

This event will be recorded

Net Zero Innovation Portfolio: Red Diesel Replacement Phase 2 Competition

Stakeholder Engagement Event
25 January 2023

NZIP: Red Diesel Replacement



Department for
Business, Energy
& Industrial Strategy

Agenda and House Keeping

Agenda

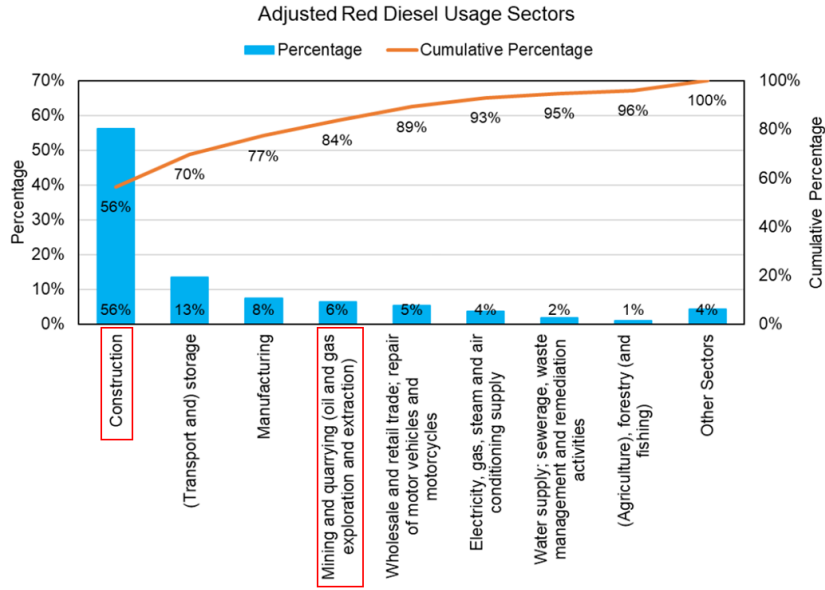
- Context
- Programme overview
- Competition scope
- Deliverables
- Eligibility
- Grant funding intensities
- Phase 2 timetable
- Application and assessment criteria
- Acceleration Support
- Next steps
- Q&A

House keeping

- Leave comments or questions in the chat function
- The slides and will be shared after the meeting and published with the anonymised Q&A on the [RDR Phase 2 competition page](#)



Context








- Industrial Non Road Mobile Machinery (NRMM) accounted for **6.0 MtCO₂e, 8% of total industrial emissions** in 2019
- Partial removal of the rebate on red diesel and biofuels from April 2022
- The Red Diesel Replacement (RDR) programme forms a key part of the developing government response to decarbonise NRMM
- Part of the £1 billion **Net Zero Innovation Portfolio (NZIP)**

- Supports the **Industrial Decarbonisation Strategy** and **Net Zero Strategy** which recognised the need for government intervention to advance the development of low carbon technologies necessary to reach net zero



Red Diesel Replacement Innovation Programme

£40m in grant funding to support projects that develop and demonstrate low-carbon alternatives to red diesel for the construction, mining & quarrying sectors.

-  **Develop commercially viable and globally applicable low-carbon alternatives to red diesel, looking at long-term solutions**
-  **Demonstrate an integrated, low-carbon solution at a moderate scale on site** for the mining and quarrying sector, and the construction sector
-  **Accelerate the commercialisation of low-carbon red diesel alternatives**
-  **Disseminate the learnings and results of the Red Diesel Replacement programme** to international stakeholders, industry and other sectors which utilise middle distillate fuels
-  **Inform policy teams on the potential of these low-carbon alternatives and create awareness of the spin-off opportunities** for other sectors (e.g. maritime, agriculture and road freight)

