

UNITED KINGDOM ATOMIC ENERGY AUTHORITY
Minutes of the 4th Board Meeting in 2018

Date: 12 September 2018

Location: Bickerton Room, E6
Culham Science Centre

Members present:

David Gann, Chair
Ian Chapman
Norman Harrison
Shrin Honap
Jim Hutchins
Sue Scane
Adrian Smith
Chris Theobald

In attendance:

Sarah Redwood (BEIS)
David Martin
Maya Riddle (sec)
Catherine Pridham

Martin Cox (Item 4)
Andrew Bickley (Item 6)
Mark Shannon (Item 7)
Alli Brown (Item 8)
Colin Walters (Item 9-10)
Tim Jones (Item 11)
Kay Nicholson (Item 12)

Apologies:

1	Chair's Opening Remarks	2
2	Minutes of the 2 July 2018 meeting	2
3	Sub-Committee meetings	2
4	Euratom Update	3
5	CEO's Report	3
6	Future of UKAEA Insurance Ltd	4
7	COO's Update	4
9	Fusion Technology Facility (FTF) Siting	6
10	Thermal Hydraulics Facility	7
11	JET lifetime plan refresh	7
12	Annual Assurance Report	8
13	Any Other Business	8

1 Chair's Opening Remarks

- 1.1 David Gann said that he was delighted and honoured to take on the position of chair. It was an exciting time for UKAEA with big opportunities and the potential to anchor scientific capability locally and nationally. As a Board we would need to keep eye on strategic opportunities.
- 1.2 He asked whether members had any conflicts of interest with the Board papers and none were noted.

2 Minutes of the 2 July 2018 meeting

- 2.1 The Board approved the minutes as an accurate record of the Board meeting on 2 July 2018 and reviewed the key actions.

3 Sub-Committee meetings

11 September Audit Committee

- 3.1 Shrin Honap informed members of key points from the meeting, which included:
 - The audit of the JET Operating Contract had a 'reasonable assurance' finding;
 - UKAEA used the Government Internal Audit Agency (GIAA) but this was under review as GIAA had revised the costing mechanism for its work;
 - A summarised report on risk had come to the meeting and there would be more regular reviews of the audit plan in light of the risk register; and
 - There was a disappointing response on audit actions.

11 September Remuneration Committee

- 3.2 Norman Harrison informed members of key points from the meeting, which included:
 - The main reason for the additional meeting had been to review the Executive's objective in the light of a dynamic and changing environment. Objectives for the new directors Colin Walters and Tim Bestwick had also been agreed;
 - The new Head of People had been introduced;
 - The recruitment campaign for a new Chief Financial Officer had been reviewed; and
 - There had been an oral report on retention and recruitment. Turn-over levels were predicted to increase from ca. 5% to 8%, with pay being a key factor.
- 3.3 Jim Hutchins said that pay restraints would continue to be an issue and that in the longer term it would be worth thinking strategically about governance and structure.
- 3.4 Ian Chapman said that there was an Executive action to look at governance.
- 3.5 Sue Scane asked what was being done to encourage diversity and enable women.
- 3.6 David Martin said that our gender pay gap was not good and made worse as a significant proportion of women were in support areas which were not given the same government flexibility on pay compared with those in the science, technology and engineering areas.
- 3.7 David Gann asked for a paper on attrition with evidence, e.g. data from exit interview

and demographics.

Martin Cox and Sarah Redwood joined the meeting

4 Euratom Update

- 4.1 David Gann welcomed Sarah Redwood to her first Board meeting.
- 4.2 Ian Chapman informed members that the EU Parliament had voted with a substantial majority for the framework which would enable the extension of JET operations to 2020. This now needed to go to the EU Council but was expected to be accepted, which should allow the extension of the JET Operating Contract to be agreed before Christmas.
- 4.3 We were helping to produce a credible plan for JET to 2020 with deuterium-tritium operations, which was required for the EUROfusion Bureau meeting. The recent technical issues on JET were unfortunate. Last year, EUROfusion had commissioned an independent report about reliability of JET, which had been positive.
- 4.4 Chris Theobald commented that ITER would not be operating with tritium until at least 2035 and that JET was the place to gain experience.
- 4.5 Ian Chapman said that the new Director General at the Commission was planning to visit JET once the council approved the JET extension.
- 4.6 The Board noted the report and endorsed the actions underway.

