

Revised Draft National Policy Statement for Nuclear Power Generation (EN-6)

Volume I of II

**Department of
Energy and Climate Change**

**Revised Draft
National Policy Statement for
Nuclear Power Generation
(EN-6)**

Volume I of II

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of the Planning Act 2008

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Part 1 Introduction

1.1 Background

- 1.1.1 The Government believes that energy companies should have the option of investing in new nuclear power stations. Any new nuclear power stations consented under the Planning Act 2008 will play a vitally important role in providing reliable electricity supplies and a secure and diverse energy mix as the UK makes the transition to a low carbon economy.

1.2 Role of this NPS in the planning system

- 1.2.1 This National Policy Statement (NPS), taken together with the Overarching National Policy Statement for Energy (EN-1), provides the primary basis for decisions taken by the Infrastructure Planning Commission (IPC) on applications it receives for nuclear power stations (as specified at Section 1.8 of this NPS). The way in which NPSs guide IPC decision making, and the matters which the IPC is required by the Planning Act 2008 to take into account when considering applications, are set out in Sections 1.1 and 4.1 of EN-1.
- 1.2.2 Applicants should ensure that their applications, and any accompanying supporting documents and information, are consistent with the instructions and guidance given to applicants in this NPS, EN-1 and any other NPSs that are relevant to the application in question.
- 1.2.3 This NPS may be helpful to local planning authorities in preparing their local impact reports. In England and Wales this NPS is likely to be a material consideration in decision making on relevant applications that fall under the Town and Country Planning Act 1990 (as amended). Whether, and to what extent, this NPS is a material consideration will be judged on a case by case basis.
- 1.2.4 Further information on the relationship between NPSs and the town and country planning system, as well as information on the role of NPSs, is set out in the letter to Chief Planning Officers issued by the Department for Communities and Local Government (CLG) on 9 November 2009¹.
- 1.2.5 Paragraphs 1.2.2 and 4.1.3 of EN-1 provide details of how this NPS may be relevant to the decisions of the Marine Management Organisation and how the Marine Policy Statement and any applicable Marine Plan may be relevant to the IPC in its decision making.

¹ <http://www.communities.gov.uk/publications/planningandbuilding/letternpsconsultation>

1.3 Relationship with EN-1

1.3.1 This NPS is part of a suite of energy NPSs. It should be read in conjunction with EN-1, which covers:

- the high level objectives, policy and regulatory framework for new nationally significant infrastructure projects that are covered by the suite of energy NPSs and any associated development (referred to as energy NSIPs);
- the need and urgency for new energy infrastructure to be consented and built with the objective of contributing to maintaining a secure, diverse and affordable energy supply and supporting the Government's policies on sustainable development, in particular by mitigating and adapting to climate change;
- the need for specific technologies, including the infrastructure covered by this NPS;
- key principles to be followed in the consideration and examination of applications;
- the role of the Appraisals of Sustainability (see Section 1.6 below) in relation to the suite of energy NPSs;
- policy on good design, climate change adaptation and other matters relevant to more than one technology-specific NPS; and
- the assessment and handling of generic impacts that are not specific to particular technologies.

1.3.2 This NPS does not seek to repeat the material set out in EN-1, which applies to all applications covered by this NPS unless stated otherwise.

1.4 Geographical coverage

1.4.1 This NPS, together with EN-1, is the primary decision-making document for the IPC when considering development consent applications for the construction of new nuclear power stations on sites in England and Wales that are listed in this NPS. Part 4 of this NPS lists the sites that the Government has assessed to be potentially suitable for such development before the end of 2025. None of the sites listed in this NPS are in Scotland or Northern Ireland.

1.4.2 The IPC will not examine applications for nuclear power stations in Scotland. However, energy policy is generally a matter reserved to UK Ministers and this NPS may therefore be a relevant consideration in planning decisions in Scotland.

1.4.3 In Northern Ireland planning consent for all energy infrastructure is devolved to the Northern Ireland Executive, so the IPC will not examine applications for new nuclear power stations.

- 1.4.4 In the event that a development consent application for a new nuclear power station is submitted to the IPC for a site not listed in this NPS, this NPS would not have effect for the purposes of the Planning Act 2008. The IPC would therefore examine the application and make a recommendation to the Secretary of State, who would make the decision for any such application (see Section 2.3 of this NPS).

1.5 Period of validity and review

- 1.5.1 This NPS will remain in force in its entirety unless withdrawn or suspended in whole or in part by the Secretary of State. It will be subject to review by the Secretary of State to ensure that it remains appropriate. Information on the review process is set out in CLG's letter of 9 November 2009 (see paragraph 1.2.4 above).

1.6 The Appraisal of Sustainability

- 1.6.1 All of the energy NPSs have been subject to an Appraisal of Sustainability (AoS)², incorporating the requirements of the regulations that implement the Strategic Environmental Assessment Directive³. Section 1.6 of EN-1 provides details on the AoSs for the other energy NPSs (EN-1 to EN-5). In particular it sets out key points from the AoS of EN-1.
- 1.6.2 As explained at Section 1.6 of EN-1, the primary function of the AoSs is to inform consultation on the revised draft NPSs by providing an analysis of the environmental, social and economic impacts of implementing the energy NPSs by granting development consents in accordance with them. Each of the AoSs also includes a non-technical summary for the benefit of non-specialist readers.
- 1.6.3 The development of this NPS and the assessment of sites has been influenced by the AoS of this NPS (the Nuclear AoS), which itself has taken into account the findings of the AoS of EN-1. The Nuclear AoS has assessed the NPS as a whole as well as each site listed in this NPS. To the extent relevant, the IPC may take account of the appropriate Nuclear Site Reports when determining an application for development consent.
- 1.6.4 A summary of the main findings of the Nuclear AoS is set out below.
- The Nuclear NPS could bring significant benefits⁴ in meeting the Government's climate change and energy security objectives.

² The Appraisal of Sustainability is required by section 5(3) of the Planning Act 2008. See the *Appraisal of Sustainability for the Revised Draft Nuclear National Policy Statement: Main Report*, <http://www.energynpsconsultation.decc.gov.uk>

³ Directive 2001/42/EC of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment

⁴ In this NPS the terms "effects", "impacts" or benefits" should be understood to mean likely significant effects, impacts or benefits (in accordance with Section 4.2 of EN-1).

- Possible adverse effects on nature conservation sites of European importance⁵ were identified by the Nuclear Habitats Regulations Assessment (HRA). Further studies will need to be carried out, as part of the project HRA and environmental impact assessment (EIA) processes for individual development consent applications, to determine the significance of the effects and the effectiveness of any mitigation measures.
- Possible significant adverse effects on nationally important nature conservation sites and designated landscapes were identified by the Nuclear AoS. Further studies will need to be carried out, as part of the project EIA process for individual development consent applications, to determine the significance of the effects and the effectiveness of any mitigation measures.
- Key inter-relationships between biodiversity and other sustainability effects were identified. These were most notably in relation to flood risk management, water quality and sustainable communities.
- There is the potential for interactions and cumulative adverse effects on wider biodiversity in relation to water quality and resources, habitat loss and “coastal squeeze”⁶ where there is more than one potentially suitable site for new nuclear power in the locality⁷ or as a result of other major development in the area. Such interactions and adverse effects are possible in European Sites in the Severn Estuary and River Wye and the Outer Thames Estuary where there are two potentially suitable nuclear sites⁸. These issues will need to be considered in project level HRAs and EIAs.
- Effects associated with the management and disposal of hazardous wastes, including radioactive wastes, can affect other sustainability topics⁹. The significance of these effects can only be determined through studies as part of the project level EIA and HRA.

