

## Minutes

### NIRAB fifth meeting

6th January 2015, 11:00-16:00

Royal Academy of Engineering, Prince Philip House, London

#### Attendees:

##### MEMBERS

|                 |                          |                   |                  |
|-----------------|--------------------------|-------------------|------------------|
| Dame Sue Ion    | Chair                    |                   |                  |
| Tim Abram       | University of Manchester | Bill Lee          | Imperial College |
| Don Allan       | DBD Ltd                  | John Lillington   | AMEC             |
| Richard Clegg   | Lloyd's Register         | Andrew Sherry     | NNL              |
| Steve Cowley    | CCFE                     | Paul Stein        | Rolls-Royce      |
| Graham Fairhall | NNL                      | Neil Thomson      | EDF Energy       |
| Mick Gornall    | Springfields Ltd         | Mike Tynan        | NAMRC            |
| Paul Harding    | Urenco                   | Laurence Williams | CORWM            |
| Neil Hyatt      | Sheffield University     | Peter Wylie       | Sellafield Ltd   |
| Malcolm Joyce   | Lancaster University     |                   |                  |

##### OBSERVERS

|                    |             |                |      |
|--------------------|-------------|----------------|------|
| Derek Allen        | Innovate UK | John Loughhead | DECC |
| Melanie Brownridge | NDA         | David Senior   | ONR  |
| Robin Grimes       | FCO         | Paul Collings  | NDA  |

##### OFFICIALS

|                 |      |                  |            |
|-----------------|------|------------------|------------|
| Tony Ashton     | DECC | John Donald      | ONR        |
| Rob Arnold      | DECC | Rob Moore        | Treasury   |
| Ron Cameron     | UKTI | Dominic Scullard | BIS        |
| Si Dilks        | DECC | Rupert Wilmouth  | GO-Science |
| Anna Stephenson | DECC |                  |            |

##### SECRETARIAT

|              |      |              |      |
|--------------|------|--------------|------|
| Gordon Bryan | NIRO | Andy Howarth | NIRO |
| Andrew Brown | NIRO | Simon White  | NIRO |

#### Apologies:

##### MEMBERS

|                |         |
|----------------|---------|
| Andrew Carlick | DBD Ltd |
|----------------|---------|

##### OBSERVERS

|                  |            |
|------------------|------------|
| John Jenkins     | ONR        |
| Sir Mark Walport | GO-Science |
| Jason Green      | EPSRC      |

## Agenda Item 1 – Welcome and Introductions

The meeting was called to order by the Chair. The minutes from the last meeting (NIRAB-32-1) were accepted with no amendments.

## Agenda Item 2 – Actions from previous NIRAB meetings

The minutes of the 4<sup>th</sup> meeting were approved and actions were reviewed with the following notable points:

*Action 3.7 - Bill Lee to lead on a study to look into the options for the UK in securing a supply of medical isotopes and/or targets and advise on the most appropriate approach for the UK.*

A workshop is planned with subject matter experts to be held on 14<sup>th</sup> January.

*Action 4.5 - DECC to identify and implement a mechanism that will enable payment of the NEA databank subscription.*

A stop gap mechanism has been created by DECC that will be in place up until May. After this a definitive mechanism will be put in place. This will ensure that UK remains engaged with the NEA databank.

*Action 4.6 - Andrew Sherry to coordinate an articulation of why nuclear data is important to UK programmes and to recommend priority research areas through international engagement.*

A paper has been drafted and text will be included in the annual report.

## Agenda Item 3 – Autumn Statement

A brief was given by Tony Ashton on the outcome from the autumn statement - there was no new money to fund programmes in the areas recommended by NIRAB. The Chair shared her disappointment with the board that the recommendations had not been acted upon, noting that this may send an unwelcome signal to other nations keen to collaborate with the UK.

Officials thanked the board for their recommendations noting that the autumn statement was a one year settlement and the comprehensive spending review to be carried out in 2015 represents an opportunity to secure funding for a new nuclear R&D programme.

Despite the failure of the autumn statement to secure new money for nuclear research programmes, the following positives were highlighted:

- £7million capital funding has been secured by DECC for FY15/16 for research capital infrastructure,
- BIS through EPSRC has made available up to £60 million for capital infrastructure for the National Nuclear Users Facility for the period up to 2020/21,
- Government are looking to commission a techno-economic assessment of Small Modular Reactors during FY15/16.

Whilst welcoming the capital investment in research and development, the board reiterated its advice to Government of the importance of funding programmes of work as well as developing infrastructure. The objectives set out in the Nuclear Industrial Strategy are unlikely to be met in the absence of programme funding.

The board was made aware that Innovate UK are launching round two of the Energy Catalyst, and in round 1 two nuclear projects were funded.

### Agenda Item 4 – 2015 Plan

A plan of activities for the first half of 2015 has been drafted by NIRO, leading to recommendations being made by NIRAB to Government to inform the next comprehensive spending review. It is proposed that the sub-groups should be used to gather information and a quality plan will be produced to ensure that recommendations are robust and traceable. The sub-groups will revisit the R&D capability landscape to assess the impact the lack of funding is having on the research community.

