

Executive 160321

LEAD MEMBER: Cllr David Moore

LEAD OFFICER: Pat Graham, Chief Executive

REPORT AUTHOR: Steve Smith, Nuclear Projects Manager

WHAT BENEFITS WILL THESE PROPOSALS BRING TO COPELAND RESIDENTS?

If the bidding process proves successful, the development of the STEP project will provide significant investment in the locality and business and employment opportunities for the local supply chain and local residents

WHY HAS THIS REPORT COME TO THE EXECUTIVE?

(eg Key Decision, Policy recommendation for Full Council, at request of Council, etc.)

This report has come to Executive after being considered by the Council's Strategic Nuclear and Energy Board at its meeting on 18th February when it agreed a recommendation to seek the endorsement of Executive to the submission of the bid to the siting process for UK Atomic Energy Authority (UKAEA) Spherical Tokamak for Energy Production (STEP) project

RECOMMENDATIONS: That Executive supports the nomination of the Moorside site and other suitable NDA-owned land around Sellafield into the national siting process.

UK Atomic Energy Authority (UKAEA) Spherical Tokamak for Energy Production (STEP) Siting Process

1. INTRODUCTION AND BACKGROUND

- 1.1. The STEP programme is an UKAEA and UK Government initiative to accelerate progress towards commercially-viable fusion power, through design and construction of a prototype fusion reactor by 2040 and aims to build on the UK's world-leadership in compact fusion technology, to transition from a research-led sector to industrial-design and delivery.
- 1.2. This development aligns closely with the vision set out in the Cumbria Nuclear Prospectus for a multi-technology clean energy park around Moorside, and with the ambition set out in the Copeland Vision 2040 for Copeland to be a "globally

recognised place of innovation” and to become a “major clean energy hub for the UK”.

- 1.3. The siting process is seeking to identify a site of at least 100 hectares to host the STEP facility and associated modern, low-carbon, high-skill and high-value supply chain activity. This £multi-billion programme could have a significant immediate and long-term positive economic and regenerative effect to West Cumbria.
- 1.4. A report outlining the bidding process and additional background to the project was considered by Members of the Council’s Strategic and Nuclear Energy Board (SNEB) at its meeting on 18th Feb. A recommendation from that meeting was that the submission of a bid focussed on the nomination of the Moorside site be considered for endorsement by Executive. A copy of the report to SNEB is attached as appendix A.

2. DISCUSSION

- 2.1 Members are asked to endorse the nomination of the Moorside site into the national siting process for the STEP project

3. STATUTORY OFFICER COMMENTS

- 3.1 The Monitoring Officer’s/Legal comments are: The project’s bidding process together with the background detail has already been considered by SNEB. This project work is a furtherance and alignment of the Council’s published Cumbria Nuclear Prospectus and also the Copeland Economic Vision 2040. This report is presented to Executive with the recommendation of support in consideration of the facilities siting process. No legal issues arise as a result of the recommendation made; but any legal issues which subsequently surface will be dealt with as a continuing part of the process.
- 3.2 The Section 151 Officer’s comments are:
There are no direct financial implications for the Council arising from this recommendation’

4. RESOURCE REQUIREMENTS

The submission is being supported by a team assembled through the Cumbria LEP, with the deadline for completed submissions being 31st March.

5. HOW WILL THE PROPOSALS BE PROJECT MANAGED AND HOW ARE THE RISKS GOING TO BE MANAGED?

5.1 The Council's engagement in the development of the submission is being led by the Council's Nuclear Sector Development Manager

6. WHAT MEASURABLE OUTCOMES OR OUTPUTS WILL ARISE FROM THIS REPORT?

6.1 The submission will be completed and submitted by 31st March

List of Appendices

Appendix A - UK Atomic Energy Authority (UKAEA) Spherical Tokamak for Energy Production (STEP) Siting Process – report to SNEB 18th Feb 2021

List of Background Documents:

STRATEGIC NUCLEAR AND ENERGY BOARD 210218

UK Atomic Energy Authority (UKAEA) Spherical Tokamak for Energy Production (STEP) Siting Process

LEAD OFFICER: Pat Graham, Chief Executive Officer

REPORT AUTHOR: Rob Ward, Nuclear Sector Development Manager

Summary:

This paper provides an update to members on the siting process launched by the UK Atomic Energy Authority in late 2020 to identify a site for the development of a future Fusion facility, known as “STEP”.

Recommendation:

That members of the Board:

1. Note the information in this paper, and;
2. Recommend that the Council’s Executive Committee supports the nomination of the Moorside site and other suitable NDA-owned land around Sellafield into the national siting process.