⁵ The Habitats Directive (see footnote 11) protects habitats and species of European nature conservation importance by establishing a network of internationally important sites designated for their ecological status. These are referred to as Natura 2000 sites or European Sites, and comprise Sites of Community Importance (SCI), Special Protection Areas (SPAs) (as classified under the EC Birds Directive 1979), Special Areas of Conservation (SACs), candidate Special Areas of Conservation (cSAC), and European Offshore Marine Sites (EOMS) designated under the EC Habitats Directive. For the purposes of the Nuclear HRA all SAC, cSAC, SPA, pSPA, EOMS and Ramsar sites are referred to as “European Sites”. It is Government policy to treat Ramsar sites, designated by the Ramsar Convention on Wetlands (1971) and potential SPAs (pSPAs) as if they are fully designated European Sites for the purpose of considering any development proposals that may affect them (Planning Policy Statement 9 Biodiversity and Geological Conservation; Government Circular: Biodiversity & Geological Conservation – Statutory Obligations and their impact within the planning system (ODPM, 2005); and Technical Advice Note (TAN) 5 Nature Conservation and Planning (WAG, 1996)).

⁶ The reduction in habitat area which can arise if the natural landward migration of a habitat under sea level rise is prevented by the fixing of the high water mark, for example a sea wall.

⁷ See Section 2.3 of this NPS for details of the Government’s policy on the siting of new nuclear power stations; and Part 4 of this NPS for the list of sites determined by the Government to be potentially suitable for the deployment of new nuclear power stations in England and Wales before the end of 2025.

⁸ The Severn Estuary and the River Wye are both within the vicinity of Hinkley and Oldbury. Bradwell and Sizewell are located within the locality of the Outer Thames Estuary.

⁹ *Appraisal of Sustainability for the Revised Draft Nuclear National Policy Statement: Main Report*, Chapter 6: Radioactive waste, spent fuel and hazardous waste, <http://www.energyngpsconsultation.decc.gov.uk>

- There is the potential for positive effects on local employment opportunities. A development consent application should therefore include an assessment of the considerations given to socio-economic as well as environmental issues (see Section 4.2 of EN-1 for further details regarding the EIA and Environmental Statement). This might be especially relevant where there is the potential for cumulative positive effects for economic development at the regional level, for example in the south-west and north-west of England¹⁰.
- Significant trans-boundary effects arising from the construction of new nuclear power stations are not considered likely. Due to the robustness of the regulatory regime there is a very low probability of an unintended release of radiation, and routine radioactive discharges will be within legally authorised limits.

1.7 Interaction with the Habitats Directive

- 1.7.1 The Nuclear NPS is a “plan” for the purposes of the Habitats Directive¹¹. Its objective is to facilitate the delivery of new nuclear power electricity generation on some or all of the sites listed in this NPS by the end of 2025.
- 1.7.2 The Government has assessed this NPS (by conducting an HRA) and has concluded that it cannot rule out the potential for adverse effects on the integrity of European Sites adjacent to or at a distance¹² from each site listed in this NPS. In line with the requirements set out in Article 6(4) of the Habitats Directive the Government considered potential alternatives to the plan and nominated sites, and concluded that there were no alternatives that would better respect the integrity of European Sites and deliver the objectives of this plan. Accordingly the Government has presented a case for Imperative Reasons of Overriding Public Interest (IROPI) which sets out the rationale for why the plan should proceed given the uncertain conclusions identified by the Nuclear HRA. This can be found at Annex A of this NPS.
- 1.7.3 The conclusions of the Nuclear HRA, including the examination of alternative plans and the IROPI case, are set out in the Main HRA Report¹³.
- 1.7.4 When applications for development consent are submitted to the IPC for consideration in accordance with this NPS the applications constitute “projects” for the purposes of the Habitats Directive. The IPC must assess them accordingly, taking into account the findings of the plan level HRA process. Individual consent

¹⁰ The listed sites that are located in the south-west of England are Hinkley and Oldbury. Heysham and Sellafield could cause cumulative effects in the north-west of England.

¹¹ The European Directive (92/43/EEC) on the Conservation of Natural Habitats and of Wild Flora and Fauna (the Habitats Directive)

¹² The HRA considered the likely effects of the plan on all those European Sites that were within 20 km of the sites listed in the NPS. Further, in consultation with the Statutory Consultees, the HRA also considered European Sites at a greater distance from the nominated sites where potential impact pathways (e.g. hydrological connectivity) were known to exist.

¹³ *Habitats Regulations Assessment of the Revised Draft Nuclear National Policy Statement: Main Report*, <http://www.energy-nps-consultation.decc.gov.uk>

applications will be required to be supported by more detailed project level HRA, including Appropriate Assessment where necessary¹⁴. If adverse effects on the integrity of European Sites cannot be ruled out in relation to the project at that stage, then the IPC will need to make an assessment in line with the requirements of Article 6(4) of the Habitats Directive. As set out in Annex A, the finding of IROPI for this NPS does not automatically transfer to individual projects.

- 1.7.5 Further information on the requirement for HRA and the consideration of alternatives is set out at Sections 4.3 and 4.4 of EN-1 and Sections 2.3 to 2.5 and Annex A of this NPS.

1.8 Effect of, and infrastructure covered by, this NPS

- 1.8.1 This NPS has effect in relation to nuclear power generation with a capacity of more than 50 megawatts (MW) on a site listed within this NPS (see Section 2.3 and Part 4 of this NPS).

¹⁴ Appropriate Assessment is an assessment required under the Habitats Directive when a plan or project is likely to have a significant effect, either individually or in combination with other plans or projects, on a European Site.

Part 2 Assessment Principles

2.1 Introduction

- 2.1.1 Part 4 of EN-1 sets out the general principles that should be applied in the assessment of development consent applications across the range of energy technologies. This Part contains additional policy for when the IPC is considering an application for nuclear development, for example addressing the Government's policy on the need for early deployment of new nuclear power stations, the siting of nuclear power stations, the consideration of alternatives and the management and disposal of radioactive waste.
- 2.1.2 This Part also explains the relationship between the Regulatory Justification process and the planning regime; and sets out the role of the regulators in the IPC's consideration of applications for new nuclear power stations and the interaction that will be required between the IPC and relevant regulators.

2.2 Policy on the need for new nuclear power stations and the benefits of early deployment

- 2.2.1 The Government has established the need for all types of energy NSIPs, including new nuclear power stations (see Part 3 of EN-1). The IPC should therefore assess applications for new nuclear power stations on the basis that the need for such infrastructure has been demonstrated - see Section 3.1 of EN-1. Section 3.5 of EN-1 provides detail regarding the specific need for new nuclear power stations.
- 2.2.2 In order to be considered potentially suitable and therefore be listed in this NPS, sites had to be shown to be capable of deployment by the end of 2025¹⁵ (see Section 2.3 below). However, given the urgent need to decarbonise our electricity supply and enhance the UK's energy security and diversity of supply, the Government believes that new nuclear power stations need to be developed significantly earlier than the end of 2025.
- 2.2.3 Failure to develop new nuclear power stations significantly earlier than the end of 2025 would increase the risk of the UK being locked into a higher carbon energy mix¹⁶ for a longer period of time than is consistent with the Government's ambitions to decarbonise electricity supply¹⁷. As a result, it would become more difficult and expensive to meet the Government's targets for significant and urgent

¹⁵ For the purposes of this NPS "deployment" means commencing operation of one or more new nuclear power stations.

¹⁶ Analysis suggests that in scenarios of central fossil fuel prices and high fossil fuel prices, if nuclear power was excluded from the energy mix it would be replaced by new gas fired generation. For more details see Chapter 3 of the Nuclear AoS Main Report: <https://www.energy-nps-consultation.decc.gov.uk/>

¹⁷ See EN-1 for details of the Government's climate change strategy.

decarbonisation of the economy and enhanced security of supply (see Part 3 of EN-1).

