
- Support systems that help operatives manage battery life effectively

Operatives hesitate to use electric plant because they are uncertain about battery life and reliability. Without explicit evidence that BEV plant will not leave them stranded during working hours, and without clear communication about how to manage battery life, adoption will be slow. Building operator confidence requires three things: field evidence that batteries hold charge for full working days, clear training on correct usage, and visible support systems that help operatives understand and manage battery performance.

We are inviting businesses to propose solutions that build operator confidence in battery-electric plant. Your solution should provide evidence of reliability, clear operator guidance, and systems that reduce uncertainty about battery performance.

Example innovation areas may include (but are not limited to):

- **Evidence and validation systems:** data showing BEV plant performance on comparable projects; documentation of battery life under real working conditions; case studies that address operator concerns
- **Operator training programmes:** clear guidance on charging procedures; education on how to manage battery life during working days; certification or accreditation for BEV plant operation
- **On-site support and monitoring:** visible battery status displays on plant; alert systems that notify operatives of charging needs; real-time performance dashboards that build confidence
- **Communication and messaging:** clear information on battery range and performance; transparent documentation of BEV capabilities versus diesel; testimonials from operatives who have successfully used BEV plant

Application Guidance

Eligibility

The Infrastructure Productivity Scale-Up Programme is open to micro, small and medium-sized enterprises with proven productivity solutions that have the potential to be adopted more widely across the infrastructure sector.

Applicants must have the following:

- Be a UK registered small or medium-sized enterprise
- Applications must have a solution at TRL 7 or above that has been tested in an operational environment. We are particularly interested in deployment-ready solutions at TRL 8-9, with existing customers, evidence of successful delivery and the ability to scale.
- Have a proven solution that has moved beyond research and development, and has been proven in real world conditions
- Have a solution which addresses at least one of the four published challenge areas
- Have tested, demonstrated or deployed the solution in a relevant environment
- Be able to provide evidence from at least one real project
- Be able to demonstrate commercial potential
- Already operate within construction or infrastructure, or be seeking to transfer a proven solution from another sector
- Be willing to work collaboratively with Connected Places Catapult and programme partners
- Be able to commit appropriate time and resource to the programme
- Be willing to travel occasionally for face-to-face meetings, including a Welcome Day, programme workshops and showcase events
- Be available to participate actively in programme activities between **October 2026 and March 2027**

Equity, Diversity & Inclusion

The Programme celebrates Equity, Diversity, and Inclusion (EDI) not just because it is the right thing to do but because it leads to better decisions, better innovation and makes our working life more rewarding and more productive. All partners are committed to fostering EDI in our workforce, our partners, suppliers, and innovators.

We hold EDI to include the characteristics outlined in the Equality Act 2010 {Age; Sex (and Gender); Race (and Ethnicity); Disability; Religion or belief; Sexual orientation; Gender reassignment; Marriage or civil partnerships; Pregnancy and maternity}, but also other historic barriers to opportunity, such as “class”, nationality, dialect, education, and other forms of socio-economic exclusion.

The Programme is committed to the following EDI principles:

- Provide a level playing field for all innovators seeking to apply to participate in the Programme.
- Drive a human-centred approach when tackling real world challenges.
- Foster an open and inclusive environment for businesses joining the Programme.
- Offer advocacy and collaboration opportunities to reduce barriers to innovation.
- Encourage a range of perspective in our shortlisting and due diligence process by selecting diverse assessment panels.

Key application information

- Successful applicants will have the opportunity to apply for up to £60,000 (including VAT) in funding over a four-month period. Where their solution will be developed and integrated between November 2026-February 2027 with our partners, benefiting from access to industry expertise, facilities and testing environments
- Applications must be submitted by 12pm on 7th of September 2026. Late submissions will not be accepted or considered.
- Please review the assessment scoring criteria section in this guidance document as this will provide clarity of what evidence to provide in your responses to maximise your score.

- Assessors with a broad technical knowledge will mark your application. You should therefore write clearly in plain language, avoiding acronyms and obscure jargon.
- Only the information included within your application form is subject to assessment.
- Your application will automatically save so you can return to edit later.
- Please keep within the maximum word counts noted in each of the sections of the application form. Any content that exceeds the word count limit will be excluded from your submission.
- Please ensure you have read and understood the Terms & Conditions set out on the website before submitting.

Application process

Stage 1: After the competition deadline, only applications that meet the eligibility criteria and scope of the competition will be formally assessed. Connected Places Catapult reserves the right to declare applications as out of scope of the programme. You will only be notified at this stage if your application does not meet the eligibility criteria. Otherwise, your application will progress to Stage 2.

Stage 2: Applications that progress to stage 2 will be scored in line with the scoring criteria below by at least two expert assessors from the Connected Places Catapult. Applications will be shortlisted for Stage 3 – an interview. Shortlisted applicants will be contacted by the 31st of September 2026.

Stage 3: On-line interviews will take place between the 5-8 October 2026. You will be provided with a virtual Teams meeting link and interview guidance ahead of the interview if you are successfully shortlisted. The interviews will comprise a 10-minute presentation and then a Q&A session for us to clarify any points from your application from a commercial or a technical perspective. Regretfully, we may not be able to accommodate specific requests for interview slots, therefore it is imperative that you keep your diary as open and flexible as possible on these dates.

