

BOARD MEETING

Meeting Reference UKAEA(24)1

Date	Thursday 11 January 2024		
Time	1030-1600		
Location	RACE Boardroom, Culham Campus		
Members	Eithne Birt (Chair) Ian Chapman Ruth Elliot Tim Bestwick	Luc Bardin Sue Gray Stephen Hillier Stephen Barter <i>[remote]</i>	Richard Hookway Mary Ryan Robin Grimes
Apologies	Lee McDonough (DESNZ)	Alli Brown (UKAEA)	
Attendees	Edward Lewis-Smith (Sec) David Gann (UKIFS NED) Justin Kingsford (UKAEA COO) John Staples (DESNZ) – LMcD deputy Alison George (DESNZ) <i>[remote]</i>		
Guest	Heather Lewtas (UKAEA) – Item 7 Paul Methven (UKIFS CEO) – Item 9 Fulvio Militello (UKAEA) – Item 10		

Agenda Items

1. Chair's opening remarks led by E Birt:

The Chair welcomed the Board, noting that the end of JET operations is a significant moment for the organisation. Board agreed to send collective congratulations to Lee McDonough who received a CBE in the New Years Honours.

Declarations: no declarations.

2. Minutes and Actions Review [UKAEA(23)M6], led by E Birt:

Minutes review: no changes proposed.

Actions review:

Reference	Action	Actionee	Update
UKAEA(22)3/5	Seek SC level clearance for all NEDs	J Kingsford	Open: Report on status of clearances sent separately.
UKAEA(23)2/2	Report on the Ethnicity pay gap and any suggested treatments by the May Board.	J Kingsford	Open: action revised with report due at May Board.
UKAEA(23)5/1	Board to be updated on progress on fusion expertise ltd company	T Bestwick	Closed: Addressed at this meeting.
UKAEA(23)5/2	Action board effectiveness review recommendations.	E Birt	Replaced (see section 5), closed .
UKAEA(23)5/4	STEP to provide proposals for UKAEA and UKIFS ARAC arrangements	P Methven / C Price	Closed: Addressed at this meeting.

UKAEA(23)5/5	Propose a list of “Reserved Matters” which would need DESNZ decision or involvement	P Methven / C Price	Closed: Addressed at this meeting.
UKAEA(23)5/6	Agree new framework document	L McDonough	Open: For Board approval as an agenda item for next meeting.
UKAEA(23)6/1	D Gann to provide update on UKIFS Board appointments.	D Gann	Closed
UKAEA(23)6/2	DESNZ to explore spin-outs governance issue with HMT, with reference to existing delegations, precedent and Government Office for Technology Transfer.	L McDonough	Open: John Staples (on behalf of LM) reported that no fundamental concerns had been raised but HMT and CO may need to be sighted. Written position from DESNZ on this issue to be provided by next Board meeting.
UKAEA(23)6/3	UKAEA to develop first case to put to Board; setting out more on the strategic side as well as the proposed governance for future spin-outs.	T Bestwick	Closed: Addressed at this meeting.
UKAEA(23)6/4	T Bestwick to update the Board on UKAEA engagement with industry and investors with respect to a fusion fund	T Bestwick	Closed; updates on fusion fund will be via Exec Report henceforth.
UKAEA(23)6/5	DESNZ, UKAEA and other government departments to decide whether and how to organise an event for potential fusion investors.	T Bestwick / L McDonough	Closed: replaced by (24)1/1, see below.
UKAEA(23)6/6	STEP to return to Board with a full update following the Fusion Technical Advisory Group.	D Gann/P Methven	Open
UKAEA(23)6/7	Secretariat to establish process by which UKAEA Chief Scientist can distribute to the Board scientific reports from key international meetings.	E Lewis- Smith	Closed
UKAEA(23)6/8	Secretariat to coordinate induction visits and meetings for new members and existing members that would like them.	E Lewis- Smith	Open

During the actions review the Board discussed the ongoing engagement with potential partners, investors and government, noting that there are opportunities new and existing that should be mapped with a clearer articulation of strategic intent from both HMG and UKAEA. The Board recognised that DESNZ should develop a paper on this topic, which would also inform parallel work on a fusion fund.

Actions:

Action ID	Section	Action Items	Owner(s)	Target time
UKAEA(24)1/1	Action Review	DESNZ to submit paper to Board setting out strategic coordination plan for industry engagement over coming months covering both fusion companies and investors.	L McDonough	March Board

3. Sub-committee updates [UKAEA(24)1 Sub-committee reports]:

ARAC led by R Hookway.