- 2.2.4 When considering an application for a new nuclear power station that is capable of deployment by a date significantly earlier than the end of 2025, the IPC should give substantial weight to the benefits (including the benefit of displacing carbon dioxide emissions) that would result from the application receiving development consent.

2.3 Policy on the siting of new nuclear power stations

- 2.3.1 The Strategic Siting Assessment (SSA) was designed to identify sites in England and Wales that are potentially suitable¹⁸ for the deployment of new nuclear power stations by the end of 2025¹⁹.
- 2.3.2 Having considered all of the sites nominated as well as those identified by the Alternative Sites Study (see Section 2.4 below) the Government believes that only those sites listed in Part 4 of this NPS are potentially suitable for the deployment of new nuclear power stations in England and Wales by the end of 2025. This NPS has therefore been designated for the purposes of the Planning Act 2008 solely in relation to applications for development consent at those sites listed in Part 4 (see Section 1.8 of this NPS).
- 2.3.3 Should the IPC receive and accept a development consent application²⁰ for a new nuclear power station on a site that is not listed in this NPS the IPC will examine the proposal (see paragraph 2.3.4 below) and make a recommendation to the Secretary of State²¹. The Secretary of State will be the decision maker for any such application. Should this situation arise, the Secretary of State would consider whether there was a need to review the SSA criteria and/or conduct a further SSA.
- 2.3.4 In the event that the IPC is required to make a recommendation to the Secretary of State pursuant to paragraph 2.3.3 above, the IPC should consider the application in accordance with EN-1, this NPS and the Planning Act 2008. In particular the IPC should consider whether the non-listed site meets the SSA criteria and is capable of

¹⁸ The SSA could only conclude that sites are “potentially” suitable as it is a strategic level assessment based on the information available to the Government at the time. The IPC will assess the details of each application for new nuclear development in accordance with EN-1, this NPS and the Planning Act in order to determine whether or not to grant development consent at any of the listed sites. To be considered potentially suitable the sites had to meet the SSA criteria (see footnote 19 and Part 4 of this NPS) and be shown to be capable of deployment before the end of 2025. The SSA also included an assessment of the ability of the site to store spent fuel and intermediate level waste (see Section 2.11 and Annex B of this NPS).

¹⁹ *Towards a National Nuclear Policy Statement: Government response to consultations on the SSA and siting criteria for new nuclear power stations in the UK; and to the study on the potential environmental and sustainability effects of applying the criteria*, January 2009:
<http://webarchive.nationalarchives.gov.uk/http://www.berr.gov.uk/files/file49865.pdf>

²⁰ Section 55 of the Planning Act 2008 sets out the circumstances under which the IPC may accept an application for development consent.

²¹ Section 74 of the Planning Act 2008 states that where a NPS does not have effect the IPC has the functions of examining the application and making a report to the Secretary of State on the application setting out: (i) the IPC’s findings and conclusions in respect of the application; and (ii) the recommendation as to the decision to be made on the application. The examination is to be conducted in accordance with the provisions of Chapter 4 of Part 6 of the Planning Act 2008.

deployment before the end of 2025. In this situation, references in this NPS to the IPC granting consent or taking a decision should be deemed to refer to the decision to be reached by the IPC as to the appropriate recommendation to be made to the Secretary of State.

2.4 The Government's assessment of alternatives and the need for the listed sites to be included in this NPS

- 2.4.1 The SSA assessed sites through a nomination-driven process. The Government believes that before deciding to put forward a site as part of the SSA process, nominators would have considered the strategic merits of the site in comparison to others. It was in the nominators' best interests to thoroughly consider alternative sites.
- 2.4.2 In order to aid its consideration of alternative sites the Government commissioned a strategic level screening exercise to identify whether there are any other sites in England and Wales that are potentially suitable for the deployment of new nuclear power stations before the end of 2025 which had not been nominated (the Alternative Sites Study).
- 2.4.3 As a result of the SSA and the Alternative Sites Study, the Government does not believe that there are any alternatives to the listed sites that are potentially suitable for the deployment of new nuclear power stations in England and Wales before the end of 2025 (see paragraphs 2.3.1 and 2.3.2 above).
- 2.4.4 Given the very limited number of sites identified as potentially suitable for the deployment of new nuclear power stations before the end of 2025, the Government considers that all eight are required to be listed in this NPS. This is to allow sufficient flexibility to meet the urgent need for new nuclear power stations (see Part 3 of EN-1) whilst enabling the IPC to refuse consent should it consider it appropriate to do so (see Annex A of this NPS for further information).
- 2.4.5 In addition to the consideration of alternative sites, an assessment was undertaken as part of the Nuclear AoS to consider whether or not the objectives of this NPS could be delivered using alternative options (see Section 1.6 of this NPS for further information regarding the AoS and Section 1.6 of EN-1 for information regarding the consideration of alternatives in the AoS of EN-1). The assessment included consideration of not having this NPS, or having an NPS which prohibited new nuclear power stations, and alternative ways of developing this NPS. It is the Government's view that none of the alternative options looked at can be relied upon to deliver the objectives of this NPS by the end of 2025. Further details are set out in Chapters 3 and 4 of the Nuclear AoS Main Report²².

²²

Appraisal of Sustainability for the Revised Draft Nuclear National Policy Statement: Main Report, <http://www.energy-nps-consultation.decc.gov.uk>

2.5 The IPC's assessment of alternatives

- 2.5.1 Where the IPC is required to consider alternative sites or proposals to an application for development consent (whether because of a legal requirement or because of a policy requirement detailed in EN-1 or this NPS), it should act in accordance with Section 4.4 of EN-1 as well as the additional policy set out in this Section 2.5.
- 2.5.2 In view of the urgent need for new nuclear power stations, the IPC should be guided by whether there is a realistic prospect of the proposed alternative being able to generate a comparable amount of low carbon electricity²³ on a comparable timescale.
- 2.5.3 The IPC should consider whether the proposed alternative site would meet the SSA criteria (see Section 2.3, Part 4 and Annex C of this NPS) and be capable of deployment before the end of 2025. If not, the Government would not expect the site to be relevant to the IPC's decision (see paragraph 4.4.3 of EN-1).
- 2.5.4 The IPC should have regard to the conclusions of the Government's assessment of alternatives, namely that:
- the Government does not believe that there are any alternative sites that meet the requirements of this NPS (see paragraph 2.4.3 above); and
 - the Government considers that all of the sites listed in this NPS are required to be listed so that they are each available as a potential opportunity for nuclear development subject to the IPC's consideration of the detailed proposals (see paragraph 2.4.4 above).
- 2.5.5 Subject to any contrary legal requirements, it should therefore be reasonable for the IPC to judge an application on a listed site on its own merits and to conclude that a comparison with any other listed site is not important and/or relevant to its decision.

2.6 The Regulatory Justification process and the planning regime

- 2.6.1 The Basic Safety Standards Directive²⁴ requires European Member States to ensure that all new classes or types of practice resulting in exposure to ionising radiation are "justified" (by their economic, social or other benefits in relation to the health detriment they may cause) in advance of being first adopted or first approved.
- 2.6.2 This process has been implemented in UK law by the Justification of Practices Involving Ionising Radiation Regulations 2004 (the Justification Regulations) and is known as Regulatory Justification. In relation to nuclear power in the UK, the Justifying Authority for the implementation of the Regulatory Justification aspects of the Basic Safety Standards Directive is the Secretary of State for Energy and Climate Change.

²³ See Section 3.5 of EN-1 which sets out why nuclear power stations are considered to be low carbon.

²⁴ European Council Directive 96/29/Euratom of 13 May 1996

- 2.6.3 In October 2010 the Secretary of State published his decisions²⁵ that two nuclear reactor designs, Westinghouse's AP1000 and Areva's EPR, are justified²⁶.
- 2.6.4 A decision regarding the grant of development consent should not be delayed in the event that a Regulatory Justification decision is subject to legal challenge. If there are concerns about a challenge to, or the validity of, a Regulatory Justification decision, the IPC should consider whether conditions should be attached to the Development Consent Order to the effect that the order is conditional on the existence of a valid Regulatory Justification decision.