Red Diesel Replacement Innovation Programme

Phase 1: Separate development of component technologies

- **Lot 1:** Distribution, storage and energy delivery systems development
- **Lot 2:** Development of equipment (components/sub-systems) and fleet management infrastructure (facilities for maintaining, hosting and servicing equipment)
- **Lot 3:** Fuel development
- **TRL4+:** Lab & Test bench demonstrations/Development prototypes

c£6.7m
11 months duration

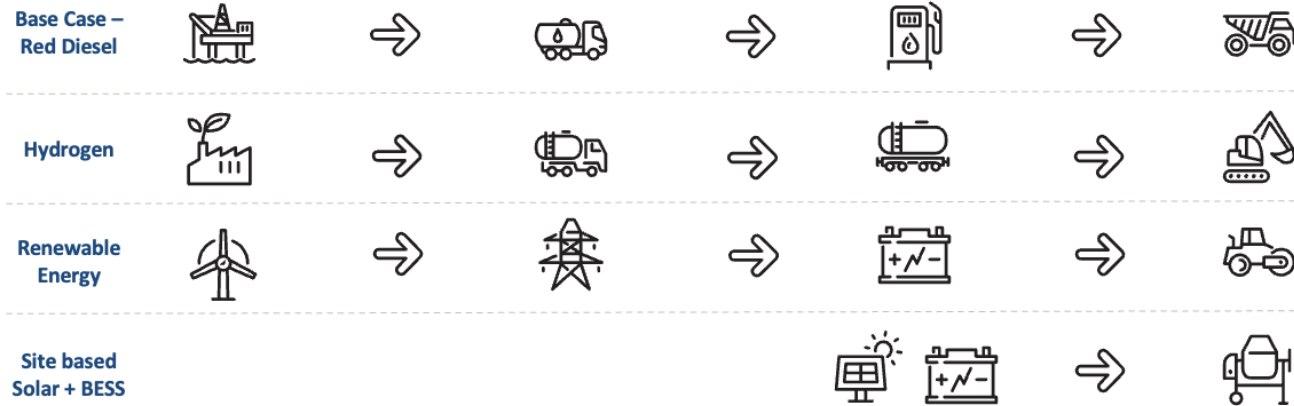


Phase 2: System integration and demonstration

- Consortia developing a low carbon, end-to-end demonstrated solution
- Open to all applicants, not just those who were successful in Phase 1

Up to £32.5m
20 months duration

Phase 2 Competition Scope



Schematic examples of a “well-to-work” system

- **End-to-end:** Projects must demonstrate a low carbon, end-to-end solution (“well-to-work”) on a representative construction, mining and quarrying site. Must include:
 - Generation/production
 - Distribution, storage and refuelling/energy delivery
 - End-use, e.g. excavators, generators
- **Demonstrations:** Must run for a minimum of 1 month with 80% operational uptime/availability on a site that is representative of a real-life operational environment for the construction, mining and quarrying sectors.
- **Innovation:** Must be innovative and unproven prior to launch. The end-to-end solution must achieve Technology Readiness Level (TRL) 7 by the end of the project.

Phase 2 Competition Scope

- **Fuels:** Must align with one of the long-term energy vectors. H2 blending is acceptable if justified and as a stepping stone to 100% low carbon fuel use (without blending with any fossil fuel derived fuels or HVO)

Electricity (direct or battery)	Hydrogen (ICE or Fuel Cell)	E-fuels
Ammonia	rDME	RTFO Development Fuels

- **Emissions:** Projects should aim to achieve –
 - GHG emissions reduction by 75% for the end-to-end solution vs. current red diesel systems
 - Air pollution emissions reduction by 50% reduction vs. current EU Stage V emissions standards
 - Noise emissions reductions where possibleProjects will score higher if they can achieve the emissions targets described or can provide a clear route achieving them

See Competition Guidance for full details

Phase 2 Competition Scope

Exclusions

- Systems/solutions which are already commercially or widely deployed in the UK or internationally
- Any system/solution that is below TRL 4 or will not reach TRL 7 by the end of the project (14 March 2025)
- Individual technologies or components being demonstrated in isolation, only complete end-to-end systems, e.g., a project to refuel equipment on-site alone is not eligible
- Projects that do not utilise one of the long-term energy vectors described above, e.g., HVO or fossil fuels
- Projects without the potential to achieve a significant reduction in GHG emissions (target 75%) or NOx, SO2, and PM (PM2.5 and PM10) emissions for NRMM (well-to-work) (target 50% below EU Stage V emissions standards)
- End-use equipment that is not normally deployed in a mining and quarrying or construction environment

Deliverables

Project completion and deliverable submitted by 14 March 2025

- A physical demonstration of their end-to-end system and ‘demonstration day’ for key stakeholders
- Interim findings reports for publication throughout the project lifecycle, for the purposes of knowledge dissemination
- Progress reporting to BEIS
- Knowledge dissemination activities
- An evidence-based final project report for BEIS (and other government departments), covering the technical design, costs, emissions savings potential, commercialisation, and lessons learned
- An accessible version of the Phase 2 final project report alongside a one-page case study which can both be published