**Action 5.1: NIRO to issue a Quality Plan taking into account the advice and comments offered by NIRAB members.**

**Action 5.2: Sub-groups to revisit the Civil Nuclear R&D Landscape to determine the strength of UK R&D capabilities relevant to Advanced Reactors.**

### Agenda Item 5 – Small Modular Reactors

NNL published its SMR feasibility report in November 2014. The Energy Technologies Institute has also been conducting studies which together with the feasibility study will contribute to a body of information from which Government can make a policy decision on a UK position on SMRs.

A techno-economic assessment will be commissioned by Government in 2015. Government Officials welcomed the input of NIRAB to identify suitable areas where investment would bolster the technical evidence base to support the forthcoming techno-economic assessment. The Chair noted NIRAB's view that feasibility studies on micro-modular reactors should also be supported.

**Action 5.3: DECC to liaise with NIRO, relevant NIRAB members and participants in the SMR Feasibility study to identify areas where investment could increase technical evidence and understanding to support a policy decision on SMRs.**

### Agenda Item 6 – Annual Report

A draft version of the annual report (NIRAB-35-2) has been prepared by NIRO on behalf of NIRAB and was circulated prior to the meeting. Comments had been received from some members and some comments were shared at the meeting. In order to approve the report for release, any further comments are required by 9<sup>th</sup> January.

A series of detailed comments were captured at the meeting, the most notable was to reword the report's foreword and the executive summary in order to bring out the urgency of the NIRAB recommendations.

**Action 5.4: NIRAB members to send comments on the Draft Annual Report to NIRO by 9<sup>th</sup> January.**

**Action 5.5: NIRO to update the Annual Report based on members' comments and circulate to NIRAB members a revised Foreword from the Chair and Executive Summary.**

### Agenda Item 7 – International Engagement

DECC presented key points from a dossier of information on international nuclear R&D activities that has been gathered by diplomatic telegram from 26 UK embassies across the world. There are varying levels of information in the responses which provide a good overview of the global R&D landscape.

It was agreed that a strategy for co-operating with international partners was required, especially for making comprehensive spending review recommendations. A strategy for international collaboration must take into account ongoing commitments or agreements the UK currently has so that a consolidated and coordinated approach is adopted. Government would like NIRAB to advise on which countries are most appropriate for partnering with from a technical perspective. A proposed method to create the strategy will be developed by NIRO and reported back at the next NIRAB meeting.

**Action 5.6: NIRO to propose a method for NIRAB to develop an International Strategy for discussion at the March meeting.**

### Agenda Item 8 – Science and Innovation Network Mission to the US

Robin Grimes presented a summary of the recent Science and Innovation Network Mission to the US. The UK delegation included UK academics and NNL staff visiting three US national labs to discuss research capabilities and explore potential opportunities for collaboration. A key outcome of the trip is that the US Department of Energy and National Lab staff confirmed their interest in identifying potential collaborative R&D projects and agreeing specific R&D topics. Robin Grimes will hold discussions with UK Government officials to determine whether funding can be accessed to enable further discussions to take place. Immediately prior to the visit the US Department of Energy appointed Andy Worrall to be the coordinator for R&D links between the US National Labs and the UK

**Action 5.7: Robin Grimes to discuss with DECC and BIS how to secure funding for the proposed US ‘deep dives’ over the next 2 years.**

### Agenda Item 9 – NIRAB Chair/NIRO Additional Notable Activities

In addition to the notifications issued with briefing papers, the chair also attended the Nuclear Energy Advisory Committee in the US. She noted that the US is about to embark on a collaboration with China on molten salts reactors.

### Agenda Item 10 – Summary of Actions and Next Steps

The actions of the meeting were summarised.

### Agenda Item 11 – AOB

Action 4.4 on Jason Green to produce a paper on nuclear data and research councils has been completed however there are still outstanding issues. NIRO agreed to contact Jason Green to share the outstanding concerns.

**Action 5.8: NIRO to liaise with Jason Green to highlight the ongoing concerns relating to nuclear data.**

Don Allan raised the issue of exploiting existing UK owned IP, a note has been written for John Clarke (NDA) and Andrew Carlick will progress this. Melanie Brownridge noted that the first priority should be to clarify the current ownership and rights of access to relevant historic IP. Melanie Brownridge noted that she had previously carried out such analyses for the NDA.

**Action 5.9: Melanie Brownridge to provide a summary of the provisions of the Transfer Agreements that governed ownership and rights of access to IP upon the break-up of BNFL and the establishment of NDA.**

The Chair had been requested by officials to ask if industry would be willing to takeover the funding of the board's secretariat. Currently only the Chair's time, the Chair's travel and NIRO are funded by Government.

The Industry members of NIRAB unanimously agreed that it was not appropriate for industry to fund NIRO for the following reasons:

- NIRAB is charged with providing independent advice to Government. This independence would be prejudiced by industry funding.
- NIRAB recommendations are intended to underpin and inform the Government's energy and industrial policies. It would be inappropriate for industry to fund Government policy making.
- Industry and academic institutions are already making a significant contribution in kind.

### **Date of Next Meeting**

The next meeting is scheduled for 5<sup>th</sup> March 2015.