2.7 Relationship between the regulatory framework for nuclear power stations and the planning regime

- 2.7.1 As with other major energy infrastructure, the regulators play an important role in ensuring the safety, security and protection of people and the environment in relation to the design, construction, operation and decommissioning of nuclear power stations and the transport of nuclear material.
- 2.7.2 This Section should be read in conjunction with Sections 4.10 to 4.12 and 4.15 of EN-1.
- 2.7.3 The regulators for the nuclear industry are the Environment Agency (EA), the Nuclear Installations Inspectorate (NII), the Office for Civil Nuclear Security (OCNS)²⁷ and the Department for Transport (DfT)²⁸ (collectively referred to in this NPS as the Nuclear Regulators).
- 2.7.4 When considering a development consent application the IPC should act on the basis that:
- the relevant licensing and permitting regimes will be properly applied and enforced;
 - it should not consider matters that are within the remit of the Nuclear Regulators (see paragraph 2.7.5 below); and
 - it should not delay a decision as to whether to grant consent until completion of the licensing or permitting process (see paragraphs 2.7.6 and 2.7.7 below).
- 2.7.5 Certain matters are for consideration of the Nuclear Regulators and the IPC should not consider these matters itself. This would include the Generic Design

²⁵ http://www.decc.gov.uk/en/content/cms/what_we_do/uk_supply/energy_mix/nuclear/new/reg_just/reg_just.aspx

²⁶ The decisions will be taken by the making of Regulations by way of statutory instruments, which were laid in draft in both Houses of Parliament in October 2010.

²⁷ NII and OCNS are both part of the Nuclear Directorate within the Health and Safety Executive (HSE).

²⁸ The safety of nuclear transports (and security of less sensitive nuclear material) is regulated by the Department for Transport.

Assessment (GDA)²⁹ and the site licensing and environmental permitting processes (including in respect of the management/disposal of radioactive waste, the protection of human health, the permitting of cooling water discharges, etc). The Nuclear Regulators are also responsible for those matters listed in paragraph 3.6.3 of this NPS.

- 2.7.6 The IPC can consider and determine an application for development consent where the relevant regulatory licensing, permitting and authorisations process is still in progress. Consent should not be refused unless the IPC has good reason to believe that any necessary licence, permit or authorisation will not subsequently be granted. Applicants should have involved the Nuclear Regulators early enough during the pre-application stage so that they have had the opportunity to incorporate the relevant regulators' requirements in proposals where appropriate.
- 2.7.7 If the regulatory approvals process is incomplete the IPC should seek advice from the relevant Nuclear Regulators on whether the necessary licences, authorisations or permits are likely to be issued, any regulatory conditions that are likely to be attached and the anticipated timing of these processes. In addition the IPC should liaise with the Nuclear Regulators over any conditions it is considering attaching to a development consent in order to ensure that where possible the conditions are consistent with the regulatory approvals process.

2.8 Consideration of good design

- 2.8.1 Section 4.5 of EN-1 sets out the principles of good design that should be applied to all energy NSIPs. In applying these principles to applications for the development of nuclear power stations, the need to ensure the safety and security of the power station, and the need to control the impacts of its operations, must be given substantial weight.
- 2.8.2 For some structures where the functional requirements may change over the lifetime of the structure, such as sea defences, they should be capable of being adapted if the need were to arise in future without major re-design or significant physical disruption.
- 2.8.3 The IPC should consider how good design can act to mitigate the impacts of new nuclear power stations, such as landscape and visual impacts (see Section 3.11 of this NPS).
- 2.8.4 The GDA, site licensing and environmental permitting processes will consider certain aspects of design, which the IPC should not replicate. The IPC should liaise closely with the Nuclear Regulators in this respect (see Section 2.7 above).

²⁹ The purpose of the GDA is to provide a robust, transparent and independent review of the 'licensibility' of nuclear power station designs. This begins prior to the assessment of other site licensing and environmental permitting issues and before large capital commitments need to be made, thus reducing project risks and uncertainty associated with the regulatory processes. The GDA process for the EPR and AP-1000 reactors commenced in 2007 and the regulators have stated that they expect to publish their conclusions in Summer 2011: <http://www.hse.gov.uk/newreactors>

2.9 Consideration of combined heat and power

- 2.9.1 The Government's general policy in respect of combined heat and power (CHP) is set out in Section 4.6 of EN-1.
- 2.9.2 Consistent with the SSA demographic criterion applied to the siting of new nuclear power stations, sites are likely to be located away from major population centres, which may limit the viability of CHP schemes.
- 2.9.3 In keeping with applications for other thermal generating stations, development consent applications for nuclear power stations should demonstrate that the applicant has fully considered the opportunities for CHP. However, the IPC should note that the presumption is that CHP opportunities will be limited for new nuclear power stations.

2.10 Climate change adaptation

- 2.10.1 Part 2 of EN-1 outlines the policy context for the development of energy NSIPs, including policies for mitigating climate change. Section 4.8 of EN-1 sets out generic considerations that applicants and the IPC should take into account to help ensure that new energy infrastructure is resilient to climate change. Additional information that is specific to applications covered by this NPS is set out below.
- 2.10.2 As the sites listed in this NPS are either coastal or estuarine, applicants should provide the IPC with information as to how the development incorporates adaptation measures to take account of the effects of climate change, including:
- coastal erosion and increased likelihood of storm surge and rising sea levels;
 - effects of higher temperatures; and
 - increased risk of drought, which could lead to a lack of available process water.
- 2.10.3 Climate change adaptation should form part of the relevant impact assessment in the Environmental Statement accompanying an application (see Section 4.2 of EN-1).
- 2.10.4 The GDA process looks at the capability of the power station's generic design features to take into account the effects of climate change. The subsequent site licensing and environmental permitting processes ensure that new nuclear power stations will be located, constructed, operated and decommissioned with the long-term impacts of climate change in mind.
- 2.10.5 The relevant Nuclear Regulators will assess the evidence provided by applicants that external hazards to the proposed nuclear power station have been considered.

This will include consideration of the reasonably foreseeable effects of climate change over the lifetime of the power station³⁰.

- 2.10.6 The IPC should have regard to advice from the Nuclear Regulators, in particular the NII and the EA, in relation to climate change impacts and their views on the adaptation measures proposed. Where issues of climate change adaptation fall within the role of the Nuclear Regulators (whether as part of GDA, site licensing or environmental permitting) the IPC should act in accordance with Section 2.7 of this NPS.

2.11 Radioactive waste management

- 2.11.1 Annex B of this NPS sets out how the Government has satisfied itself that effective arrangements will exist for the management and disposal of the wastes produced by new nuclear power stations.
- 2.11.2 As set out in Annex B, new nuclear power stations will produce a number of different types of waste that will need to be managed in different ways.
- On the presumption of a once through fuel cycle (and therefore assuming no reprocessing of spent fuel), “higher activity waste” will consist of spent fuel and intermediate level waste. Geological disposal is the way in which higher activity waste will be managed in the long term. This will be preceded by safe and secure interim storage until a geological disposal facility can receive waste.
 - New nuclear power stations will also produce other waste streams: low level waste, liquid and gaseous discharges, and non-radioactive wastes. The Government considers that arrangements already exist for the effective management and disposal of wastes in these categories, as demonstrated by the UK’s experience of dealing with such wastes from existing nuclear power stations.
- 2.11.3 In reaching its view on the management and disposal of waste from new nuclear power stations the Government has in particular satisfied itself that:
- geological disposal of higher activity radioactive waste, including waste from new nuclear power stations, is technically achievable;
 - a suitable site can be identified for the geological disposal of higher activity radioactive waste; and
 - safe, secure and environmentally acceptable interim storage arrangements will be available until a geological disposal facility can accept the waste.

