

UNITED KINGDOM ATOMIC ENERGY AUTHORITY
Minutes of the 3rd Board Meeting in 2016

Date: 20 April 2016

Location: Llewellyn-Smith Room, K2,
Culham Science Centre

Members present:

Roger Cashmore, Chairman
Keith Burnett
Steve Cowley
Norman Harrison
Jim Hutchins
Peter Jones

In attendance:

Rob Buckingham
Martin Cox
David Martin
Catherine Pridham
Maya Riddle (secretary)

Apologies:

Chris Theobald

Steve Moss, Property Manager (Item 3)
Jerome Pamela, CPAC chair (Item 4)
Ian Chapman, Fusion Programme Manager (4-6)
Tim Jones, JOC Senior Manager (4-6)

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1 Chairman's Opening Remarks

- 1.1 Roger Cashmore provided an update on the recruitment of a new CEO. The aim was for an appointment to be agreed before the summer recess. Each stage required approval by the Secretary of State and the actual appointment also required agreement by the Prime Minister. He would keep members updated on developments.
- 1.2 Several presentations had been scheduled on the agenda as part of the new members' induction.
- 1.3 That morning most of the Board had been present for a staff talk as part of endeavours to make the Board more open.
- 1.4 Norman Harrison commented that there had not much of an opportunity for staff to ask questions and it was agreed that more time would be factored in next time.

2 Minutes of the 17 March 2016 meeting

- 2.1 The Board approved the minutes of the Board meeting on 17 March 2016.
- 2.2 Members reviewed the actions and noted that Jo Johnson was due to open RACE and MRF on 23 May 2016.

3 CEO's Report

- 3.1 Steve Cowley informed members that an international panel had reviewed the ITER cost and schedule. The report would be taken at a special ITER council meeting on 27 April.
- 3.2 A report from the US Department of Energy on ITER was also going to Congress in May.
- 3.3 Bernard Bigot, Director General of ITER was visiting JET next week. The deuterium-tritium (DT) experiments planned on JET would really help ITER to be a success.
- 3.4 There was boost to the morale of the MAST Upgrade team with the successful trial fit of the central column. It was a spectacular demonstration of quality and precision engineering.
- 3.5 The provisional outturn of the corporate performance measures was provided in the report.
- 3.6 Jim Hutchins expressed concern that ITER was intending to assemble the magnets and not first undertake individual testing of coils.
- 3.7 Members asked a number of points of clarification on the project dashboards and it was agreed that project managers should check that the information was up to date and unambiguous.

Steve Moss joined the meeting

- 3.8 Steve Moss informed members that Culham was being considered as a potential site in a bid for a national Grid call for energy storage facilities.
- 3.9 Based on the information provided, the Board agreed to exclusivity with Capita.

- 3.10 Steve Moss said that a prospectus has been drafted to aid engagement with potential investors in commercial development at Culham.
- 3.11 Jim Hutchins asked whether it would be speculative build and noted that the intention would be to identify end-occupiers before building.
- 3.12 The Board noted the report.

Steve Moss left. Ian Chapman & Tim Jones joined the meeting & Jerome Pamela joined the meeting by videoconference

4 Culham Programme Advisory Committee (CPAC) report

- 4.1 Jerome Pamela said that the CPAC had last met on 8-9 March, with a special sub-group looking at the MAST Upgrade project on 7 March.
- 4.2 The main point of discussion at the meeting had been the forthcoming fusion programme grant submission to EPSRC.
- 4.3 It was CPAC's opinion that only scenario A was fully consistent with UKAEA's long term vision and strategy.
- 4.4 Points of note included:
- JET was an important European facility;
 - the MAST upgrade would provide a unique capability and its divertor configuration was a key element for the development of future reactors. Resources to operate MAST were already tight;
 - the science and materials programme were both world-class and should be protected; and
 - UKAEA was a key contributor to EUROfusion's DEMO activities.
- 4.5 Scenario B, flat funding, was effectively a reduction due to the increase in mandated costs (pensions etc). It could reduce UKAEA role to that of an operator of facilities and not exploit the MRF properly. RACE activities would have to be delayed or alternative funding sources found.
- 4.6 Steve Cowley said leverage of European funding was of a similar size to the tokamak science programme.
- 4.7 Roger Cashmore suggested that the ESPRC council should be invited to hold a meeting at Culham, noting that most of the members had not visited before.
- 4.8 Jerome Pamela said that CPAC had also discussed preparations for DT experiments on JET. The heating power issues would need to be resolved to provide sufficient power. Rather than a single campaign it was suggested that it was split into a number of smaller campaigns to allow scientist and engineers to analyse the data and influence the next experiments.
- 4.9 The Board noted the update.

