

# **Nuclear Regulatory Review**

## **Summary Recommendations**

**from**

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Treasury**

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**Dr Tim Stone** is the chairman and founder of KPMG's Global Infrastructure and Projects Group. In addition to his role as an expert non-executive director of the European Investment Bank, Tim is the senior adviser to the Secretary of State for Energy and Climate Change and to the Chief Secretary of the Treasury on nuclear new build. In this role he has also been asked by the Secretary of State to work with the regulators to explore ways of enhancing their efficiency in dealing with the challenges of a nuclear new build programme.

1. In the Nuclear White Paper (January 2008), the Government announced it would be working with the regulators of the nuclear industry to explore ways of enhancing further the transparency and efficiency of the regulatory regime, without diminishing its effectiveness, in dealing with the challenges of new nuclear power stations. I was appointed to carry out the review of the current nuclear regulatory environment to ensure that it is in line with the Government's ambition to make the UK a world leader in the safe, efficient use of nuclear energy, including a highly efficient and effective regulatory system, that makes it the best place in the world to invest in new nuclear power stations.
2. In undertaking this review I discussed with a range of people the issues confronting the NII. These included representatives of the nuclear industry, Whitehall, and the regulator itself. My summary recommendations arise out of evidence from those discussions, and my own observations.
3. This summary sets out key issues that have been identified by my review, and high-level proposals in relation to the reform of the arrangements associated with the regulatory regime. The focus of the review has been on HSE's Nuclear Directorate (ND), of which the Nuclear Installations Inspectorate (NII) is the major part. Interim recommendations were delivered to Government in June 2008.
4. Phase 1 (*Short-Term Recommendations*) covers short-term measures that must be worked on as a priority to assist with the timely completion of the Generic Design Assessment process.
5. Phase 2 (*Medium-Term Recommendations*) sets out proposals for longer-term reform of the NII.
6. The short-term recommendations should be undertaken as soon as possible and those items specifically addressing NII's recruitment issues should be implemented as soon as possible.
7. In the medium term I would want to ensure that the Nuclear Directorate is able to recruit and retain sufficient suitably qualified and skilled staff through having flexibility over its own remuneration and employment terms and conditions, as well as governance and location. This is necessary to compete with the private sector for the specialist resources it needs to operate to world-class standards and to meet

business needs, both in the immediate term and on a permanently sustainable basis.

8. Three important points provide essential context for my recommendations:
  - First, I agree with the conclusion of the IAEA review, as set down in the Nuclear White Paper, that the UK's nuclear regulatory arrangements are mature and transparent, with highly trained and experienced inspectors.
  - Second, the NII is significantly under-resourced for its predicted future workload, both with and without new nuclear build, and this results from institutional arrangements that have been in place for some years. NII's staffing shortage is increasing in severity both due to an inability to recruit suitable new staff, and also because the age profile of the expert and highly experienced inspectors is heavily skewed towards retirement age.
  - Third, the current senior management team, in particular the Chief Inspector, have already identified and are implementing a number of important cultural and governance changes, but progress on such commendable changes is hampered by resourcing and other institutional constraints.<sup>1</sup> My recommendations are fundamentally intended to reinforce and accelerate the NII's existing plans and reforms, as well as recommending a number of important additional steps. It is essential that the NII is fully supported in implementing such changes, otherwise their effectiveness will be far below the aspirations for Government's new nuclear policy.
9. A failure to make the necessary reforms may consequently hamper the effective operation of British Energy (BE) and the Nuclear Decommissioning Authority (NDA) in the next few years, as well as the programme of work to decommission legacy nuclear facilities.
10. Adverse past criticism of the NII from some parts of the industry may well have arisen in part because of a lack of visibility of NII's programme of improvements, which is only now beginning to be recognised by industry and other stakeholders. These changes need

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<sup>1</sup> Such initiatives that are actively being pursued by the NII include (i) strengthening relations with the rest of HSE to be able to operate as effectively as possible within present structures; (ii) improving the leadership and management of the staff in the NII to ensure that resources are used effectively and efficiently, as well as recognising the wider society aspects of the organisation's work; and (iii) developing relations with principal stakeholders, including licensees, to improve on effectiveness, efficiency and transparency of the organisation.

to be much better communicated by the NII and this is one of the tasks that, although showing signs of being addressed, remains unresolved as a consequence of competing demands on resources.