³⁰ *Safety Assessment Principles for Nuclear Facilities*, p38 paragraph 226, <http://www.hse.gov.uk/nuclear/saps/saps2006.pdf>

- 2.11.4 The question of whether effective arrangements will exist to manage and dispose of the waste that will be produced from new nuclear power stations has therefore been addressed by the Government and the IPC should not consider this further.
- 2.11.5 The UK has robust legislative and regulatory systems in place for the management (including interim storage, disposal and transport) of all forms of radioactive waste that will be produced by new nuclear power stations. The IPC should act on the basis that the relevant licensing and permitting regimes will be properly applied and enforced (see Section 2.7 of this NPS).
- 2.11.6 If an application for development consent includes proposals for waste management facilities that either form part of the development of the NSIP or constitute “associated development” for the purposes of the Planning Act 2008, the IPC should consider the application in accordance with the policy set out in EN-1, this NPS and the provisions of the Planning Act 2008.

Part 3 Impacts and general siting considerations

3.1 Introduction

- 3.1.1 Part 5 of EN-1 sets out policy for the IPC when assessing potential impacts which are common across the range of energy NSIPs (generic impacts). It also contains (at Section 5.1) information to inform the interpretation of the impact Sections of all of the energy NPSs.
- 3.1.2 This Part 3 provides additional policy for the IPC when assessing the impacts and siting considerations of new nuclear power stations. It should be read in conjunction with EN-1 and also the relevant site assessment set out in Annex C of this NPS, which provides further information in respect of site specific considerations.
- 3.1.3 While the AoS and HRA reports for each site listed in this NPS contain an assessment of the potential impacts of construction, operation and decommissioning of nuclear power stations at these sites, detailed assessment of the potential impacts of each stage of development will need to take place at the development consent stage (see Section 4.2 of EN-1).
- 3.1.4 The impacts and siting considerations identified in Part 5 of EN-1 and Part 3 and Annex C of this NPS are not intended to be exhaustive. Applicants are required to assess all likely significant effects of their proposals (see Section 4.2 of EN-1) and the IPC should consider any impacts which it determines are relevant and important to its decision.

3.2 Ownership of sites

- 3.2.1 The sites listed in this NPS were nominated into the SSA by third parties. Nominators did not have to own the land that they nominated as the ownership of land is a commercial concern that is subject to change.
- 3.2.2 However, applicants should submit to the IPC up to date information about the ownership and land use of the site, and, where relevant, details of consultation with the owners of the land. Where the land is subject to an alternative use at the time of the application, the IPC should consider that use in conjunction with Section 5.10 (Land Use) of EN-1.

3.3 Listed site boundaries and location of facilities

- 3.3.1 The boundaries of each listed site are shown on a series of maps (at 1:10,000 scale) at Annex C of this NPS.
- 3.3.2 To reduce the likelihood of further land being needed, and to increase the usability of their site, nominators were encouraged to ensure that the area nominated

included within it all likely site plans and all reasonable variations to those plans. The boundary of the nominated area may, however, vary from the site boundary that is proposed for development consent. It was not considered reasonable to expect nominators to include detailed lay-outs or any additional land needed for construction or decommissioning at the time of requesting nominations. In addition, the Government recognises that flexibility is required to accommodate detailed local level considerations.

- 3.3.3 The IPC should ensure that the key operational aspects of the power station, and in particular the infrastructure that has the potential to directly cause a radiological hazard such as the reactor building (including the associated turbine hall), spent fuel and intermediate level waste stores, will be located within the boundary of the site that was assessed by the SSA.
- 3.3.4 However, applications for development consent may include land additional to the boundary of the listed site for other aspects of the power station, such as car parks, access roads or marine landing facilities, or for the construction and/or decommissioning of the nuclear power station.

3.4 Impacts of multiple reactors

- 3.4.1 For the majority of the SSA criteria³¹ the number of reactors that may be developed at a listed site would not affect the outcome of the assessment. However, for criteria where it was more relevant³², the assessment was carried out on the basis of one reactor. The Nuclear AoS also used a base case of one reactor, apart from at Hinkley Point and Sizewell where it assessed twin reactors as a result of nominator proposals.
- 3.4.2 This does not mean that more than one reactor could not be built at any site, but the impacts of all of the reactors proposed for a site would need to be considered by the IPC (and/or the relevant Nuclear Regulators – see Section 2.7 of this NPS) should such an application come forward³³.

³¹ See Part 4 of this NPS.

³² Size of site (D9) and cooling (D10) criteria assessed the impact of one reactor.

³³ The Government would not expect to re-assess a site against the SSA criteria or re-run the relevant AoS and HRA assessments should proposals for more than one reactor be submitted.

3.5 Nuclear Impacts

- 3.5.1 Certain “Nuclear Impacts” are set out in this Part to provide policy that is additional to the generic impacts set out in EN-1 for when the IPC is considering an application for a new nuclear power station. In certain cases, the text in this Part amends the application of policy in EN-1 for this NPS, for example see Section 3.7 (flood risk).
- 3.5.2 In considering Nuclear Impacts the IPC should also refer to the relevant site AoS and strategic HRA reports, the relevant site assessment set out in Annex C of this NPS, as well as the policy set out in EN-1 (in particular Parts 4 and 5).
- 3.5.3 The Nuclear Impacts are:
- flood risk (including tsunamis and storm surge);
 - water quality and resources;
 - coastal change;
 - biodiversity and geological conservation;
 - landscape and visual impacts;
 - socio-economic; and
 - human health and well being.
- 3.5.4 When considering the Nuclear Impacts the IPC should liaise closely with the Nuclear Regulators in accordance with Section 2.7 of this NPS.

3.6 Flags for Local Consideration

- 3.6.1 Flags for Local Consideration are siting criteria that were identified through the SSA consultation in 2008, but which it was considered (usually due to the need for detailed site-specific investigations and data) would be more appropriately assessed at the project level³⁴.
- 3.6.2 The Flags for Local Consideration to be considered by the IPC (in accordance with this Part 3) are:
- proximity to civil aircraft movements;
 - access to transmission networks;
 - impact on significant infrastructure and resources; and

³⁴ *Towards a Nuclear National Policy Statement: Consultation on the Strategic Siting Assessment Process and Siting Criteria for New Nuclear Power Stations in the UK*, July 2008, p15:
<http://webarchive.nationalarchives.gov.uk/+http://www.berr.gov.uk/files/file47136.pdf>

- size of site to accommodate construction and decommissioning.

3.6.3 Other Flags for Local Consideration (as set out below) will be considered at the time of the development consent application by the NII (see Section 2.7 of this NPS):

- demographics;
- seismic risk (vibratory ground motion);
- capable faulting;
- non-seismic ground conditions;
- emergency planning (the NII will work together with the local authority or other Emergency Planning Authority);
- meteorological conditions; and
- proximity to mining, drilling and other underground operations.

3.6.4 As these Flags for Local Consideration are for the NII rather than the IPC to consider, detailed policy is not set out as planning policy in this NPS³⁵.

³⁵

Details regarding these Flags for Local Consideration are set out in the consultation document referenced in footnote 34.