Jerome Pamela left the meeting

5 Tokamak Science Programme presentation

- 5.1 Ian Chapman took members through the three main aims of the programme, which were:
- ensuring the successful operations of ITER and in particular developing integrated scenarios;
 - developing reactor concepts; and
 - explore the route to smaller/cheaper fusion reactors.
- 5.2 Funding/resources for the Tokamak Science Programme had reduced since 2009. Research had been strategically focused and collaborations with UK universities and international labs were increasing.
- 5.3 Keith Burnett emphasised the importance of the MAST Upgrade for fusion science and for the UK's capability. He also stressed the importance of communications.
- 5.4 The Board noted the presentation.

6 JET presentation

- 6.1 Tim Jones provided an over view of JET. Key points included:
- UKAEA had a contract to operate JET to the end of 2018, but was working on the basis of an extended scenario to the end of 2020. This extension was linked to the next EURATOM framework programme;
 - there was potential to extend beyond 2020 as part of an internationalisation of JET. There were strong scientific justifications for further experiment as well as providing training for ITER. A 3-day workshop would be held at Culham in July with ITER partners to discuss options;
 - JET was suffering from problems with one of the neutral beam heating system and was unable to operate at full power. Last year the insulating gas had been changed from sulphur hexafluoride (SF₆ - a potent green-house gas) to nitrogen, following successful trials;
 - use of new diagnostics had identified the source of the high-voltage breakdowns to the bottom part of the SF₆ tower. An intervention was planned to clean the affected area; and
 - in parallel, discussions were underway with 3M about development of a new insulating gas, which was a possible replacement for SF₆.
- 6.2 Roger Cashmore asked for the Board to be kept updated on resolution of the technical issues on JET.
- 6.3 The Board noted the presentation.

Ian Chapman and Tim Jones left the meeting

7 Draft Budget for 2016/17

- 7.1 Catherine Pridham said that the budget had been updated and there was an increase in property schemes funding.
- 7.2 The Executive had discussed the comprehensive spending review (CSR) funding

and agreed:

- the IT committee would advise on the prioritisation of IT spend;
- the asset and investment committee would steer property spend;
- a new Business Development (BD) committee would be set up; and
- in 2016/17 some of the BD funding would be used to cover RACE losses and provide more resources in the BD team.

7.3 The Board was invited to endorse the budget subject the Executive agreeing the overhead budget and clarification of depreciation cover from BIS.

7.4 Roger Cashmore commented on the magnitude of the additional costs which UKAEA had to bear and the pressure this put on programmes. He also offered the Board's thanks to Catherine Pridham for all her efforts on the CSR.

7.5 The Board endorsed the budget.

8 P11 Financial report

8.1 Catherine Pridham highlighted key points of the financial position at the end of period 11, which included:

- the business development income target was forecast to be missed, but the commercial property profit was on target;
- while the overhead figure was showing a marginal overspend, there were significant increases in Divisional Management and in the finance dept;
- there were delays on implementation of Unit 4 Business World (replacement to the SAP system), due to unresolved issues with functionality of the system. Go-live was now anticipated to be July; and
- a key risk from this delay was the ability to implement payroll in the new system. The current payroll system would not be available after December 2016. Discussions were underway with the current supplier, CGI Logica, about moving to its new system. It would be undertaking due diligence in May.

8.2 The Board noted the financial position.

9 Business Development presentation

9.1 Jim Hutchins said his initial observations were that the organisation was predominantly academic and needed more commercial focus. A successful company normally had marketing/communications and product development integrated with business development. UKAEA currently had business development as a separate activity from communications.

9.2 Rob Buckingham said that part of the CSR case had been on enabling jobs and growth outside of UKAEA.

9.3 The Board noted the presentation.

10 Any Other Business

10.1 David Martin said that plans were progressing for Oxford Advanced Skills (OAS)

and that JTL had won the tender action to provide training for phase 1.

10.2 The next Board meeting would be held on Monday 20 June 2016.

10.3 Members discussed the forthcoming Brexit vote on 23 June. It was agreed in the outcome of an 'exit Europe' vote that the Board would hold a conference call.

Secretary Maya Riddle

Chairman Roger Cashmore