Eligibility

As a precis:

- Robust “well-to-work” project meeting the scope described
- Solution achieves TRL 7 by project end
- No retrospective funding is available
- Over 50% of project funding and demonstration in the UK
- Project would not go forward without public sector funding
- Grant requested between £1 – £12 million
- Max £10 million per single organisation
- Match funding within 3 months of grant signing
- No ineligible costs and meets grant thresholds
- End date by 14 March 2025
- Capable of delivering on multiple projects, if applicable
- Prepared to enter into grant agreement with BEIS based on the terms in the grant templates
- Led by private organisation or RTO
- Disseminate widely and publicly
- No activities with sanctioned entities



Eligibility – Eligible Costs

Directly incurred costs

- E.g. labour, materials, capital equipment costs, sub-contractor costs, T&S

Indirectly incurred costs

- In proportion to the amount of effort on the project, and applicants must document the methodology used to calculate it
- E.g. office and laboratory consumables, library resources, overheads (up to 20%)

VAT

- Non-recoverable VAT is an eligible cost
- Grants are outside the scope of VAT and so non-recoverable VAT should be added into the 'excluding VAT' line on the invoice

Inflation

- Material and capital expenditure items only

Eligibility – Ineligible Costs

The full list is available in the competition guidance but as a precis:

- Commercialisation activities
 - Profit
 - Contributions in kind
 - Protection of IPR
 - Religious/political activities
 - Gifts/entertaining
 - Recoverable VAT from HM Revenue and Customs
 - Contingency sums beyond the expected costs of the project work
- Inflation for:
 - Labour and overheads
 - Sub-contract
 - Travel and subsistence
 - Other costs

Eligibility – Changes between application and grant award

- Project costs will be the cost estimates quoted in your application, deemed by BEIS to be a “not to exceed cost”
- Increases in project costs will need to be covered by the applicant
- BEIS will only pay the actual, eligible costs incurred as evidenced by appropriate information hence the total sum paid for the grant may be less than the grant requested



Grant Funding Intensities

- Subsidy rules in line with UK-EU Trade and Co-operation Agreement (TCA) requirements and the WTO (World Trade Organisation) rules (and Northern Ireland Protocol, where applicable)
- Eligible for applicants in England, Wales, Scotland and N Ireland equally
- Applicable subsidy intensities depends on:
 - Organisation type (private organisation, university, etc.)
 - Organisation size (small, medium, large – based on your parent company, see guidance notes)
 - The activity being undertaken (industrial research, experimental development)
- All public funding from government organisations/public bodies must be taken into account
 - Any other public funding will be cumulated with BEIS funding to ensure that the public funding limit and the subsidy intensity levels are not exceeded for the project
- Match funding to cover remaining project cost within 3 months of grant signing



Grant Funding Intensities

Research Category	Business Size	Maximum amount of grant funding towards total eligible Project Costs
Industrial Research	Small	80%
	Medium	75%
	Large	65%
Experimental Development	Small	60%
	Medium	50%
	Large	40%

Compliance with subsidy limits is the responsibility of the parties receiving grant funding

