

Minutes

NIRAB seventh meeting

11th June 2015, 11:00-15:00

The Royal Society, London

Attendees:

MEMBERS

Dame Sue Ion	Chair		
Tim Abram	University of Manchester	John Lillington	Amec Foster Wheeler
Marie Carlick (on behalf of Andrew Carlick)	DBD Ltd	John Molyneux (on behalf of Paul Stein)	Rolls-Royce
Steve Cowley	CCFE	Andrew Sherry	NNL
Mick Gornall	Springfields Ltd	Neil Thomson	EDF Energy
Paul Harding	Urenco	Mike Tynan	NAMRC
Neil Hyatt	Sheffield University	Laurence Williams	CORWM
Malcolm Joyce	Lancaster University	Peter Wylie	Sellafield Ltd
Bill Lee	Imperial College		

OBSERVERS

Derek Allen	Innovate UK	Robin Grimes	FCO
Neil Bateman	EPSRC	David Senior	ONR
Melanie Brownridge	NDA		

OFFICIALS

Rob Arnold	DECC	Shivani Katyal	DECC
Ron Cameron	UKTI	Craig Lucas	DECC
Leo Dando-Ladenis	DECC	Bryan Payne	BIS
Si Dilks	DECC	Anna Stephenson	DECC
Paul Hollinshead	MoD	Rupert Wilmouth	GO-Science

SECRETARIAT

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

Apologies:

MEMBERS

Andrew Carlick	DBD Ltd
Richard Clegg	Lloyd's Register
Paul Stein	Rolls-Royce

OBSERVERS

Jason Green	EPSRC
John Loughhead	DECC
Sir Mark Walport	GO-Science

Agenda Item 1 – Welcome and Introductions

The Chair welcomed members and observers to the seventh meeting of NIRAB. The draft minutes from the last meeting (NIRAB-62-1) were agreed with only one minor amendment.

Agenda Item 2 – Actions from previous NIRAB meetings

The actions from the last meeting were reviewed using the NIRAB action tracker (NIRAB-24-5).

In response to Action 6.2 Neil Bateman reported that following discussions with colleagues he could confirm that ESRC would be prepared to consider research proposals addressing appropriate aspects of public engagement. The Chair therefore asked that DECC highlight any such need that arises from the forthcoming SMR Techno-economic Assessment (TEA).

Action 7.1: DECC to identify any outputs from the SMR TEA that flag up the need for any research on public acceptance.

The action for NIRAB to explore options for medical isotope production (Action 3.7) in the UK is closed as the subject does not fall within the NIRAB remit. However it was agreed that assurance should be sought from the Department of Health that any appropriate research required to facilitate Tc^{99m} production using accelerators is being commissioned.

Action 7.2: BIS to discuss how to take forward the need to maintain a secure supply of medical isotopes with the Department of Health.

Neil Bateman also agreed to identify any relevant research funded by STFC.

Action 7.3: Neil Bateman to identify any STFC funded research relevant to Tc^{99m} production using accelerators.

Agenda Item 3 – Small Modular Reactors

Government officials gave a brief on the Government's current position on Small Modular Reactors. Government are still in an information gathering stage. DECC is in the process of letting a contract to carry out a techno-economic assessment of SMRs. This represents a £3 million project to gather investment grade information to inform a possible policy decision. The assessment will be complete by the end of the 2015/16 financial year. In parallel DECC and BIS will carry out a programme of work to identify policy and delivery options with a view to establishing policy by the autumn of 2016.

The Board discussed the potential merits of SMRs. Members stressed the importance of:

- Identifying the areas in which the UK could secure IP as a foundation from which to achieve economic growth in the SMR market
- Generating the evidence for a competitive Levelised Cost Of Electricity
- Emphasising the potential for reduced risk to delays in construction in comparison with large reactors.

Action 7.4: NIRO to update the summary of potential SMR benefits to include Member's comments.

Action 7.5: Members to identify any additional benefits associated with SMRs.

Agenda Item 4 – Comprehensive Spending Review

An update was given on the progress made in formulating NIRAB's recommendations for the comprehensive spending review. A summary was given of how the recommendations have been generated and where necessary the principles used to prioritise the recommendations. This work has involved engagement with up to 60 experts from academia, national laboratories and industry.