3.7 Nuclear Impact: flood risk

Introduction

- 3.7.1 Generic flood risk impacts of new energy NSIPs are covered in Section 5.7 of EN-1. In addition, policy specific to new nuclear power stations is set out below. It should be noted that the policy set out in Section 5.7 of EN-1 is relevant to applications for new nuclear power stations with the exception of the application of the Sequential Test and Exception Test (see below).
- 3.7.2 Nuclear power stations need access to cooling water. As the sites listed in this NPS indicate, this means that nuclear power stations in the UK are most likely to be developed on coastal or estuarine sites. Without appropriate mitigation measures the potential effects of climate change make these sites at greater risk of flooding than if they were located inland.
- 3.7.3 The significance of the effects will depend on the detailed design and site characteristics of the proposed new nuclear power station. In developing this NPS the sustainability of each site in relation to flood risk has been appraised. The AoS reports for individual sites set out the findings, which are also summarised in the Nuclear AoS Main Report. On the basis of the SSA and the Nuclear AoS, it is considered that the listed sites have the potential to be protected from the risks of flooding over their operational lifetime³⁶.
- 3.7.4 The construction of new nuclear power stations could also result in positive effects. For example, measures taken to mitigate the risk of flooding at a new nuclear power station may also protect existing developments in the area.
- 3.7.5 The Nuclear AoS identified that there are likely to be positive and negative cumulative effects in the south-west and north-west of England, where nominated sites are relatively close to each other³⁷.

Applicant's assessment

- 3.7.6 In addition to meeting the requirements of Section 5.7 of EN-1, applicants should identify the potential effects of the credible maximum scenario in the most recent projections of marine and coastal flooding. Applicants must then be able to demonstrate that they could achieve further measures for flood management at the site in the future if future climate change predictions show they are necessary.
- 3.7.7 Where possible, safety and operational critical installations should be sited in the areas of the site at least risk of flooding.

³⁶ See Table in Annex C: "The SSA criteria and how they were assessed".

³⁷ See footnote 10 which identifies the listed sites located in the south-west and north-west of England.

IPC decision making

The Sequential Test

- 3.7.8 The Sequential Test (see Section 5.7 of EN-1) has been undertaken by the Government as part of the SSA. As a result, the IPC should not conduct the Sequential Test for any of the listed sites - this requirement of EN-1 does not apply to applications for development consent for new nuclear development on any of the sites listed in this NPS. The Government has taken a sequential approach to the SSA by assessing all sites at a strategic level, including in relation to flooding, and by using the results of the Alternative Sites Assessment (see Section 2.4 of this NPS). The Government has considered whether or not the objectives of this NPS can be met through reasonably available alternative sites in lower flood risk zones.
- 3.7.9 In conducting the Sequential Test the Government concluded that sites within this NPS in lower flood risk zones were not reasonably available alternatives to those in higher flood risk zones. This is because, as set out in paragraphs 2.4.3 and 2.4.4 of this NPS, the Government determined that the only potentially suitable sites for the deployment of new nuclear power stations in England and Wales before the end of 2025 are those listed in this NPS; and that all of the sites listed in this NPS are required to be listed to allow sufficient flexibility to meet the urgent need for new nuclear power stations whilst enabling the IPC to refuse consent should it consider it appropriate to do so.
- 3.7.10 Applicants will still need to submit a flood risk assessment in accordance with Section 5.7 of EN-1. The IPC will need to be satisfied that a sequential approach has been applied at the site level to ensure that, where possible, critical infrastructure is located in the lowest flood risk areas within the site.

The Exception Test

- 3.7.11 Subject to paragraph 3.7.12 below, the IPC is still required to consider the Exception Test in accordance with Section 5.7 of EN-1 where the site is located in Flood Zone 3 in England (or Zone C in Wales).
- 3.7.12 As noted at paragraph 3.7.9 above, the Government has determined that all of the listed sites are required to be listed in this NPS as being potentially suitable for new nuclear development in spite of some being located in higher flood risk zones because of the lack of alternative sites and the need for new nuclear development. As a result, the second limb of the Exception Test (as set out in paragraph 5.7.17(b) of EN-1³⁸) does not apply to new nuclear development.

Mitigation

- 3.7.13 It is the Government's view, based on the Nuclear AoS and the SSA, that all sites listed in this NPS have the potential to be adequately protected from flood risk

³⁸ The second limb of the Exception Test as set out in EN-1 is that the project should be on developable, previously developed land or, if it is not on previously developed land, that there are no reasonable alternative sites on developable, previously developed land, subject to any exceptions set out in the technology-specific NPSs.

(including the potential effects of climate change, taking into account the UK Climate Impacts Programme 2009³⁹).

- 3.7.14 Based on the advice of the relevant Nuclear Regulators, the IPC should be satisfied that the applicant is able to demonstrate suitable flood risk mitigation measures. These mitigation measures should take account of the potential effects of the credible maximum scenario in the most recent marine and coastal flood projections. Applicants should demonstrate that future adaptation/flood mitigation would be achievable at the site, after any power station is built, to allow for any future credible predictions that might arise during the life of the station and the interim spent fuel stores.
- 3.7.15 Applicants should set out measures to mitigate the risk of flooding on or from individual sites that may result from the development, including any associated infrastructure such as possible marine landing jetties/docks. For further information on mitigation measures see Section 5.7 of EN-1.

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<http://ukclimateprojections.defra.gov.uk/>

3.8 Nuclear Impact: water quality and resources

Introduction

- 3.8.1 Generic water quality and resource impacts of new energy NSIPs are covered in Section 5.15 of EN-1. This policy applies to applications for new nuclear development and, in addition, policy specific to new nuclear power stations is set out below.
- 3.8.2 The Nuclear AoS identified potential adverse effects on water resources including effects on coastal processes, hydrodynamics and sediment transport⁴⁰. Adverse effects on water resources could occur through increased demand, particularly during construction. The Nuclear AoS also identified indirect effects on nationally and internationally designated habitats, including from the thermal impact of cooling water discharges. This Section should therefore be read in conjunction with Section 3.10 of this NPS and Section 5.3 of EN-1, which set out policy in respect of biodiversity and geological conservation. The significance of these effects depends on the location of the site, proximity to water bodies and the existing water surplus/deficit status within the region.

Applicant's assessment

- 3.8.3 In addition to fulfilling the requirements of Section 5.15 of EN-1, the applicant's assessment should also set out the characteristics of cooling water for new nuclear power stations and the specific implications of the proposal on marine and estuarine environments.

IPC decision making

- 3.8.4 The IPC should consider the cumulative effects of a development consent application for the construction of a new nuclear power station at a specific site with other major infrastructure proposals in accordance with the requirements of EN-1 (in particular Section 4.2 of EN-1).
- 3.8.5 The IPC should liaise closely with the EA who will consider issues of water quality (including any water abstraction and discharge) as part of the environmental permitting process (see Section 2.7 of this NPS).

Mitigation

- 3.8.6 In the design of any direct cooling system the locations of the intake and outfall should be sited to avoid or minimise adverse impacts on legitimate commercial and recreational uses of the receiving waters, including their ecology. There should also be specific measures to minimise impact to fish and aquatic biota by entrainment or by excessive heat or biocidal chemicals from discharges to receiving waters.

⁴⁰ *Appraisal of Sustainability for the Revised Draft Nuclear National Policy Statement: Main Report.*
<http://www.energy-npsconsultation.decc.gov.uk>

- 3.8.7 Discharges into water sources will be controlled in accordance with permits issued by the EA. Applicants will be expected to demonstrate Best Available Techniques⁴¹ to minimise the impacts of cooling water discharges.
- 3.8.8 The contamination of soils and water resources can be mitigated through the EIA process and managed through the possible implementation of Environmental Management Plans.

⁴¹ Best Available Techniques (BAT) are required to be considered (under European law) in order to avoid or reduce emissions resulting from certain installations and to reduce the impact on the environment as a whole. Use of BAT is required by the EA when licensing the major potentially polluting industries. BAT takes into account the balance between the costs and environmental benefits.

