



UK Atomic
Energy
Authority

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Chief Executive Officers
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Care of: Ministry of Housing, Communities & Local Government

Site Selection: Spherical Tokamak for Energy Production (STEP)

Dear Colleagues

I trust you and your team are staying well, amid the current global challenge of Covid-19.

I am writing to introduce the STEP programme - a UKAEA and UK Government initiative to accelerate progress towards commercially viable fusion power, through design and construction of a prototype fusion reactor by 2040.

Fusion power provides scope for almost limitless low carbon energy. Whilst Fusion has previously been seen as something of a future prospect, technology advances in recent years now show a clear viability for commercial operations around the middle of this century.

STEP (Spherical Tokamak for Energy Production) is an innovative programme which draws on the UK's world-leadership in compact fusion technology, and aims to transition from a research-led sector to industrial-design and delivery.

The programme is expected to represent an ultimate investment of multiple £billions, and to further enhance UK leadership in the field. This is expected to bring immediate and enduring economic benefit - construction of the prototype represents a major infrastructure project in-and-of-itself; whilst the success of the programme will further establish the UK as a global hub of the fusion industry.

This prototype plant is not necessarily expected to be based on the current UK fusion research campus, which is near Culham in Oxfordshire. Whilst the campus is a vital and world-class research hub which will support the sector for many decades to come, the STEP plant is expected to have requirements much more closely aligned to those of a generating power station. As such we will shortly begin the process of looking for a suitable site on which to construct the STEP prototype.

The site ultimately selected will not only host a major construction programme, but will also become fertile ground for a flourishing, modern, low-carbon, high-skill and high-value supply chain. Consideration of necessary skills and training initiatives are already underway, and long-term workforce development will be a priority consideration as the programme proceeds.

To establish the most effective enduring relationship with the ultimate host community, UKAEA intends to issue an open call for site nominations – based on collaborative proposals from landowners, local authorities, LEPS and local communities. Commercial terms of site access would naturally be subject to associated engagement between the landowner and UKAEA.

Nominations would be welcomed from a broad range of entities – and UKAEA will simply ask that those who nominate sites provide basic information in line with a set of site assessment criteria to be published alongside the call for sites. Needless to say; size, land profile, current use, access to cooling water, grid connectivity and industrial base are significant amongst those criteria.

We wanted to give you foresight of this coming process; both so you can consider any potential opportunities associated with your area, and so you could be prepared for any questions this may raise for you. We expect to launch the process this Autumn, via a bespoke website and media announcement.

If you have any questions and would like to discuss STEP, please feel free to contact shelley.vaisey@ukaea.uk to arrange a meeting with me or a member of my team.

Yours Sincerely

Tristram Denton
STEP Head of Commercial and Programme Development