The Board noted the report submitted. The Board agreed with the need for improvement in the efficiency of the process for laying of accounts, notwithstanding the challenges involved. The link between ongoing UKAEA activities noted in the ARAC report and the implications for establishing UKIFS, given that UKAEA is the fusion partner within UKIFS, was acknowledged. The Board also recognised the recruitment and retention challenges faced in some of the areas flagged in the ARAC report.

Actions: none.

4. Executive Board report [UKAEA(24)1 Board report and supplementary papers], led by I Chapman, T Bestwick, J Kingsford, R Elliot.

The Board thanked the Executive for the Report, and for the video of a unique JET experiment focused on understanding controlled damage scenarios.

UKAEA CEO provided further detail on ongoing engagement with European partners and also on the rapid fusion progress in China in building a JET-scale research facility. Set against both Chinese and US abilities to move at pace on industrial capability in advanced technologies (from fusion R&D to electric car production), the Board expressed concern at the UK’s ability to do the same, noting that government approval on launching the STEP whole plant partner procurement has been pending for over a year.

The Board explored where more transactional collaborations with international partners may be appropriate, and noted potential implications for Spending Review of international collaborations.

The Board explored with the Executive where – beyond the enduring technical risks involved in fusion – the other key areas of risk were and how these were being managed. In particular, the Board tested how supply chain resilience in the context of fusion could be strengthened with more emphasis on recycling. UK and US reports on critical minerals (see links below) were flagged as being relevant.

[Resilience for the Future: The UK’s Critical Minerals Strategy - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/consultations/resilience-for-the-future-the-uk-s-critical-minerals-strategy)

[DOE Critical Minerals and Materials Strategy_0.pdf \(energy.gov\)](https://www.energy.gov/eere/energy-efficiency/doe-critical-minerals-and-materials-strategy-0.pdf)

The Board noted that workforce changes associated with the end of JET operations continue to be implemented, with staff engagement and consultation ongoing. The Board received an update on flywheel repurposing, on which DESNZ undertook to consider whether and how it could provide greater strategic support if appropriate.

COO noted two positive indicators; an improving trend on retention and positive results from the Stress Survey. The Board looked ahead to the Strategic Workforce Plan, which will be considered at REMCO. The Chair recognised that this was not just about operational planning but reinforcing culture, values and commitment to the organisation.

CDO proposed a review of all current engagement with fusion companies – it was agreed that this should be combined into action (24)1/1 above.

Actions: (24)1/1 – see section 2

5. Board Effectiveness Review Actions Status [UKAEA(24)1-Effectiveness Review...], led by E Birt.

The Chair summarised the note circulated, and will contact Board members separately for ideas that maximised flexibility and targeted particular capabilities of particular members.

Actions:

Action ID	Section	Action Items	Owner(s)	Target time
UKAEA(24)1/2	Board effectiveness	Board to be updated on board effectiveness review recommendations.	E Birt	ongoing

6. Future of UKAEA [UKAEA(24)1 Future of UKAEA] led by I Chapman.

The Board acknowledged that, with the end of JET operations and a General Election ahead, now is the right time to re-affirm the UKAEA’s strategic purpose. UKAEA CEO reiterated the UK’s Fusion Strategy and its goals, and UKAEA’s goals and how these relate to the Fusion Strategy. The Board strongly agreed that maintaining R&D capability in the form of a national laboratory as distinct from a power plant prototype programme is critical to secure an innovative, long-term and future-focused fusion industrial capability in the UK, and how precedent is clear that it is more efficient to build on current strengths rather than have to re-build this in the future. The Board made a number of suggestions – covering international competition and collaboration and the strategic role of near-term opportunities – that will be addressed as this work proceeds.

Actions:

Action ID	Section	Action Items	Owner(s)	Target time
UKAEA(24)1/3	6. Future of UKAEA	Hold substantive strategy session with Board.	I Chapman	March Board

7. Fusion Energy Partners [UKAEA(24)1 Fusion Energy Partners] led by T Bestwick and H Lewtas (guest).

UKAEA Head of Innovation summarised the paper circulated, noting the timely nature of this opportunity with the end of JET operations. The discussion focused on ensuring commercial competence in terms of service provision (as opposed to technical competence) and heard how the proposed approach would both enable this at the outset and reinforce assurance as market opportunities grow and the entity evolves and matures. The Board affirmed the need for it (the Board) to continue to be sighted on such initiatives, in line with the previous meeting’s discussion on establishing spin outs.

