Tactical Power Challenge: powering the future force

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UK Defence Innovation and the British Army are seeking innovative technologies to help meet rapidly growing battlefield power demands.

- UKDI has launched a new Tactical Power Challenge on behalf of the British Army and with support from the Defence Science and Technology Laboratory (Dstl)
- The challenge seeks innovative solutions to improve the generation, storage, distribution and management of electrical power for deployed forces.
- The activity is being delivered in partnership with Australia's Advanced Strategic Capabilities Accelerator (ASCA).
- Technologies ranging from advanced energy storage and rapid charging to novel power generation systems are being sought.

Modern military operations rely increasingly on electrically powered capabilities, including communications systems, uncrewed systems, sensors, electronic warfare equipment, counter-UAS technologies and edge computing. As operational power demands continue to rise, the Army is seeking innovative solutions that can provide flexible, resilient and deployable energy.

UK Defence Innovation (UKDI) is pleased to launch the Tactical Power Challenge, a new innovation opportunity designed to identify and develop technologies capable of supporting future deployed operations.

The challenge is being run in partnership with Australia's Advanced Strategic Capabilities Accelerator (ASCA) and aligns with parallel work being undertaken by both nations to modernise tactical power provision for deployed forces.

What is the Tactical Power Challenge?

The challenge consists of two complementary opportunities:

Innovative Tactical Power Solutions

Innovative Tactical Power is a two-stage funded competition seeking technologies currently at Technology Readiness Levels (TRL) 4 to 6 that can be developed into future tactical power capabilities. The amount of funding available is £2.45 million (ex-VAT).

Successful innovators will progress through a staged assessment process and may receive funding to mature and demonstrate their technologies, with project activity expected to conclude by March 2028.

Immediate Power Problem

Immediate Power is a non-funded market engagement activity seeking technologies that are already at TRL 6 or above and have the potential to address current operational requirements.

Innovators with solutions of particular interest may be invited to participate in future Army trials and experimentation activities within the UK.

Director Innovation responsible for UK Defence Innovation, John Cunningham said:

> Reliable and deployable power is fundamental to maintaining operational advantage. As Defence adapts to increasingly complex operating environments, we are seeking innovative technologies that can provide our personnel with resilient and flexible electrical power solutions wherever they are deployed.
>
> British industry is central to delivering the capabilities our Armed Forces need for the future. This challenge will help identify and develop sovereign technologies that can improve operational energy resilience, support deployed personnel and strengthen the UK defence innovation ecosystem.
>
> We look forward to sharing the results of this exciting challenge with our partners in Australia and the US.

What are we looking for?

The British Army is seeking innovative solutions that can improve the provision, storage, recharge, distribution and management of electrical power across the tactical battlespace.

We are interested in technologies including:

- safer alternatives to lithium-ion battery chemistries with equal or greater energy density
- high-speed charging technologies
- innovative electrical power generation systems
- power storage, management and distribution solutions
- technologies that support silent operation and reduced logistical burden
- soldier-carried and localised power generation capabilities

- integrated tactical power systems and enabling components

Both complete systems and individual components are welcome.

Solutions should support distributed operations and provide commanders with the ability to manage electrical power as a deployable resource across dispersed formations.

Why is this important?

Research and experimentation conducted by the British and Australian Armies has identified a significant increase in battlefield power requirements driven by the introduction of modern digital and autonomous capabilities.

Current in-service power systems rely heavily on fuel-powered generators, which can be noisy, difficult to transport and constrained by fuel resupply requirements. Future deployed forces require more flexible, survivable and resilient approaches to power generation and storage.

Innovations developed through this challenge could support future military operations by:

- enabling silent power generation and storage
- improving battlefield endurance
- reducing reliance on fuel resupply
- supporting autonomous and robotic systems
- improving power resilience for command-and-control functions
- increasing operational effectiveness in dispersed environments

Exploitation opportunities

Technologies selected through the challenge may support future defence procurement and capability development activities.

The British Army currently maintains a requirement for more than 4,000 Lightweight Field Generators and is exploring options to modernise tactical power provision as existing systems approach replacement.

Successful technologies may therefore have opportunities to support future capability acquisition and operational deployment.

International collaboration

The challenge is being delivered alongside the Australian ASCA Land Distributed Tactical Power Management Challenge.

Submissions may be shared with the Australian Department of Defence for assessment purposes. Outputs from funded projects may also be shared with Australian and United States defence partners under appropriate information-sharing arrangements.

Key dates

- Stage 1 opens: 12 noon (GMT) Thursday 15 October 2026
- Stage 1 submission deadline: 12 noon (GMT), 10 November 2026
- Stage 2 submissions: by invitation only
- Demonstration activities completed by: March 2028

Submit a proposal

Do you have an innovative technology that could help provide the Army with resilient, deployable and operationally relevant power?

Read the full competition document and submit a proposal through the UKDI Online Submission Service.

https://www.gov.uk/government/news/tactical-power-challenge-powering-the-future-force