Grant Funding Intensities

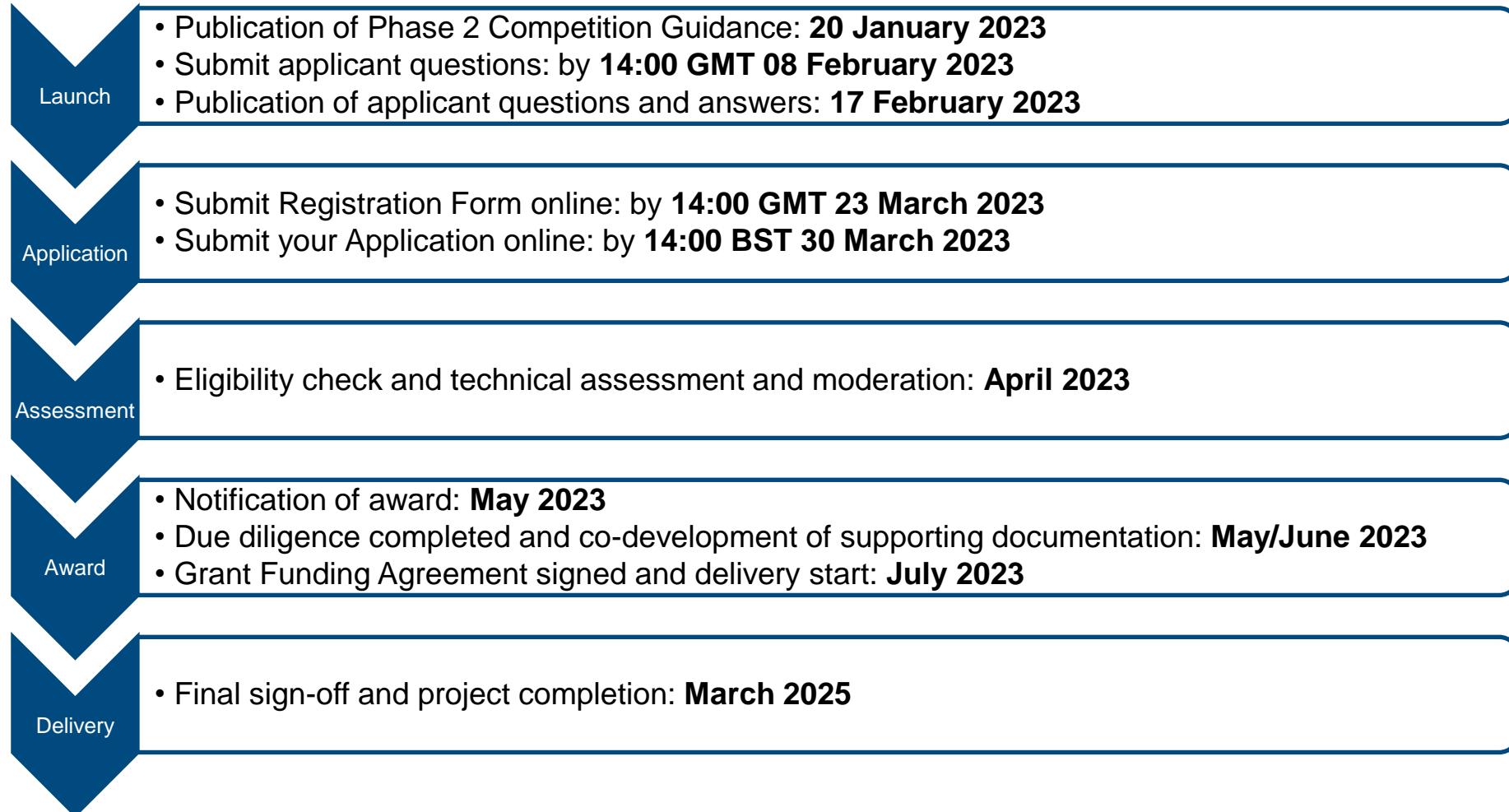
Collaborative applications

- Funding intensity is related to the % costs per project partner to the project

E.g.

Business Size	Research Activity	Maximum Aid Threshold	Percentage of project	Effective Aid Threshold
Small business	Industrial Research	80%	25%	20%
	Experimental Development	60%	75%	45%
Maximum project aid rate	65%			
Large business	Industrial Research	65%	50%	32.5%
	Experimental Development	40%	50%	20%
Maximum project aid rate	52.5%			

Phase 2 Timetable



Application

Questions and Answers

- All questions must be in by **14:00 GMT 08 Feb**
- Questions submitted after this date may not be answered, though we may answer them if we believe them to be of material significance
- Submit questions via the [RDR Questions Form](#)

Register online

- Registration deadline is **14:00 GMT 23 March**
- Companies that do not register will not be eligible to apply
- Registration does not obligate you to apply
- Register using the [online registration form](#) (link is in the competition guidance)

Application form

- Application deadline is **14:00 BST 30 March**
- It will not be possible to submit an application after the deadline, so allow time for files to upload etc
- Apply using the [online application form](#) (link is in the competition guidance)

Application – Costs & Consortia

Costs and expenses associated with preparing the application are not eligible for reimbursement, regardless of success

Consortium applications are welcome

- Only one application should be submitted for each separate project application
- All consortium partners are expected to sign the completed application form for their project
- A lead partner **must** be nominated
 - They will be the recipient of the grant funding agreement, to whom all monies paid and will be responsible for distributing funds to their consortium partners
- Project partners should draft a Consortium Agreement as early as possible
 - These will need to be in place and signed within 1 calendar month of grant signature

