

SELECT COMMITTEE ON SCIENCE AND TECHNOLOGY

Priorities for Nuclear Research and Technologies

Call for Evidence

The House of Lords Science and Technology Select Committee, under the Chairmanship of Lord Selborne, is conducting an inquiry into Priorities for Nuclear Research and Technologies. The Committee invites interested individuals and organisations to submit evidence to this inquiry. The deadline for written evidence submissions is **Friday 24 February 2017**.

Background

The Committee published a report *Nuclear Research and Development Capabilities* on 22 November 2011.¹ Since the publication of that report the Government has accepted and acted on a number of the recommendations of the Committee. The Committee will now revisit some of the conclusions and recommendations of that report to investigate the developments that have taken place and what more needs to be done to ensure the UK can meet its future nuclear energy requirements. The Committee will look specifically at the upcoming decision on a small modular reactor (SMR) design for the UK; and the roles of the National Nuclear Laboratory (NNL) and the Nuclear Innovation and Research Advisory Board (NIRAB).

Scope

Small Modular Reactors

The inquiry will consider the upcoming Department for Business, Energy and Industrial Strategy decision on opportunities for Small Modular Reactor (SMR) development and selection for the UK, the economic case for SMRs and the potential economic benefits to the UK by being an early adopter of this technology.

Small Modular Reactors (SMRs) are a relatively new technology for civil nuclear power generation. They are smaller than conventional nuclear reactors, with power outputs of around 300MWe or less. The modularity of SMRs means that much of the design and plant can be fabricated in a factory environment and transported to site. Globally there are some 45 designs at various stages of development, though none as yet are ready for deployment. They provide an opportunity to implement newer, passively safe designs and they offer financial and deployment-time advantages compared to largescale nuclear – owing to their modular design. There could be considerable export opportunities for SMRs. There are potential barriers to deployment of SMRs in the UK, however, including uncertainties in the economic case – which will be influenced by novelty of the adopted design or designs, regulatory hurdles, public acceptance and the cost of running potentially several nuclear licensed sites.

¹ <http://www.publications.parliament.uk/pa/ld201012/ldselect/ldsctech/221/22102.htm>

In March 2016 the Government launched an SMR Competition to identify the best value SMR design for the UK, and a decision on the winner is expected imminently. In parallel with this competition the Government intends to develop an SMR roadmap setting out the policy framework for SMRs to help the UK achieve its energy objectives.²

Governance and Nuclear Strategy

This inquiry will examine whether the current remit of the National Nuclear Laboratory (NNL) allows it to function with clarity and purpose benefitting the wider civil nuclear sector in the UK. This will include the ability of NNL to operate as a national laboratory through providing advice to Government on nuclear topics, driving innovation to address nuclear industry challenges, maintaining and growing the talent within nuclear research and development R&D, and providing the appropriate facility structure to support nuclear R&D programmes. The inquiry will examine what actions, if any, the Government needs to take in this area.

One of the recommendations of the Committee's 2011 report led to the establishment of the Nuclear Innovation and Research Advisory Board (NIRAB) in 2014 as a temporary advisory board in accordance with Cabinet Office guidance. The role of NIRAB was to advise Ministers, Government Departments and Agencies on issues related to nuclear research and innovation in the UK and to ensure that public R&D programmes were aligned to support industrial and energy policy.³ Following the completion of its work it has now been disbanded, with its last meeting in December 2016, and no new body has taken its place.

The inquiry will collect evidence on the effectiveness of NIRAB and whether a permanent successor body needs to be established and if so what the role of this body should be and how it should be constituted.

Questions

The Committee invites submissions on the following points, with practical examples and other evidence where possible.

Please only answer those questions of relevance to you. Please also do draw the Committee's attention to any relevant issues not captured in the specific questions below:

1. Where if anywhere do you believe that responsibility should lie for ensuring that the UK has a coherent and consistent long term policy for civil nuclear activities including international collaboration and, within the UK, for cost-effective and efficient articulation of the different elements of nuclear work?
2. The Government's industrial strategy green paper discusses a possible 'sector deal' for the nuclear sector.⁴ How might the nuclear sector benefit from such a sector deal? What might a deal involve and who would be the leadership organisations within the sector for such a deal?