11. My recommendations, if accepted by the Government, should be the responsibility of the Chief Inspector of the NII assisted by the Chief Operating Officer referred to below, and I would be prepared to undertake a “follow up” review as to how such recommendations have been implemented.

## **Phase 1: Short-Term Recommendations**

12. In order for the NII to support the facilitative steps<sup>2</sup> to enable the construction and operation of new nuclear power stations envisaged by the Nuclear White Paper (January 2008) and, at the same time, maintain its oversight of operational and legacy nuclear plants, it is necessary immediately to provide additional qualified inspectors. The NII needs to have recruited new inspectors and professionals by the end of the first quarter of 2009 so the implementation of the short-term recommendations must receive the focused efforts and attention of government and the HSE in particular. Failure to do so will seriously jeopardise the delivery of a key element of this government’s energy policy.
13. The following steps are designed to achieve this fundamental objective:
  - Appointment of an HR Advisor: to provide a rapid, focused and independent analysis of what is needed to enable the NII to compete successfully for the small pool of specialists available in the market, now and over the next few years, and to assist HSE’s limited and over-stretched human resource department in their recruitment campaign. The advice must be carefully focused on how to attract the particular specialists needed by the NII within the market in the timescales required, and hence recruitment must be closely targeted on the right recruiting grounds. This should not be a one-off event: the situation should be monitored at least annually until there is clear consensus that appropriate numbers of suitably skilled resources are in, or in clear prospect of being in adequate supply for the medium term. This decision should be that of the Chief Inspector and supported by his governing board.

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<sup>2</sup> The facilitative steps are in relation to the regulatory “approval” process of specific designs of new reactor fleet type, separate from the regulatory consideration of site-specific licensing applications. The former process is referred to as the Generic Design Assessment (GDA).

- Inspectors' remuneration: the pay and other critical compensation elements of current and prospective NII staff must be adjusted rapidly to enable recruitment of the full complement of staff needed. Nuclear skills are in short supply – this area requires specific action, though it will be important to ensure that such action is restricted to where it is genuinely needed.
- Support: in order to relieve the workload on the scarce technical staff within the NII and to support the senior management team, appropriate professional organisations should be invited to provide interim personnel on a secondment basis. Specific skills and positions needed are:
  - an interim Chief Operating Officer (COO) to assist with overall administration of the Nuclear Directorate;
  - at least three experienced project and programme managers to help manage and support the three current GDA streams; and
  - four experienced mid-level managers to take over as much of the day-to-day administration of the NII as possible, focusing initially on the recruitment of nuclear inspectors and Technical Support Contractor procurement referred to below.
- Overseas regulators: within the GDA process, the Chief Inspector has fully recognised the ongoing need for information exchanges with overseas regulators; these should continue to be developed with as much assistance from Government and wider industry as possible. The NII should seek to build as robust international cooperation and collaboration as possible without interfering with regulatory sovereignty. Regulation of fleet designs on an international basis should materially eliminate duplicate activity and significantly improve the quality of regulatory oversight.
- Short-term package of measures within the civil service: certain rules within the civil service applicable to the NII's particular staffing conditions should be disapplied to assist with the retention of inspectors (e.g. salary arrangements relating to the first two years of employment in the HSE).
- Technical Support Contractors (TSCs): much greater use should be made by the NII of third party contractors and TSCs to maximise the effectiveness of the inspectorate without devolving regulatory decision-making powers or responsibility. It will be important to ensure that the

TSCs are not merely used as “body shops” but as sources of expertise to leverage the NII professionals’ work.<sup>3</sup>

- Location: the current main office being in Bootle, Merseyside is not ideal for recruiting and retaining staff. The possibility of satellite offices for members of the Nuclear Directorate elsewhere in the UK should be actively considered, although I have no specific recommendations as to where these might be – that is for the Chief Inspector of the NII to decide, taking into account the impact on recruitment and retention of staff. The day-to-day location of all NII personnel should be a matter entirely for the Chief Inspector.
- Communications: a wider and ongoing dialogue with industry and stakeholders is urgently required to show how NII is changing and improving, and to further enhance the regular and open exchange of information between the regulator and industry.