2. Background

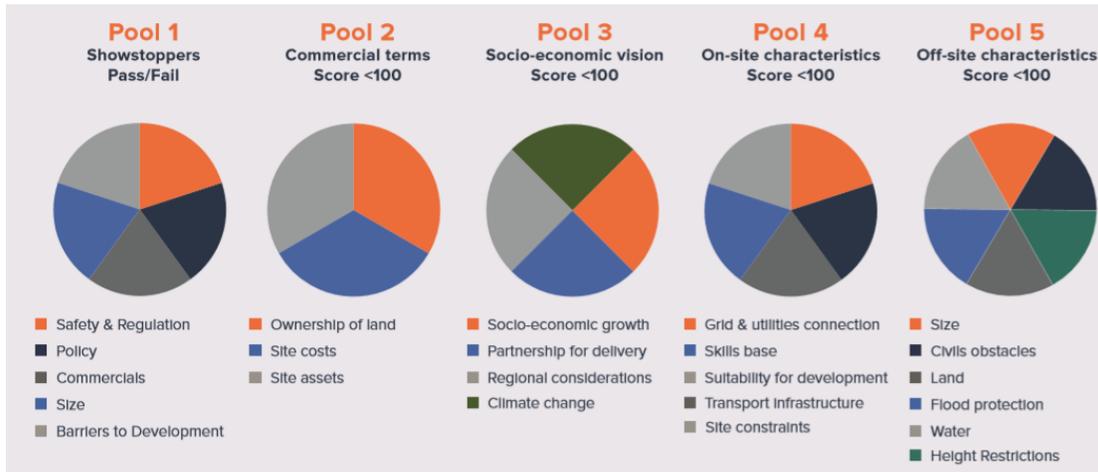
- 2.1. The STEP programme is an UKAEA and UK Government initiative to accelerate progress towards commercially-viable fusion power, through design and construction of a prototype fusion reactor by 2040.
- 2.2. The STEP programme aims to build on the UK’s world-leadership in compact fusion technology, and aims to transition from a research-led sector to industrial-design and delivery.
- 2.3. To date, the UK’s fusion development activity has been focussed at the Culham Centre for Fusion Energy in Oxfordshire, home to the Joint European Torus (JET) and Mega Ampere Spherical Tokamak (MAST) fusion test reactors.
- 2.4. However, the UKAEA is now searching for a site elsewhere in the UK to construct the STEP facility and to host the associated industrial and supply chain facilities.

3. The Siting Process

- 3.1. UKAEA has set out the criteria by which sites will be assessed:

1. Showstoppers: pass/fail
2. Commercial terms: score/100
3. Socio-economic vision: score/100
4. On-site characteristics: score/100
5. Off-site characteristics: score/100

3.2. The elements of these 5 “pools” are shown in the image below:



3.3. Nominations have been invited from a range of organisations that meet some basic criteria:

- The entity is capable (in personnel and funding) to work with UKAEA as we assess the proposal
- The entity has some form of jurisdiction (council, LEP, business group, devolved Government) for the area of the site
- That not more than one entity propose the same site
- That the proposing entity has the agreement of the landowner to propose the site

3.4. The deadline for nominations into the national siting process is 31st March 2021.

3.5. Further information on the STEP facility and siting process is available on the UKAEA website, accessible via the following link:

<https://step.ukaea.uk/>

3.6. To date, representatives from UKAEA have made presentations to Cumbrian stakeholders via two Cumbria LEP-hosted online events, and to the Nuclear Legacy Advisory Forum.

3.7. Engagement has also taken place between the Department for BEIS, UKAEA and NDA in relation to land ownership and availability issues.

4. Strategic Opportunity

- 4.1. This development aligns closely with the vision set out in the Cumbria Nuclear Prospectus for a multi-technology clean energy park around Moorside, and with the ambition set out in the Copeland Vision 2040 for Copeland to be a “globally recognised place of innovation” and to become a “major clean energy hub for the UK”.
- 4.2. The scale of development is likely to be comparable to an operational power station, with associated infrastructure and research and development facilities. The programme will require investment in skills development from apprenticeships to higher level skills and UKAEA has committed to working with local education and training providers early in the programme.
- 4.3. It is likely that the programme will be consented as a Nationally Significant Infrastructure Project (NSIP) under a Development Consent Order (DCO). STEP will be a project at the international forefront of the clean energy revolution, bringing visibility to the community on a global stage.
- 4.4. The siting process is seeking to identify a site of at least 100 hectares to host the STEP facility and associated modern, low-carbon, high-skill and high-value supply chain activity. This £multi-billion programme could have a significant immediate and long-term positive economic and regenerative effect to West Cumbria.
- 4.5. As the UK’s Centre of Nuclear Excellence, host to a wealth of nuclear capability across industry, supply chain and R&D, Copeland is well-placed to support this development. This is further reinforced by the potential for transferability with the development of advanced fission which already takes place in West Cumbria, led by National Nuclear Laboratory as the UK authority on advanced fuels and reactor technology.

5. The Cumbrian Nomination

- 5.1. Over the Christmas period, the Cumbria Local Enterprise Partnership (LEP) launched a mini competition to identify a single site to be nominated on behalf of Cumbrian stakeholders into the national siting process.
- 5.2. On behalf of the Council, the Portfolio Holder for Nuclear and Corporate Services nominated the Moorside site and other suitable NDA-owned land around the Sellafield site into this Cumbria mini-competition.
- 5.3. The Cumbria LEP will undertake an assessment of any Cumbrian sites nominated, making a decision as to which will be taken forward into the national siting process by the 5th February 2021.

- 5.4. Although the Cumbria LEP is planning to select one Cumbrian site only to be nominated, there is no limitation on how many nominations from a region may be made into the national siting process.