Martin Cox left the meeting

5 CEO's Report

- 5.1 Ian Chapman highlighted key points and updated members on a few things that had changed since the report had been issued, which included:
 - We had submitted two bids into UKRI's strategic priorities fund one on digital design and one on qualifying new materials;
 - The EPSRC grant was being changed and the funding of MAST-U and JET operations would come directly from BEIS;
 - We were working on two bids in anticipation of the next comprehensive spending review (CSR) – one for STEP and the other for world class lab funding;
 - An independent review of STEP was taking place on 19th November;
 - Sharon Ellis had approved the National Nuclear Users Facility (NNUF) business case and the MRF extension. These were now subject to ministerial approval;
 - We were holding an event for MAST-U on 18 October and invitations had gone out to around 100 stakeholders;
 - An exhibit including fusion was going ahead at the Science Museum in October;
 - the new OAS building would be opened in September 2019 and members were asked for suggestions on who might open the facility; and
 - The Minister was expected to approve the business case for commercial development at Culham. The Board was asked to endorse the proposed model.

- 5.2 David Gann asked what kind of tenants were being considered at Culham and Ian Chapman said that two companies who already had a presence at Culham were interested in new buildings.
- 5.3 David Gann said that we needed a campus development plan.
- 5.4 The Board endorsed the proposed model for commercial development at Culham.

Andrew Bickley joined the meeting

6 Future of UKAEA Insurance Ltd

- 6.1 Catherine Pridham introduced Andrew Bickley, who had helped to prepare the paper.
- 6.2 UKAEA obtained insurance through two routes: from the insurance market and through a 100% owned captive insurance company, Atomic Energy Authority Insurance Ltd (AEAIL). The captive had been set up 28 years ago to cover areas which UKAEA couldn't get from the market.
- 6.3 Discussion with other similar organisations indicated that we were carrying a lot more insurance than we needed.
- 6.4 There were legal requirements to cover some things such as motor, travel and property insurance. It was proposed that we procured these through a broker.
- 6.5 It was recommended that UKAEA closed AEAI, determined the closure mechanism and that the necessary assurances from BEIS were sought.
- 6.6 Sue Scane commented that it made sense to close the captive as it added no value.
- 6.7 Chris Theobald asked whether we could we use the NDA scheme for nuclear insurance and Catherine confirmed that this was one of the options.
- 6.8 David Gann asked about insurance on the Culham site and Andrew responded that we provided property insurance and charged this back pro-rotta via the rental fee.
- 6.9 Shrin Honap said that we needed to look at liabilities of closure.
- 6.10 David Gann said that we should seek clarity from BEIS about nuclear insurance and insurance for cyber risk.
- 6.11 The Board supported the closure subject to there being no substantial issues, in which case this should come back to the Board.

Andrew Bickley left, and Mark Shannon joined the meeting

7 COO's Update

- 7.1 David Martin highlighted key points from the report, which included:
 - There were currently 174 open vacancies and a rough forward look over the next 6-18 months indicated another 130 or more. We were restricted by what pay we could offer and there was a risk of causing tension with existing staff;
 - A resource management project was underway to categorise current resource/capability using our ERP system;