## Phase 2: Medium-Term Recommendations

14. In addition to the short-term recommendations discussed above, more significant changes are needed in the medium term. Further work is needed to translate these broad recommendations into detailed and specific actions. However, the changes that are needed include:
  - ensuring the NII (plus the wider Nuclear Directorate) is structured to give it financial and organisational flexibility to meet its business needs on a sustainable basis. The final disposition will depend on analysis currently underway and, in part, on the results of the human resource advice on necessary terms and conditions of employment for the members of the Inspectorate.
  - changing the cost recovery arrangements so that, given a fluctuating work load, the Nuclear Directorate has full flexibility to adjust its budgets, charge industry and other regulatees accordingly, and receive payments directly.
  - creation of a governing body for the Nuclear Directorate whose functions will include:
    - significantly strengthening the overall accountability of the wider societal responsibilities of the NII (reinforcing the

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<sup>3</sup> “Body shopping” generally refers to the practice of hiring people on a one-by-one basis with no other intellectual or professional content, rather than buying in professional advice to address a specific problem or issue.

direction of travel already being driven by the current Chief Inspector)<sup>4</sup>

- supervision and approval of budgets
  - preparation of an annual report to the Secretary of State on the operation of the Nuclear Directorate
  - oversight of internal peer-review processes and advice to the Chief Inspector
- enhancement of the peer-review processes within the NII as soon as resources allow
  - creation of a more transparent and enhanced expert review and appeals process, including an element of outside advice as determined by the Chief Inspector (undertaken in a public forum)
  - sponsorship and advocacy for a regular exchange programme with industry to, among others things, assist with the GDA process, taking account of and dealing effectively with any concerns about the impact on regulatory independence.
15. The governing body should be established as quickly as possible pending the enactment of any other medium-term changes necessary to achieve the outcomes I have raised. Shadow running should be instituted as soon as possible if permanent change cannot be effected quickly, and in any event by the first half of 2009.
16. Each of the proposals will need to be further developed and legal opinions sought before advice is given on the feasibility of the suggested reforms.

## Concluding remarks

17. It is self-evident that the Nuclear Installations Inspectorate is a critical part of the future of the UK's nuclear industry. It would be an understatement to say that the NII is also a fundamental success factor for the UK as a whole to be a world-class place in which to construct and operate nuclear power stations. It has a central role to play both in enabling new nuclear stations to be built, and in ensuring they are operated safely through the application of the necessary high standards and regulatory requirements. The implementation of my

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<sup>4</sup> An example of this is the new mission statement, viz: "Protecting people and society ..." Society involves a wider construct than people and relates to the supply of low-carbon electricity, strategic nuclear deterrent, etc so that it is more obvious to all NII's stakeholders, including its own staff, that when making regulatory judgements wider societal considerations have to be taken into account. See, for example, the Chief Inspector's speech (7 May 2008) to the Industry and Parliamentary Trust.

recommendations by the Government will be one of the largest single factors in the success of the Government's policy for new nuclear build. The policy as set out in the Nuclear White Paper (January 2008)<sup>5</sup> has already attracted widespread support both in the UK and internationally for its vision, commitment and strong leadership. Should the implementation of these recommendations be either incomplete or delayed by months, the consequences could easily be a delay in the programme of several years as investment capital, both financial and human, would be diverted to other countries.

18. Prompt and complete implementation of these recommendations will help ensure that the Government's vision and plans are delivered on time with the major benefits for the citizen of the provision of secure, affordable, low-carbon electricity, and helping to keep the UK at the forefront of the global nuclear renaissance.

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<sup>5</sup> Nuclear White Paper, January 2008 (<http://www.berr.gov.uk/energy/nuclear-whitepaper/page42765.html>)