Members endorsed the following:

- The overall scale, level of ambition and balance of activities between different technical areas of the baseline programme is appropriate.
- The principles used to prioritise and consider delay for the activities within the baseline programme are appropriate to develop recommendations to Government.
- The level of ambition for the high option could be significantly increased, potentially through the addition of a large project. Any such project would require an increase in funding beyond the timeframe of the current CSR.

Members further noted that:

- The funding scenario described as the minimum required to keep nuclear options open would not, in fact keep options open, but would result in a further decline in capability, which is already fragile in some areas.
- An option of doing nothing is not compatible with the UK retaining its status as a credible nuclear nation.

In addition the Government officials present reminded the board that the recommendations need to describe the benefits accruing from any proposed Government investment, the line of sight to commercialisation and the anticipated extent to which Government investment would be leveraged.

Action 7.6: NIRO to take on board member's comments in preparing material to support departmental business cases.

Members offered their support for a simple booklet setting out the high level benefits of the main components of a programme of research and innovation to address the main recommendations made to Ministers. Comments were provided on a draft and members agreed to provide further comments after the meeting.

Action 7.7: NIRAB Members and Observers to provide any comments on the draft key messages booklet to NIRO.

Agenda Item 5 – Public Funded R&D Review

To date NIRAB has focused on identifying gaps in public funding for nuclear R&D and developing and prioritising recommendations on how these gaps should be addressed. It falls within NIRAB's remit to consider the totality of publicly funded research and innovation and to identify synergies and the potential to redirect funds to greater effect. A draft paper was discussed which presented a summary of the current landscape for publicly funded R&D which encompassed funding from the NDA estate, Research Councils and Innovate UK. NDA Site License Companies (SLCs) are by far the largest source of public funding and R&D spend by the SLCs is dominated by Sellafield Ltd. The Chair noted that R&D commissioned by SLCs is primarily late stage development work that validates and verifies

solutions that have already been selected for deployment and is directly linked to the highest priority and decommissioning projects. It was noted that SLC R&D expenditure is running at the minimum levels required to support the decommissioning mission.

It was noted that, in the interest of completeness the report should also include both the component of the research programme run by the Culham Centre for Fusion Energy (CCFE) which is relevant to fission and the internal research funded by NNL from its profits.

The recommendations were endorsed.

Action 7.8: Add NNL (internally funded) spend and relevant elements of the CCFE programme to the R&D paper.

Action 7.9: Provide Craig Lucas with information on the split between capital and programme spend.

Agenda Item 6 – National Nuclear Users Facility

Robin Grimes has stepped down as the NNUF steering group Chair. This role will now be taken on by Malcolm Joyce (Deputy Chair) and Chris Grosvenor (Chair). Whilst an announcement of funding for the next stage of the NNUF was announced in the autumn statement it was contingent on a satisfactory business case being produced. This is still in progress and EPSRC is working alongside BIS to not only secure the required capital funding but the required programme money that would guarantee open access to facilities.

Agenda Item 7 – International Engagement

Members shared updates on international collaborations that are currently planned or underway. This included:

- A report back on the academic delegation mission to China which was led by Juan Matthews.
- An agreement has been reached with the CEA to allow UK PHD students access to French facilities at Marcoule, Cadarache and Saclay.
- The NDA has held discussions with CEA to explore opportunities for cooperation and leverage of funding at how best to leverage investment.
- There was a successful European safeguards conference (ESARDA) held in Manchester, this was a world class event welcoming delegations from across Europe.
- There is currently a call for research proposals that has been put out by the research councils that is looking for collaborative research with Japan that is relevant to decommissioning at Fukushima.
- Sellafield Ltd have been having discussions with Japan on using its robotics expertise.
- NNL have been supporting the setting up of a research centre near Fukushima by providing a secondee to be the main UK link.
- There may be an opportunity for Toshiba to fund a small amount of research with UK universities, the research councils are looking how to co-ordinate this.

Action 7.10: Melanie Brownridge to ensure that UK involvement in relation to Fukushima is made available to relevant parties in the UK.

Agenda Item 8 – NIRAB Chair/NIRO Additional

Notable NIRAB chair and NIRO stakeholder meetings were distributed to the board.

Agenda Item 9 – Summary of Actions and Next Steps

Actions will be collated by NIRO and distributed after the meeting.

Agenda Item 10 – AOB

The known issue of nuclear data falling between research councils was raised again. There have been meetings between EPSRC and STFC and the STFC Innovation Team has confirmed that it is open to receiving responsive mode grant applications.

Date of Next Meeting

The next meeting is scheduled for 7th October 2015.