Application – Submission Checklist

- Technical Performance and Emissions spreadsheet
- Project Cost Breakdown Form
- Key Work Packages
- Gantt Chart
- Organogram
- Risk Register
- Project Team CV Package
- Referenced figures, e.g. schematics, diagrams, pictures (optional)
- Letters of support from OEMs/ fuel suppliers/ sub-contractors/ project partners (optional)
- Supporting information, e.g. academic papers (optional)
- Partner Information Form
- Signed Declarations



Assessment

- Bids will be assessed by 3 independent assessors, which may include assessors who are not BEIS staff members
 - All assessors will be carefully selected to avoid conflicts of interest
- Assessors will score bids against the assessment criteria
- Scores are awarded on a 1-5 scale
 - Any criterion scoring a 1 will automatically fail the whole bid
 - A minimum score of 60% is required for success
- Successful bids will be ranked in order of merit (highest to lowest score) and will be funded in rank order until total funding available (up to £32.5m) is exhausted
- **BEIS reserves the right to not to award up to £32.5 million depending on the number and quality of applications received and budget availability**



Assessment – Criteria

Criteria	Weighting (%)
1. Innovation & Performance	35
1a) Innovative Solution	10
1b) Performance and Feasibility	15
1c) Emissions, Environment, and Safety	10
2. Project Delivery	45
2a) Project Team Experience and Consortium Governance	10
2b) Delivery Plan and Risk Management	15
2c) Commercialisation Plans	15
2d) Dissemination	5
3. Project Financing	20
3a) Justification of Costs	10
3b) Additionality and Value for Money	10

Assessment – Scoring

Score	Description
1	Not Satisfactory: There is no evidence to very little evidence that the question has been satisfactorily answered and major omissions are evident. The response does not give confidence that the project will result in a satisfactory outcome.
2	Partially Satisfactory: The question has been satisfactorily answered in part however, notable omissions are evident and considerable clarification is needed Supporting evidence is lacking and there is uncertainty whether the project will result in a satisfactory outcome.
3	Satisfactory: The question has been satisfactorily addressed, with reasonable evidence provided but some omissions are evident and further clarification is needed. There is a reasonable expectation that the answer provided can lead to satisfactory project outcomes.
4	Good: The question has been well addressed with only minor omissions or lack of clarity and good evidence provided. There is a good probability that that the answer provided will lead to a strong project outcome.
5	Excellent: The question has been addressed clearly and concisely in all aspects with strong evidence provided. Very minor clarifications may be needed however, the answer provides confidence that a strong project outcome is likely to be achieved.

Grant Award

- If successful, BEIS will carry out financial due diligence checks on all preferred bidders and engage in clarifications on the project proposal as identified by assessors
- Grants are expected to be awarded in June 2023 with projects starting in July 2023, and will run until March 2025
 - The demonstration and final deliverables are expected to be complete by February 2023, and final invoices submitted before the end of March 2025
 - **This is a hard end date as projects cannot extend beyond the spending round in March 2025**
- The terms and conditions will be based on the BEIS template Grant Offer Letter and Grant Funding Agreement provided in Annex 1 of the Competition Guidance
 - These terms and conditions are **final and non-negotiable**; we recommend reviewing these as soon as possible



Acceleration Support

- For Small & Medium Enterprises (SMEs), 100% funded by BEIS
- Services are delivered by The Carbon Trust and their consortium partners on behalf of BEIS
- Bespoke plans covering:
 - Market engagement and customer value proposition
 - Strategy and sales
 - Business processes and controls
 - Product-service design, development and launch
 - Team and board
 - Funding and investment readiness
- Services include:
 - Tailored support, including coaching and specialist support
 - Group training and learning resources, including sector specific masterclasses and techno-market workshops
 - Access to industry and finance networks, providing companies with investor engagement opportunities, pitch training sessions, facilitated market engagement and networking opportunities



Next Steps

- Review the Phase 2 competition guidance and application forms on [RDR Phase 2 competition page](#) on gov.uk
- [Register](#) before **14:00 GMT 23 March** for the password to access to the online application form
- All questions should be submitted **by 14:00 GMT 08 Feb** via the [RDR Questions Form](#)

Q&A



Thank you for attending