3.9 Nuclear Impact: coastal change

Introduction

- 3.9.1 Generic coastal change impacts of new energy NSIPs are covered in Section 5.5 of EN-1. This policy applies to applications for new nuclear development and, in addition, policy specific to new nuclear power stations is set out below.
- 3.9.2 The Nuclear AoS identified that the construction of new coastal and fluvial defences and possible marine landing jetties/docks necessary to support the nuclear power station could affect coastal processes, hydrodynamics and sediment transport processes at coastal and estuarine sites. These impacts could lead to coastal erosion or accretion. There could also be changes to offshore features such as submerged banks and ridges and marine ecology. On the Severn Estuary there is the potential for cumulative effects (with another listed site and/or with other major schemes in the area).

Applicant's assessment

- 3.9.3 In addition to the requirements of Section 5.5 of EN-1, an applicant's EIA/HRA for a site on the Severn Estuary should give consideration to the potential for cumulative effects on coastal change.
- 3.9.4 In light of the findings of the Nuclear AoS, applicants should assess the site's geology, soils and geomorphological processes in order to understand the ongoing natural ecological, coastal and geomorphic processes. This will include identifying impacts on coastal processes, intertidal deposition and soil development processes that maintain terrestrial/coastal and/or marine habitats.

IPC decision making

- 3.9.5 For Oldbury and Hinkley Point, other major schemes proposed in the Severn Estuary may result in cumulative effects.
- 3.9.6 The possible in-combination effects of such schemes will require more detailed assessment by the IPC as at the strategic level it is not possible to identify whether or not such schemes would have a detrimental impact on coastal change at the listed sites.

Mitigation

- 3.9.7 In applying the policy on mitigation set out in Section 5.5 of EN-1, and having taken account of the effects of climate change over the lifetime of the project (including any decommissioning period), the IPC should be satisfied that the application will include measures where necessary to mitigate the effects of and on coastal change.

3.10 Nuclear Impact: biodiversity and geological conservation

Introduction

- 3.10.1 Generic biodiversity and geological conservation impacts of new energy NSIPs are covered in Section 5.3 of EN-1. This policy applies to applications for new nuclear development and, in addition, policy specific to new nuclear power stations is set out below.
- 3.10.2 The Nuclear AoS has identified potential cumulative ecological effects at sites in the east, south-west and north-west of England⁴². It also identified some common implications for biodiversity resulting from:
- water discharge, abstraction and quality issues;
 - habitat and species loss and fragmentation/coastal squeeze;
 - disturbance events (noise, light and visual); and
 - air quality.

Applicant's assessment

- 3.10.3 In carrying out an assessment in accordance with Section 5.3 of EN-1, applicants should also consider the effects of the construction of a new nuclear power station on the groundwater regime and its effects on terrestrial/coastal habitats.
- 3.10.4 At the project level, baseline studies on nationally and internationally important habitats and species that may be affected as a result of the development should be undertaken by the applicant to inform the assessment of the cumulative ecological effects.

IPC decision making

- 3.10.5 See Section 5.3 of EN-1.

Mitigation

- 3.10.6 As well as the options for mitigation set out in EN-1, the Nuclear AoS and HRA have identified possible mitigation options. These include variations to building layout to avoid ecologically sensitive areas and on-site measures to protect habitats and species and to avoid or minimise pollution and the disturbance of wildlife.

⁴² See footnote 10 which identifies the listed sites located in the south-west and north-west of England. Sites in the east of England are Bradwell and Sizewell,

3.11 Nuclear Impact: landscape and visual impacts

Introduction

- 3.11.1 Generic landscape and visual impacts of new energy NSIPs are covered in Section 5.9 of EN-1. This policy applies to applications for new nuclear development and, in addition, policy specific to new nuclear power stations is set out below.
- 3.11.2 The Nuclear AoS identified that the potentially suitable sites share the following landscape issues: the sites are generally in less populated areas that may have value for visual amenity and as landscape resources; they are coastal/estuarine sites; and the scale of the facilities means that the scope for visual mitigation is quite limited. In addition, because of the timescales involved, there is some uncertainty over future land uses once sites are decommissioned.
- 3.11.3 There is the potential for long-term effects on visual amenity, especially at Sellafield because of the proximity to the Lake District National Park, and at Sizewell, given the Suffolk Coast and Heaths Area of Outstanding Natural Beauty.
- 3.11.4 Cooling towers may increase a nuclear power station's visual impact on the landscape. See Section 5.9 of EN-1 in this respect.

Applicant's assessment

- 3.11.5 See Section 5.9 of EN-1.

IPC decision making and mitigation

- 3.11.6 In assessing the landscape and visual effects resulting from the electricity transmission network associated with the proposal for a new nuclear power station, the IPC should act in accordance with Section 4.9 of EN-1 and EN-5 (in particular Section 2.8 of EN-5).
- 3.11.7 The IPC should not expect the visual impacts associated with a new nuclear power station to be eliminated with mitigation. Indeed, the scope for visual mitigation will be quite limited. Mitigation should, however, be designed to reduce the visual intrusion of the project as far as reasonably practicable.

3.12 Nuclear Impact: socio-economic

Introduction

- 3.12.1 Generic socio-economic impacts of energy NSIPs are covered in Section 5.12 of EN-1. This policy applies to applications for new nuclear development and, in addition, policy specific to new nuclear power stations is set out below.
- 3.12.2 The Nuclear AoS identified that there are likely to be positive effects of local economic significance, although these are less significant at the regional scale except where there are clusters of potentially suitable sites for new nuclear power stations, particularly in the south-west and north-west of England⁴³.

Applicant's assessment

- 3.12.3 Through the EIA, and in accordance with Section 5.12 of EN-1, the applicant should identify at local and regional levels any positive and negative socio-economic impacts associated with the construction, operation and decommissioning of the proposed new nuclear power station.
- 3.12.4 This assessment should demonstrate that the applicant has taken account of, amongst other things, potential pressures on local and regional resources, demographic change and economic benefits.

IPC decision making and mitigation

- 3.12.5 See Section 5.12 of EN-1.

⁴³ See footnote 10 which identifies the listed sites located in the south-west and north-west of England.

3.13 Nuclear Impact: human health and well-being

Introduction

- 3.13.1 Generic health impacts of energy NSIPs are covered in Section 4.13 of EN-1. This policy applies to applications for new nuclear development and, in addition, policy specific to new nuclear power stations is set out below.
- 3.13.2 The Nuclear AoS noted that the sites listed in the NPS are on coastal or estuarine locations in rural areas and that there is therefore the potential for impact on land that has recreational and amenity value. As a result, this Section should also be read in conjunction with Section 5.10 of EN-1 (Land Use including Open Space, Green Infrastructure & Green Belt).
- 3.13.3 The operation of new nuclear power stations is unlikely to be associated with significant noise, vibration or air quality impacts (although there may be local impacts from transport and associated activities during construction; and if cooling towers are required, particularly forced draught towers, the potential noise impact may be greater). With appropriate mitigation, the subsequent effect of these potential impacts on human health is unlikely to be significant.
- 3.13.4 Radiation from nuclear power stations requires careful management during and beyond the operational life of the power station. However, safety systems in place in the designs of new nuclear power stations and compliance with the UK's robust legislative and regulatory regime mean that the risk of radiological health detriment posed by nuclear power stations⁴⁴ (both during normal operation and as a result of an unplanned release) is very small^{45,46}.
- 3.13.5 In common with other major industrial processes, the construction, operation and decommissioning of new nuclear power stations could affect health care provision. For example, the facility could increase demand on health monitoring services.
- 3.13.6 The Nuclear AoS also identified that there could be positive effects for health and well being resulting from the positive socio-economic benefits of new nuclear power stations (see Section 3.12 above).

⁴⁴ This risk has been considered for all stages of the development – operation, decommissioning and the storage, transportation or disposal of radioactive waste.

