

Minutes

NIRAB sixth meeting

5th March 2015, 11:00-16:00

The Royal Society, London

Attendees:

MEMBERS

Dame Sue Ion	Chair		
Tim Abram	University of Manchester	John Lillington	Amec Foster Wheeler
Andrew Carlick	DBD Ltd	John Molyneux	Rolls-Royce
Steve Cowley	CCFE	Andrew Sherry	NNL
Graham Fairhall	NNL	Neil Thomson	EDF Energy
Mick Gornall	Springfields Ltd	Mike Tynan	NAMRC
Neil Hyatt	Sheffield University	Laurence Williams	CORWM
Malcolm Joyce	Lancaster University	Peter Wylie	Sellafield Ltd

OBSERVERS

Neil Bateman	EPSRC	John Loughhead	DECC
Melanie Brownridge	NDA	David Senior	ONR
Robin Grimes	FCO		

OFFICIALS

Tony Ashton	DECC	Shivani Katyal	DECC
Rob Arnold	DECC	Dominic Scullard	BIS
Ron Cameron	UKTI	Rupert Wilmouth	GO-Science
Si Dilks	DECC		

SECRETARIAT

Gordon Bryan	NIRO	Andrew Howarth	NIRO
Andrew Brown	NIRO	Simon White	NIRO

Apologies:

MEMBERS

Richard Clegg	Lloyd's Register
Bill Lee	Imperial College
Paul Harding	Urenco
Paul Stein	Rolls-Royce

OBSERVERS

Derek Allen	Innovate UK
Jason Green	EPSRC
Sir Mark Walport	GO-Science

Agenda Item 1 – Welcome and Introductions

The Chair welcomed members and observers to the sixth meeting of NIRAB. The minutes from the last meeting (NIRAB-45-1) were accepted with no amendments.

Agenda Item 2 – Actions from previous NIRAB meetings

The actions from the last meeting were reviewed using the NIRAB action tracker (NIRAB-24-4).

Agenda Item 3 – Annual Report

The NIRAB annual report was published on 26th February. The report was welcomed by Ministers, especially the skills and training aspects and how these contribute to a sustainable future for the sector. Government will now work with NIRAB on the prioritisation of research.

The annual report has already been distributed to a wide variety of stakeholders, the board suggested other organisations and people that should receive a copy of the report.

Agenda Item 4 – CSR Plan

NIRAB will be making recommendations for the Comprehensive Spending Review (CSR) which is expected after the next election. Whilst officials have advised that a timetable has not been set for the CSR submission process, NIRAB will continue to work up recommendations through the various subgroups in preparation for a post election submission. Recommendations will include prioritisation of programme options to meet a number of scenarios to help fulfil the level of ambition established by new Ministers.

Agenda Item 5 – Advanced Reactors and Fuels

A brief summary was given on the work being done by the Advanced Systems Reactors and Fuels subgroup. They have been preparing a roadmap which details the background, vision, objectives, needs, challenges, opportunities, synergies and dependencies for the components of an advanced reactor and fuel programme. The roadmap is intended to be used as a mechanism to represent agreed NIRAB views, to provide the technical underpinning evidence to support the CSR submission, and to showcase to international audiences the vision for advanced systems research.

NIRAB members agreed that this format should be used by the Waste Management and Recycle subgroup. Members also individually gave specific feedback on the content of the Roadmap. Key points were:

- Need to articulate how the recommended research helps to deliver the vision.
- Strengthen the skills aspect of the Roadmap including those needed for the lowest ambition of the UK being an intelligent customer in nuclear technologies in future
- The importance of being valued internationally to realise benefits needs further emphasis

Action 6.1: A Sherry to update the Reactors and Fuel Roadmap to take on board NIRAB member comments.

Small Modular Reactors (SMRs) - NIRO along with the reactors and fuels subgroup have been preparing a response to DECC, on behalf of NIRAB, which requested suggested activities that would provide additional evidence in support of a techno-economic analysis of SMRs. The recommended activities were reviewed by NIRAB, amendments were suggested which will be incorporated by NIRO and sent to DECC. A suggested amendment that is to be pursued separately is for work to be done

exploring public acceptability issues which may arise through a large scale deployment of SMRs in the UK.

Action 6.2: Neil Bateman to liaise with ESRC to explore the possibility of ESRC funding an SMR public engagement task.

