

APC6: Accelerating the drive to low carbon propulsion

APC **6**



Department
for Business
Innovation & Skills

Innovate UK



ADVANCED
PROPULSION
CENTRE UK

APC 6

Accelerating the drive to low carbon propulsion

Consortia are invited to apply for the latest round of research and development funding from the Advanced Propulsion Centre (APC).

Provisionally up to £25m in collaborative research and development funding is available in the latest round of APC competition funding (known as APC6). Project funding is delivered in partnership with the Department for Business, Innovation and Skills (BIS) and Innovate UK.

Provisionally up to

£25
million

This is the sixth collaborative R&D competition supporting the development of low carbon, low emission automotive technologies. The first APC competition was launched in 2013. The first four rounds have engaged 77 organisations, supporting 17 innovative projects with circa £290m of funding co-invested by industry and government. It is anticipated that competitions will run on a six monthly cadence.

Which areas of research are eligible for funding?

Projects are expected to lead to significant reductions in vehicle CO₂ emissions and improvements in air quality under operational conditions. Both CO₂ and air quality improvements should be made with reference to comparable, best-in-class vehicles.

Applicants must show how the project will strengthen UK capability and develop the UK's supply chain in the field of low carbon vehicles. Projects that will accelerate disruptive technologies towards market entry are particularly encouraged.

APC6 is seeking proposals for collaborative research and development projects that demonstrate the development of

technologies based around one or more of the following technology areas:

- Internal combustion engines
- Lightweight vehicle and powertrain structures
- Electric machines and power electronics
- Energy storage and energy management
- Alternative propulsion systems

The competition's aim is to develop on-vehicle technologies – for either on-road or off-road vehicles. Technologies that primarily reside off the vehicle, such as charging infrastructure, are out of scope.

Key dates

Competition opens	27th June 2016
Registration deadline	noon on 14th Sept 2016
Deadline for full applications	noon on 21st Sept 2016

This is a single-stage competition. Applications for this competition will be managed by Innovate UK. We anticipate that applicants will be informed of the outcome of their application in December 2016.



APC are here to help guide you through the funding application process
Call APC on 02476 528 700 to arrange a meeting

Who can make an application for funding?

Applications for funding must come from a group of organisations acting as a consortium.

Consortia must have a clear, demonstrable route to production and line of sight to market. They must include at least one vehicle manufacturer and/or a Tier 1 supplier, and at least one SME partner. They are encouraged to consider having more than one end-user as part of the consortium, illustrating the strength of the business case for the technology.

Consortia should have the potential to realise economic benefits within a short period of the project end. These could include employment (new and safe-guarded jobs), new business activity or expansion of products and services and value for money delivered to customers.

We expect the majority of the technologies included to have been proven in a laboratory or vehicle environment prior to commencing the project. Projects should then aim to advance these technologies towards commercialisation.

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What is the maximum amount of funding available?

We have provisionally allocated up to £25 million to fund a limited number of collaborative R&D pre-production projects.

Successful applicants can attract grant funding towards their eligible project costs. The percentage of costs we pay varies, depending on the type of research being carried out, the type of organisation involved, and the outcome of a value-for-money economic assessment which will be undertaken by BIS. Further details are available in the competition's Guidance for Applicants document.

Overall, each project will attract no more than 50% public funding of the total eligible project costs. We expect to fund mainly industrial

research, in which large commercial partners will generally attract no more than 50% public funding for their project costs, medium-sized businesses up to 60%, small businesses up to 70% and research organisations up to 100%.

Where experimental development is funded, a large commercial partner may attract no more than 25% funding, medium sized businesses up to 35% and small businesses up to 45%.

We expect total eligible project costs to be between £5m and £40m. Projects are expected to last between 18 and 42 months. We may consider a project out of this range and such projects should be discussed with the APC in advance of submission.

What are the project criteria?

Projects must develop technology or capability to:

- Deliver significant reductions in vehicle CO₂ or other emissions in reference to comparable, current, best-in-class systems
- Align with Automotive Council Technology Group Roadmaps with respect to advanced propulsion systems
- Develop the UK's supply chain in the field of low carbon vehicle technology

As part of the assessment process and throughout the project life, applicants will need to show how the project will:

- Provide substantial additional benefits beyond a 'business as usual case'
- Develop capability to bring products to market more quickly
- Build and grow significant supply chain capability within the UK
- Achieve substantial advancement in technology and manufacturing maturity

- Show a commercially viable path to production and volume manufacture
- Define a strategy for commercialisation and market entry at a globally competitive piece price
- Handle and secure intellectual property for exploitation by, and to the overall benefit of, UK-based organisations
- Embed knowledge in people and grow expertise in the UK
- Consider the performance, durability, integrity and safety of any proposed technology, applying the appropriate standards.

