

## Appraisal Panel Summary

<b>Project Name</b>	UK Atomic Energy Authority (UKAEA)		
<b>Grant Recipient</b>	UKAEA		
<b>SCR Executive Board</b>	Business Growth	<b>SCR Funding</b>	£2.2m
<b>% SCR Allocation</b>	10%	<b>Total Scheme Cost</b>	£22m

### Project Description

The UKAEA is a UK government research organisation responsible for the development of fusion power. It is an executive non-departmental public body (NDPB) of the Department for Business, Energy and Industrial Strategy (BEIS) and is funded through a combination of direct grant from BEIS and income generated from commercial R&D activities.

UKAEA is currently establishing a major programme of work, the purpose of which is to position UK industry to win over £1bn of contracts from the International Thermonuclear Experimental Reactor (ITER) programme in France

As part of this programme UKAEA wish to establish a unique research facility in Rotherham employing up to 40 highly skilled jobs with an average salary of £45,000. Recruitment will take place locally (minimal relocations are envisaged) and typically employees will be educated to degree or PhD level.

The aim is to have a developer construct a dedicated building of ~25,000 sq. ft. on the Advanced Manufacturing Park which UKAEA would lease on a long-term basis.

Due to the specialist nature of the proposed facilities, in addition to the purchase of test equipment, there will be substantial building fit-out costs, which are higher than would be the case for a 'standard' industrial unit.

UKAEA is seeking £2.2m, 10% of the total £22m equipment purchase and set-up costs, from LGF.

The specialist equipment which will be installed includes:

- specialist test equipment; very high-power magnets, lasers systems, environmental chambers and associated diagnostic systems
- welding equipment and bonding furnaces
- fume cupboards
- 3D scanners
- Computer modelling systems.

**Note:** The facility will not contain any radioactive materials and will not present any security hazards.

### Strategic Case

The original BEIS grant was awarded on the assumption that all facilities would be built at existing facilities in the United Kingdom. Establishing a facility away from the site will involve additional costs of £2.7m capital plus £0.9m annual operations.

Location of a facility in Rotherham would enable UKAEA to have greater collaboration with local research organisations such as AMRC, NAMRC and the University of Sheffield as well as many (potentially up to 40) of the region's manufacturing companies. Such activities would greatly strengthen the ability of local companies to share in the International Thermonuclear Experimental Reactor (ITER) business opportunities as well enhancing the region's position as a leader in high value manufacturing and innovation.

Although the overall fusion programme is funded by Government, UKAEA are seeking additional financial support to allow more investment in research and the industrial aspects of the project. This is similar to other Government investments (e.g. through the Environment Agency) where additional local contribution is often encouraged to maximise the investment potential.

In the case of SCR, this could mean more investment in programmes with the Nuclear AMRC and greater collaboration with potential industrial partners.

There will be an increased demand for clean, carbon-free electricity generation particularly given the growth in world population and trends such as the uptake in electric vehicles and the planned phasing out of traditional petrol and diesel engine vehicles. Although the development of fusion and other technologies is important for the long-term energy security of the UK, this is not a factor that the private sector would consider. Consequently, the significant costs associated with fusion related R&D activities make it, currently, a non-commercial activity. These are clear market failures that require public intervention, clearly demonstrated by the Government having established UKAEA as a NDPB in the first place, plus the fact that significant funds have been made available to this project, specifically, through BEIS.

### **Value for Money**

SCR Assurance Team VFM assessment:

The scheme will deliver 50 net additional jobs which equates to an estimated net public sector (LGF) cost per job of £44,051.

The net present value of the GVA impact over ten years is estimated to be £8.6m. This represents a return of £4.04 for every £1 of LGF investment. This will be on top of any wider supply chain impacts generated in SCR as the industry grows over time.

This project therefore offers good value for money for SCR

### **Risk**

The key identified risks for this investment, as set out in the business case are: Brexit, which may limit ability of UK companies to bid for ITER contracts; the building being delivered late by poor contractor performance; the building is delivered late due to changes in specification from UKAEA; and equipment costs being higher than forecast.

The probability, potential impact and mitigation for each of these have been presented in the FBC and assessed as part of the assurance process.

### **Delivery**

The facility specification, design delivery and onward operation will be managed as part of the already established National Fusion Technology Platform Programme (NFTP).

BEIS funding for the programme was announced in November 2017 and consequently the programme is already very well established. A full governance structure is already in place and all senior posts have already been filled. The programme is managed in accordance with the government approved Managing Successful Programme approach and is fully compliant with the UKAEA quality management system which is ISO 9001 accredited.

The programme sits in an organisational hierarchy which gives each level freedom within a framework. Governance is ensured through reporting, thresholds of authority and escalation by exception.

### **Legal**

UKAEA is a research and knowledge dissemination organisation within the meaning of the Commission's 'Framework for state aid for research and development and innovation' C(2014) 3282. The facilities to be established under the scheme will be used exclusively for fundamental research, experimental development and industrial research activities within TRL range 1-5. These are activities of a character which the open market is not prepared to accept and that require public intervention. For these reasons, these activities are considered to be of a non-economic character and as such do not distort competition or threaten to do so.

<b>Recommendation</b>	Full grant award subject to conditions
<b>Payment Basis</b>	Payment on defrayal
<b>Conditions of Award (including clawback clauses)</b>	
<p><b><i>The following conditions must be satisfied before contract execution.</i></b></p> <ol style="list-style-type: none"> <li>1. Formal confirmation of all other funding approvals required to deliver the project.</li> <li>2. Confirmation that the profiled LGF spend can be defrayed in year, as SCR is unable to guarantee that this will be reprofiled beyond year end, and/or that the applicant will cover any unfunded works from alternate sources.</li> <li>3. Agree detailed schedule of inclusive growth indicators and targets (e.g. % of [previously unemployed] locals offered permanent contracts and apprenticeships, mentoring and school engagement and engagement with the local supply chain) to ensure the project delivers wider socio-economic benefits and that these can be captured, monitored and reported.</li> <li>4. Formal confirmation that planning permission and all relevant statutory requirements for the revised scheme are in place and have been satisfied.</li> </ol> <p>The conditions above should be fully satisfied by 31st August 2019. Failure to do so could lead to the withdrawal of approval.</p> <p><b><i>The following conditions must be satisfied before drawdown of funding.</i></b></p> <ol style="list-style-type: none"> <li>5. Submission of evidence of UKAEA Board approval</li> <li>6. Formal confirmation of commitment to address any cost overruns (without recourse for further LGF support) without unduly compromising project outputs and outcomes.</li> <li>7. Confirmation of the agreed contract price with the developer (Harworth) and any relevant conditions precedent thereof.</li> </ol> <p><b>The following conditions must be included in the contract</b></p> <ol style="list-style-type: none"> <li>8. Clawback on outputs</li> <li>9. The applicant to provide a tender report to provide confidence and assurance of the quoted costs.</li> </ol>	