Agenda Item 6 – Advanced Recycle and Waste Management

The chair of the Recycle and Waste Management subgroup gave an update on the group's work. The group have identified the required research topics and assigned authors to develop the topics. They intend to bring this together in the same template as the Reactors and Fuels subgroup and discuss it at the next subgroup meeting.

The Board endorsed the topics and gave suggestions for arguments that could be used to support investment now in recycle and waste management technologies. Key points made during discussion were:

- The near term research priorities to enable a 40GW or 75GW closed fuel cycle scenario are the same, and that this should be emphasized more in making the case for investment as a 75GW scenario is difficult for many to conceive of.
- Need to establish the tipping point where closing the fuel cycle becomes cost effective for future expansion of nuclear energy in the UK.
- Until a safety case for disposal of spent fuel from an open fuel cycle can be made, there is a need for the UK to consider a future closed fuel cycle.

An Integration Group will ensure that the two Advanced Systems subgroups are joined up.

Agenda Item 7 – Industry Research Requirements

The Industry subgroup updated on progress. They have met and reviewed the output from the other subgroups. They intend to focus on the opportunities for commercial gains within 5, 10 and 10+ year timeframes. The subgroup view is that opportunities for innovation in nuclear new build are in SMRs and Gen IV reactor designs as the technical designs of Gen III+ reactors are locked out and have been submitted to the Regulator through GDA.

The group have agreed to meet again to review all the Advanced Systems work prior to the CSR submission. The board suggested topics for the industry subgroup to review for commercial opportunities.

Action 6.3: Mike Tynan to revisit with the Industry subgroup their views on whether remote handling, virtual engineering and modelling and simulation should be considered as a priority.

Action 6.4: NIRO to include Mike Tynan in the Advanced Systems Integration group to ensure Industry subgroup viewpoint is taken into consideration.

Agenda Item 8 – International Strategy

NIRO presented on the role of international engagement in formulating recommendations to Government. The board agreed in the importance international engagement can make, but it requires the UK to bring a programme of research to the table if it is to be considered a credible partner. It was pointed out that international agreements are in place and have to be considered when thinking of making recommendations. It was agreed the opportunities for international collaboration should firstly be considered at a research topic level before a high level review can take place.

Agenda Item 9 – IP Ownership

Following the letter from Andrew Carlick to the NDA (NIRAB-36-1) on historic IP and the exploitation of UK owned IP, a letter has been received from the NDA. This outlines the NDA's strategy for historic IP and the holders of rights. The NDA will be reviewing the policy in 2015/16 to ensure that it is fit for function.

The board recognised the difficulty of identifying IP ownership, which may be patents, methods or know how. Andrew Carlick will continue to liaise with the NDA on this and report back to the board if required.

Agenda Item 10 – Medical Isotope Production

The subgroup on medical isotopes reported back on their view of the UK's medical isotope supply. The board welcomed the work done by the group looking at the issue.

The subgroup concluded that responsibility for medical isotope supply lies outside of NIRAB's remit and it was recommended that Chief Scientific Advisors should take forward the study recommendations with relevant Government departments and agencies, including Innovate UK, RCUK, DECC and the NHS.

Agenda Item 11 – National Nuclear Users Facility (NNUF)

The NNUF management meeting last week discussed future plans for the NNUF. They have agreed that a formal structure is required with the right level of transparency and clear aims and objectives. NIRAB will maintain a watch over NNUF activities as part of its accountability for reviewing the whole nuclear research and development landscape.

Agenda Item 12 – NIRAB Chair/NIRO Additional Notable Activities

NIRAB/NIRO notable activities were shared with the board.

Agenda Item 13 – Summary of Actions and Next Steps

The actions will be compiled and distributed after the meeting.

Agenda Item 14 – AOB

The chair highlighted the important role which NIRAB has yet to fully undertake, of reviewing the entire R&D landscape including the currently funded Government programmes. After the CSR, the chair will seek to gather a group that can review the entire public funded R&D landscape.

Action 6.5: NIRO to convene a subgroup consisting of public funders with the aim of assessing the effectiveness of publicly funded R&D across the sector.

It was highlighted that the UK has been unusually unsuccessful in the recent round of Horizon 2020 funding. The board encouraged technical experts to attend steering group meetings and comment on the priorities for 2016/17 so that the UK can be more successful in the next rounds.

Post meeting note – Andrew Sherry will chair the Advanced Systems Integration Group to coordinate between reactors/fuels and recycle/waste management.

Date of Next Meeting

The next meeting is scheduled for 11th June 2015.