Applicants are strongly encouraged to demonstrate senior management commitment to success of the project and consortium, in part by showing that the consortium's collaboration agreement is well advanced at the point of submission.

Projects that will accelerate disruptive technologies towards market entry are particularly encouraged, as are projects that follow on from activities that have already received UK public funding.

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Funding requirements

- Consortia should demonstrate the potential to build on the UK's existing capabilities, targeting global competitive advantage and economic benefit for the UK. Applications must illustrate how successful delivery of the project will benefit all consortium partners.
- Projects should be clearly defined as either predominately industrial research with some work in experimental development, or predominately experimental development with some work in industrial research.
- Under State Aid legislation, no single consortia partner can receive more than EUR 20m of grant for industrial research and no more than EUR 15m of grant for experimental development. Any projects close to these limits should contact the APC for a review of eligibility for this competition.
- We expect funding to be split between industrial research, in which a large business partner will generally attract up to 50% public funding for their total eligible project costs (60% for Medium and 70% for Small/Micro enterprises), and experimental development, with a business partner attracting 25% funding for their total eligible project costs (35% for a medium and 45% for a Small/Micro enterprise). Overall, a project cannot attract more than 50% public funding towards total eligible project costs.
- Funding will be available to support capital costs for new pilot production processes and facilities, where they are to be used for research into proposed manufacturing solutions. Test rig modifications and mule vehicles to develop and prove system performance will also be eligible. New test equipment will not be eligible unless it can be demonstrated that sufficient or appropriate capability does not exist in the UK.
- Applicants need to make a strong case to show that the project is the most cost-effective way to deliver the technology in line with an appropriate business case and a route to market.
- In all cases projects must comply with State Aid requirements. Experimental production and testing of products, processes and services will be eligible, provided that these cannot be used or modified for commercial use. Experimental development does not include routine or periodic changes to products, production lines, manufacturing processes, or existing services and operations, even if such changes may represent improvements.
- We encourage companies working outside the automotive sector that can bring technical knowledge and expertise to a consortium to participate in this competition.
- Projects are asked to provide a realistic and achievable start date, assuming notification of award to successful applicants in December 2016. There will be no penalty for requesting a later start date to ensure that robust plans and forecasts are in place and that the project team is available.
- Applications will undergo a technical and economic impact evaluation.
- We reserve the right to take a portfolio approach.

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Application process

**This competition opens on 27th June 2016.
The process involves a written application
and an interview presentation.**

The written application is assessed by technical assessors appointed by Innovate UK, and economic outputs are assessed by economists employed by BIS. Selected applicants will then be invited to present their project proposal to a panel of assessors and other stakeholders. The application process will be managed by Innovate UK.

Applicants must first register for the competition, by noon on 14th September 2016.

The deadline for receipt of all application forms is at noon on 21st September 2016.

Further details are available in the competition's Guidance for Applicants document. Applicants are strongly encouraged to read this material in full.

Innovate UK

Innovate UK are managing the application process. In case of technical issue with their system please contact:

Competition helpline: 0300 321 4357
Email: support@innovateuk.gov.uk



To access the full Guidance for Applicants, register and apply for this competition, see www.apcuk.co.uk/apc6

Further information

For more information and support contact APC:

call: 02476 528 700
email: info@apcuk.co.uk
website: www.apcuk.co.uk/apc6

Publicity

As part of the application process all applicants are asked to submit a public description of the project. This should adequately describe the project but not disclose any information that may impact on intellectual property, is confidential or commercially sensitive. The titles of successful

projects, names of organisations, amounts awarded and the public description will be published once the decision to offer an award has been communicated to applicants by email. Information about unsuccessful project applications will remain confidential and will not be made public.

The Advanced Propulsion Centre

As the global automotive industry addresses the challenge of producing lower-carbon transportation and improving air quality, a supply chain has yet to develop for the next generation of propulsion systems, not just in the UK, but internationally.

The UK automotive industry has a significant opportunity to build on its existing strengths in powertrain engineering and low carbon innovation to seize global competitive advantage, as existing technologies and traditional supply chains are displaced and new ones created.

The Advanced Propulsion Centre UK (APC) was formed in 2013 from a commitment between the Government and automotive industry through the Automotive Council to position

the UK as a global centre of excellence for low carbon powertrain development and production. It is a central pillar of the Industrial Strategy created by the Automotive Council.

The APC is a private limited company, an industry wide collaboration of innovators and producers of low carbon propulsion systems

APC facilitates partnerships between those who have good ideas and those who can bring them to market. The services provided by the APC enable projects which provide profitable growth and sustainable opportunities for the partners involved. Each project enhances the UK's position as a Propulsion Nation and contributes to the country's economic prosperity.



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