The Chair noted that the discussion had provided useful feedback and suggestions for the proposal to take on board. The Board was strongly supportive of the proposal being taken forward, subject to the risks and challenges raised in the discussion being appropriately mitigated or addressed.

Decision:

Reference	Minutes Section	Decision
UKAEA(24)1/D1	7. Fusion Energy Partners	The Board approved the Fusion Energy Partners proposal as submitted, on the basis that further information on the points raised will be provided at the next Board meeting.

Actions:

Action ID	Section	Action Items	Owner(s)	Target time
UKAEA(24)1/4	7. Fusion Energy Partners	Provide an update note to the Board on Fusion Energy Partners addressing the issues raised in the January Board.	T Bestwick	March Board

8. Fusion Futures [UKAEA(24)1 Fusion Futures OBC...] led by I Chapman.

The Board thanked the team for the business cases, noting that this represented a considerable amount of work in a short period of time. Board members had provided detailed feedback prior to the meeting, much of which had been taken on board in the drafts now in discussion with the Government. Prior to the Board approving the documents as submitted, the short discussion explored the workforce planning underway, the basis for prioritisation of projects within Fusion Futures and the potential implications of a future Spending Review, and the need for clear accountability in terms of overall programme risks. Sue Gray will work with UKAEA COO to review the governance arrangements as the programme is implemented.

Reference	Minutes Section	Decision
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UKAEA(24)1/D2	8	The Board approved the Fusion Futures Outline Business Cases as submitted for submission to DESNZ.
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9. UKIFS Update [UKAEA(24)1 UKIFS CS document] led by D Gann, UKIFS Chair (with P Methven, UKIFS CEO and C Price, STEP Head of Strategy (guests)).

Chair UKIFS provided a status update on **UKIFS Board appointments** and the intended approach for UKIFS Board meetings. In line with UKAEA's commitment to open and transparent appointments processes, the selection criteria and details of the interview panel will be published, in line with usual practice.

CEO UKIFS updated work towards **transition milestones**, which determine how and when UKIFS would take on programme responsibility for STEP delivery.

STEP Head of Strategy summarised the Corporate Structure Document submitted on **UKIFS Governance**, flagging the main changes since the previous submission to UKAEA Board. The Board suggested refinements to the drafted wording in a small number of places to ensure clarity and consistency, after which the Board confirmed its approval of the document.

Reference	Minutes Section	Decision
UKAEA(24)1/D3	9	The Board approved the UKIFS Corporate Structure Document as submitted.

10. Update on Plasma science including JET D-T and MAST-U campaign [UKAEA(24)1 Plasma Science and ops...] led by F Militello, Director Tokamak Science and MAST Upgrade.

Fulvio Militello presented the slides shared. The Board raised questions on:

- The assumptions regarding the physics basis for the models used;
- The need to have modelling, experimental and operational capabilities in order to develop and operate a plasma;
- The implications for managing IP and long-term value exploitation associated with our historically open approach to international collaborations.
- The issues of ownership and control associated with spinout opportunities covered in the presentation.

The Board was very grateful for the extremely interesting and thought-provoking presentation and expressed its thanks to Fulvio and his team.

Actions: none.

11. Finance Update [UKAEA(24)1 Finance Update] led by R Elliot, who summarised the paper shared and noted that the March Board meeting would cover budgets for 2024/25. The Board recognised the budget costing challenges associated with the uncertainty around the outcome of the pay remit.

Actions: none.

12. Any Other Business led by E Birt;

DSIT - Research Ventures Catalyst: CEO UKAEA noted a project opportunity currently in development.

Nuclear Skills Taskforce: COO UKAEA informed the Board that UKAEA intends to join the Nuclear Skills Taskforce, which involves a minor financial contribution. Given the scope of this covering Defence and Advanced Nuclear, the Board agreed that the benefits, in terms of coordination on this important topic, both to realise opportunities and mitigate risks, outweigh the downsides associated with conflating fusion with nuclear fission. The Board was happy for UKAEA to participate.

Actions: none.

Attendance record:

Position	Name	Present	Absent
Members	Eithne Birt	/	
	Ian Chapman	/	
	Ruth Elliot	/	
	Tim Bestwick	/	
	Stephen Barter	<i>online</i>	
	Richard Hookway	/	
	Luc Bardin	/	
	Sue Gray	/	
	Stephen Hillier	/	
	Mary Ryan	/	
	Robin Grimes	/	
	Lee McDonough		
Attendees	Edward Lewis-Smith	/	
	Alison George	/	
	David Gann	/	
	Justin Kingsford	/	

End of Minutes