² <https://www.gov.uk/government/publications/small-modular-reactors-competition-phase-one>

³ <http://www.nirab.org.uk/about-us/about-nirab/>

⁴ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/585273/building-our-industrial-strategy-green-paper.pdf

SMRs

3. What are the potential benefits, disadvantages and risks from the deployment of SMRs in the UK and more widely?
4. What is the scale of the global market opportunity for SMRs? What would the cost be if the UK does not take full advantage of the opportunities of SMRs?
5. Is the Government doing enough to fund research and development on SMRs, and to stimulate others to do so? Should it be doing more to coordinate UK actions including international engagement on SMR development and future deployment?
6. Are the criteria set out by the Government for the SMR competition appropriate? If not, what should the criteria be? What timescale should the Government be working to in choosing an appropriate SMR design for the UK?
7. Should the UK be involved in the development of Gen IV technology? If so, what funding and support should be put in place to help the UK establish a world leading position? Should our activity include development of one or more test reactors?

Governance

8. Is the NNL fulfilling its remit appropriately? Can it deliver the required research to support the UK's future nuclear energy policies? How does it compare to equivalent organisations in other countries?
9. Is the remit of the National Nuclear Laboratory (NNL) suitable to provide research and development support to the UK nuclear sector? Is the current funding and governance model for the NNL appropriate to its role and remit?
10. Is there sufficient co-ordination between the bodies involved in nuclear research and, if not, how should it be improved? Who has oversight of the whole nuclear R&D landscape, including international activities?
11. Was the Nuclear Innovation and Research Advisor Board successful in carrying out its role? Is a permanent successor body to NIRAB required? If yes, what form should this body take and what should its role and remit be?

Respondents need not provide responses to all questions. **Equally, if there are any crucial issues not captured under the questions we pose, please highlight what they are and explain their salience.**

The deadline for receiving written submissions is Friday 24 February 2017. Public hearings will be held in February and March 2017. The Committee aims to report to the House, with recommendations in spring 2017. The report will receive a response from the Government, and may be debated in the House. **Instructions as to how to respond to this Call for Evidence can be found in Annex I overleaf.**

26 January 2017

ANNEX I: GUIDANCE FOR SUBMISSIONS

Written evidence should be submitted online using the written submission form available at <http://www.parliament.uk/priorities-for-nuclear-research-and-technologies-written-submission-form>. This page also provides guidance on submitting evidence. The deadline for written evidence is **24 February 2017**.

If you have difficulty submitting evidence online, please contact the Committee staff by email hlscience@parliament.uk or by telephoning 020 7219 5750.

Shorter submissions are preferred. A submission longer than eight pages should include a one-page summary. Paragraphs should be numbered. All submissions made through the written submission form will be acknowledged automatically by email.

Evidence which is accepted by the Committee may be published online at any stage; when it is so published it becomes subject to parliamentary copyright and is protected by parliamentary privilege. Submissions which have been previously published will not be accepted as evidence.

Once you have received acknowledgement that the evidence has been accepted you will receive a further email, and at this point you may publicise or publish your evidence yourself. In doing so you must indicate that it was prepared for the Committee, and you should be aware that your publication or re-publication of your evidence may not be protected by parliamentary privilege.

Personal contact details will be removed from evidence before publication, but will be retained by the Committee Office and used for specific purposes relating to the Committee's work, for instance to seek additional information.

Persons who submit written evidence, and others, may be invited to give oral evidence. Oral evidence is usually given in public at Westminster and broadcast online; transcripts are also taken and published online. Persons invited to give oral evidence will be notified separately of the procedure to be followed and the topics likely to be discussed.

Substantive communications to the Committee about the inquiry should be addressed through the clerk of the Committee, whether or not they are intended to constitute formal evidence to the Committee.

This is a public call for evidence. Please bring it to the attention of other groups and individuals who may not have received a copy direct.

You may follow the progress of the inquiry at: <http://www.parliament.uk/priorities-for-nuclear-research-and-technologies>.