- A failure to comply with our technical control process had been reported. This had been investigated and actions undertaken to mitigate any safety risks. Lesson learnt had also been implemented;
 - A new project was being launched to provide a consistent approach to facility asset management and maintenance, which would be delivered over the next few years; and
 - To improve safety, we were building more of an in-house capability in supervision and changing the way we did risk assessments.
- 7.2 Jim Hutchins said that UKAEA was so short of resource that he didn't see a risk in recruiting ahead of need. We might want to consider using recruitment experts who could help access international candidates.
- 7.3 Norman Harrison asked about the most critical shortages and David Martin responded that current pinch points were in engineering particularly C&I, procurement and project management.
- 7.4 David Gann commented that there might be some lesson from other organisations that had successfully managed rapid growth.
- 7.5 Chris Theobald said that action was being taken to improve issues with the quality system and that this would be monitored through the Board Assurance Committee.
- 7.6 Mark Shannon provided an overview of the major projects and key points included:
- JET preparations for DT were in a good state, but at jeopardy due to other parts of JET not being ready. The key issue was the exhaust detritiation system (EDS), which had become corroded and was critical path to tritium operations;
 - A mini EDS had been installed which would allow some of the JET active gas handling system to be commissioned and additional people had been brought in via a Magnox framework. The Canadian supplier was late with the replacement system, although its slippages were starting to slow down;
 - JET operations had to be stopped due to a water leak in neutral beam system and the machine would not be operating in full power until February 2019. We were intending to run triple shifts to accelerate remedial work;
 - MAST-U was currently being baked and we were starting to see the hydrocarbon contamination coming off and vacuum improving. The date for first plasma was April 2019; and
 - The cost for the ESS active cell system had been driven up by ESS changing the requirements for activation levels. The RACE team had done a good job engaging with the market to bring down costs as far as possible.
- 7.7 Chris Theobald commended the work to improve the quality of the dashboards.
- 7.8 Jim Hutchins said he was very pleased about the focus on the cost to completion.
- 7.9 Mark Shannon provided a quick update on the MAST-U lessons learnt action plan and said that six actions had been completed with six more due by the end of March 2019. A further 18 actions were due by the end of 2020.
- 7.10 The Board noted the report.

Mark Shannon left and Alli Brown joined the meeting

8 P4 Financial Report

- 8.1 Alli Brown provided highlights from the report, which included:
- There was good news with an increase in MAST-U operational funding approved by BEIS and both BEIS and ITER agreeing to fund the ITER Robotics Test Facility in RACE for three more years;
 - The risk around spending the capital budget had reduced as we now had received planning permission for several of the planned construction projects;
 - JET cashflow was a risk and we were working with BEIS on the JET additional funding; and
 - There was likely to be a delay in the phasing of funding for the MAST-U enhancement, which needed to be discussed with EPSRC.
- 8.2 Chris Theobald asked how ring-fenced money was and Alli said that this was variable with some areas being very segmented but that there was some flexibility within segments.
- 8.3 Sue Scane asked whether the forecast for the capital programme was realistic given that spend to date was very low and Alli responded that contractors were now breaking ground so that the costs would ramp up in the coming months.
- 8.4 Sarah Redwood said that her finance colleagues were pleased with the improvements in forecasting.
- 8.5 Shrin Honap said that he would like to see a table showing the predicted P&L at year end.
- 8.6 Chris Theobald said that it was a credit to organisation to get reporting to this level following the change in the financial system.
- 8.7 The Board noted the financial position at the end of period 4.

Alli Brown left, and Colin Walters joined the meeting

9 Fusion Technology Facility (FTF) Siting

- 9.1 Colin Walters said that this was a follow-on paper from the one that had gone to the previous Board meeting. A number of sites had been explored to host some of the FTF facilities with a view to enabling collaborative R&D and closer connections with the manufacturing supply chain.
- 9.2 The preferred option was the advance manufacturing park at Rotherham. It had a well-established site and community and would allow us to hit the ground running.
- 9.3 The lease costs were still to be negotiated. The site had its own design team which could take forward our initial building design.
- 9.4 Jim Hutchins asked about staffing and Colin responded that we would seed with UKAEA people from Culham, but largely recruit locally. A total of around 30-40 people was envisaged.
- 9.5 Adrian Smith said that it could provide a focus for future recruitment and that we could link up with local doctoral programmes.
- 9.6 Catherine Pridham said that the cost model needed to be looked at and that there were

cost implication for supporting the rent.