Feedback: Where possible, and depending on application numbers, feedback to unsuccessful applicants from Stage 2 may be provided. However, only applicants that progress to Stage 3 (interview) will be guaranteed a breakdown of the scores achieved for each section of the application form.

Assessment Scoring Criteria

This section details the criteria our assessors will use when scoring your application. Under each criterion there is a maximum score of 5 available.

Solution & Market Potential (30%)

Does the solution align with the Diesel-Free Sites challenges, suitably mature and shows strong potential for customer adoption, commercial growth and wider sector impact?

- **Strong alignment** A proven solution utilised in real-world environments at TRL 7 or above that has been tested in an operational environment. We are particularly interested in deployment-ready solutions at TRL 8-9, with existing customers, evidence of successful delivery and the ability to scale
- **Clearly articulated value proposition** and distinctive benefits for Costain, Anglian Water and the wider infrastructure sector
- **Clear growth ambition** and a credible strategy for post-trial commercialisation, scaling and wider market adoption
- **Compliant** – Evidence the product/service is strongly aligned with current regulation and policy and can integrate into relevant existing systems

Trial Proposal and Feasibility (20%)

Question: Has the applicant presented a realistic and feasible trial proposal that can be delivered within the programme timeframe?

- Clear and credible trial plan that is realistic and achievable within the programme timescales

- Strong understanding of the operational environment and trial delivery requirements
- A strong team capable of delivering the trial
- Appropriate and well-considered approach for implementation within a live construction environment
- Key technical, operational and delivery risks are clearly identified and appropriately managed
- Sufficient resource and capability available to support successful participation throughout the programme
- Strong potential for the trial to generate meaningful operational evidence in a live environment
- Clear definition of success, including robust and measurable performance indicators
- Credible pathway from trial delivery to future deployment, procurement and wider adoption

Growth (20%)

Can we consider the business a high growth SME?

- **High employee growth** – 20%+ annual employee growth
- **High revenue generation** – FY 2025/26 annual revenue above £750k and forecasted 2026/27 annual revenue includes at least 20% growth target
- **Consistent growth** – Demonstratable year-on-year growth
- **Size of the team** – the business has at least 3 FTEs
- **Clear growth ambition** and a credible strategy for post-trial commercialisation

Financials (20%)

Can we consider the SME financially stable?

- **Profitability** – The company is profitable
- **Runway** – If not profitable, the company has 18+ months of financial runway
- **Repeat customers** – revenue comes from repeatable deals
- **Sustainability** – Self-reported clear view of financial potential and sustainability of business
- **Investment** – The business has raised investment before and/or has clear investment strategy

Team (10%)

Has the team demonstrated the needed experience and capability?

- **Strong team** with the skills, capability, capacity and relevant experience required to successfully deliver the proposed trial
- **Clearly defined roles**, responsibilities and ownership across the project team
- Strong technical capability to deliver and manage trials in an operational environment
- **Domain Experience** – It is demonstrated that the leadership team has a high level of domain experience
- **Demonstrated commercial capability** and understanding of the route to market
- **Strong ability to collaborate** effectively with Connected Places Catapult, Costain, Anglian Water and other programme partners throughout the programme

Payment Schedule

- CPC will be procuring the services for the programme under a pre-commercial Pilot & Trial contract
- Once the contract has been signed, the Catapult will provide you with a Purchase Order number which must be clearly noted on all invoices
- If you are VAT registered, please include the appropriate VAT on the face of the invoice
- To enable your fees to be paid, you will need to raise an invoice and send this to us at innovation_funding@cp.catapult.org.uk.
-

Payments are staged. An up-front payment of **60%** will be made to enable the start of the project in October 2026. At the end of the project in March 2027, the remaining funds will be paid once your end of project report has been approved, and all required documentation has been correctly filled in. Invoices will have to be provided for the payment to be released.

Only fees incurred between project start and end dates will be paid.

Your invoices will need to be accompanied by a Statement of Expenditure (template will be provided) which should include a clear breakdown of all costs incurred.

Please note the following:

- All funding is **inclusive** of VAT
- Invoices are paid within 30 days of receipt and approval. These payment terms cannot be altered

All direct project costs can be included in your financial breakdown, including staff resource, equipment, consumables, travel, and subsistence. Please note that sub-contractor and material costs should be justified within your project plan; all projects should demonstrate value for money. All cost information provided should be clearly explained and all rates must reflect fair market value.

Match Funding

If your project will be receiving any match funding from your consortium partners, including in-kind match funding such as working days, access to data or assets, please explain how this contribution will support your proposed project.

Dates and deadlines overview

Please see below a summary of the dates and deadlines for the competition. These are indicative timings, and we will adhere to this schedule as best we can. The closing date for applications is fixed and will be midnight on **7th of September 2026**.

30 July 2026	Applications Open
11 August 2026 (14:00-15:00)	Application Support Webinar
7 September (12:00 deadline)	Applications Close
5-8 October 2026	Shortlist Interviews
14 October 2026	Successful candidates notified
22 October 2026	Welcome Day

*Please note, on occasions there may be small delays in notifying of the outcome at each stage of the application process.

If you have any questions about the programme, please contact:
annah Fortune, Senior Consultant – Regional Delivery
hannah.fortune@cp.catapult.org.uk

We wish you luck with your application.