- 9.7 Jim Hutchings said that we might be able to access local funds to support local jobs growth.
- 9.8 Shrin Honap said that he fully supported the move and that there were more advantages than just financial. He suggested that we proceeded as long as numbers were not prohibitive.
- 9.9 Chris Theobald asked about the split of FTF between Culham and an off-site facility. Colin responded that a third would be at Culham using the existing team and the rest would be offsite including the new magnets.
- 9.10 Ian Chapman said that we needed a steer from the Board, because we should submit a planning application next month if we wanted to stay in Oxfordshire.
- 9.11 David Gann said that we should push hard to get draft heads of terms. It was agreed that the Board would delegate the task of checking that these were reasonable to the Chair and Shrin.
- 9.12 The Board agreed to the proposal subject to the above caveat.

10 Thermal Hydraulics Facility

- 10.1 Colin Walters said that we had agreed with BEIS to undertake a requirement capture exercise and produce an outline design based on the findings. A report would come back to the Board in March 2019 before being presented to BEIS.
- 10.2 David Gann said that the project was useful to grow UKAEA's capability.
- 10.3 Jim Hutchins asked about commitment and Ian responded that most of the first phase would be utilising external resource.
- 10.4 The Board noted the update.

Colin Walters left, and Tim Jones joined the meeting

11 JET lifetime plan refresh

- 11.1 Tim Jones explained for the benefit of the new members how the last detailed lifetime decommissioning plan for JET had been produced for the NDA 10 years ago. The lifetime plan had had minor annual updates, but we were now under significant pressure from the NAO to undertake a major review.
- 11.2 There were two key objectives, the first was to use an external company to take the existing basis for the plan and rerun the calculation using modern costing norms. The second was to use our staff to look at internal factors/changes.
- 11.3 We had sought an external view on the current plan and had been advised that it had been done very thoroughly.
- 11.4 The NDA was funding the work and the plan would need to meet its specifications.
- 11.5 There was a clear steer from NDA to use a consultant, but there might be timing issues on procurement.
- 11.6 Shrin Honap asked whether it was possible to speed up contractual requirements so that we could get the work done in time for the annual accounts as we wanted to avoid qualified account.

11.7 Catherine Pridham said that an option was to ask the NDA to procure the work for us through its existing frameworks.

11.8 The Board noted the report and asked to be alerted if there were any issues.

Tim Jones left, and Kay Nicholson joined the meeting

12 Annual Assurance Report

12.1 Kay Nicholson said that as part of governance, she provided an annual update to provide assurance across safety, health, environment, security and quality.

12.2 She provided highlights from the report, which included:

- We had achieved the combined certification to the new standards ISO9001:2015 and ISO14001:2015 as well as retaining OHSAS18001:2007;
- Behavioural safety bite size training modules had been rolled out across the organisation;
- The Integrated Delivery Process (IDP) had gone live during the year;
- There had been good performance against the assurance improvement plan, but resourcing shortages meant that we had missed two targets, including the target for quality champions;
- There had been an increase in the incidents rate. Revamping of the risk-assessment process, work to improve our behavioural safety culture and safety leadership activities were helping to address the underlying problems; and
- We were going to hold safety event for around 50 employing including directors and senior staff.

12.3 Chris Theobald said that we were not robust organisation-wide.

12.4 Norman Harrison expressed concern about the worsen incident trend.

12.5 Sarah Redwood asked if we undertook safety pulse surveys and Kay responded that we undertook employee satisfaction surveys. We also had a rolling programme of stress surveys with follow up workshops on building resilience.

12.6 The Board noted the report.

13 Any Other Business

13.1 David Gann said that he would take a look at Board effectiveness, as the Board would need time to devote to new developments such as STEP.

13.2 Jim Hutchins supported this, commenting that the organisation had gone from a stable/non-dynamic one to one that was rapidly changing.

13.3 The next meeting was on 13 November 2018.

Secretary Maya Riddle

Chair David Gann