⁴⁵ The annual *Radioactivity in Food and the Environment* (RIFE) report assesses radiation doses received by members of the public from all sources and show that these remain well below the statutory dose limit. RIFE reports are produced jointly by the Environment Agency, the Scottish Environmental Protection Agency, the Department of Environment Northern Ireland and the Food Standards Agency. See in particular Table S1 "Radiation doses due to discharges of radioactive waste in the United Kingdom, 2008" and Table S2 "Radiation doses due to all sources at major UK sites, 2008": <http://www.food.gov.uk/multimedia/pdfs/publication/rife2008.pdf>; <http://www.environment-agency.gov.uk/homeandleisure/110281.aspx>

⁴⁶ *Meeting the Energy Challenge: A White Paper on Nuclear Power*, January 2008, p80: http://www.decc.gov.uk/en/content/cms/what_we_do/uk_supply/energy_mix/nuclear/white_paper_08/white_paper_08.aspx

Applicant's assessment

- 3.13.7 The applicant should work with the local authority and the local primary care trust (in England) or the Health Board (in Wales) to identify any potentially significant health impacts and appropriate mitigation measures. Where such measures relate to better public information on the extent of risk in relation to radiological hazard, the applicant should consult the Health Protection Agency on the appropriate standards for radiological protection⁴⁷.

IPC decision making

- 3.13.8 The IPC should consider the positive effect of employment and other socio-economic impacts (see Section 3.12 above) on human health and well being.
- 3.13.9 The IPC should have regard to the Secretary of State's Regulatory Justification decision when considering impacts on human health and well being (see Section 2.6 of this NPS).
- 3.13.10 In accordance with Section 2.7 of this NPS, the IPC should act on the basis that the regulatory regime (including the consideration of demographics as part of the site licensing process) will be properly applied and enforced to protect human health.

Mitigation

- 3.13.11 The IPC should act on the basis that the risk of adverse effects resulting from exposure to radiation for workers, the public and the environment will be adequately mitigated because of the need to satisfy the requirements of the UK's strict legislative and regulatory regime as well as the NII's implementation of the Government's policy on demographics.

⁴⁷

In the event that primary care trusts, Health Boards and/or the Health Protection Agency no longer exist, this paragraph should be deemed to refer to their successor bodies as may be appropriate in the circumstances.

3.14 Flag for Local Consideration: proximity to civil aircraft movements

- 3.14.1 As part of the SSA, all nominated sites were assessed in relation to their proximity to civil and military aircraft movement and were found to be potentially suitable.
- 3.14.2 The IPC should consider this Flag for Local Consideration in accordance with the policy set out in Section 5.4 of EN-1. Given the specific security arrangements in relation to air movements around nuclear sites, and the potential impact that new nuclear power stations may have on existing aerodromes and aviation activities, the application should assess the proximity of aircraft movements to the proposed site. Where necessary the IPC should seek the advice of the NII to ensure that the proposed arrangements sufficiently safeguard the safety of the site.
- 3.14.3 In accordance with Statutory Instrument 2007 No 1929 (The Air Navigation (Restriction of Flying) (Nuclear Installations) Regulations 2007)⁴⁸ nuclear power stations in the UK are afforded some protection from aviation activity by the establishment of a Restricted Area at each station. Aviation activity within any Restricted Area is limited to that specifically permitted by the Regulations. Typically, such Restricted Areas have a radius of two nautical miles and extend vertically to 2,000 feet above the surface. The Regulations will be revised as necessary to take account of any new nuclear power stations.

3.15 Flag for Local Consideration: access to transmission networks

- 3.15.1 Issues surrounding electricity transmission were not considered in the SSA because not enough information was available to make an assessment at the strategic level.
- 3.15.2 When considering a development consent application pursuant to this NPS, the IPC should refer to Section 4.9 of EN-1 in respect of the grid connection.

3.16 Flag for Local Consideration: impact on significant infrastructure and resources

- 3.16.1 Significant infrastructure and resources includes:
- motorways, major highways (for example A roads)⁴⁹;
 - strategic rail network;
 - gas transmission network;
 - electricity transmission network;
 - airports;

⁴⁸ To be deemed to refer to the Regulations as amended or any successor regulations that may be brought into force following designation of this NPS.

⁴⁹ This also includes trunk roads and for example, the primary route network.

- ports; and
- Groundwater Source Protection Zones and Drinking Water Protected Areas⁵⁰.

3.16.2 Applications should demonstrate that the proposed development would not have an unacceptable adverse impact on significant infrastructure. The IPC should take into account any local authority impact report, advice from the relevant Nuclear Regulators and relevant policy in NPSs in assessing impacts on significant infrastructure and resources.

3.16.3 In particular, the Nuclear AoS identified that there may be adverse effects during the construction and decommissioning phases on regional transport networks that may already be under stress, particularly where there are clusters of potentially suitable sites for new nuclear power stations. In considering this issue the policy set out in Section 5.13 of EN-1 (Transport and Traffic impacts) applies.

3.17 Flag for Local Consideration: size of site to accommodate construction and decommissioning

3.17.1 Regardless of whether some activities associated with the proposed development may take place outside of the boundaries of the listed site (for example construction and decommissioning activities – see Section 3.3 of this NPS), the IPC should assess all impacts of the proposed development that it considers relevant and important to the application in accordance with the Planning Act 2008, the policy set out in EN-1 and this NPS.

⁵⁰ Groundwater Source Protection Zones and Drinking Water Protected Areas are defined by the EA to protect sources of public drinking water.

Part 4 Potentially suitable sites for the deployment of new nuclear power stations in England and Wales before the end of 2025

4.1 List of potentially suitable sites

4.1.1 The following sites are those that the Government has determined are potentially suitable for the deployment of new nuclear power stations in England and Wales before the end of 2025:

- Bradwell;
- Hartlepool;
- Heysham;
- Hinkley Point;
- Oldbury;
- Sizewell;
- Sellafield; and
- Wylfa.

4.2 The Government's assessment of potentially suitable sites

4.2.1 The sites listed in this NPS have been assessed by the Government by way of the SSA (see Sections 2.3 and 2.4 of this NPS). More information about the SSA process and criteria, including what the criteria were and what was considered against them, is available in Annex C.

4.2.2 The range of sources that the Government used in coming to its decision as to which sites are potentially suitable for the purposes of the NPS includes:

- site nominations;
- comments made by the public during the initial opportunity for comment in Spring 2009;
- the Nuclear AoS and HRA conducted at a strategic level for each site and the NPS as a whole;

- responses to the public consultation on the NPS which took place from November 2009 to February 2010;
- advice from specialists such as the Nuclear Regulators, including on the assessment of sites against specific criteria, comments received during the public comment window in 2009 and the public consultation; and
- Parliamentary scrutiny of the NPS.

4.2.3 Annex C to this NPS is comprised of site assessments for each of the listed sites⁵¹. These include analysis and conclusions drawn against the SSA criteria and reflect advice received from specialists and the Nuclear Regulators. They also highlight some of the key points made by the public on the site assessments⁵².

4.2.4 When assessing an application for a new nuclear power station, the IPC should have regard to the relevant site assessment set out in Annex C in addition to the impacts and general siting considerations set out in Part 3 of this NPS and Part 5 of EN-1. The site assessments set out why the listed sites are considered suitable and give context to concerns that were raised by the public in relation to the sites. They also provide additional direction to applicants in respect of siting issues specific to individual sites.

⁵¹ For an explanation as to why Braystones, Kirksanton and Dungeness have been excluded from the list, see the *Government Response to the Consultation on the Draft National Policy Statements for Energy Infrastructure*, October 2010, <http://www.energynpsconsultation.decc.gov.uk>

⁵² The nominations of sites were published in April 2009 for public comment. Site assessments were then consulted on (November 2009 to February 2010).

Glossary of key terms used in this NPS⁵³

AoS	Appraisal of Sustainability
Alternative Sites Study	A strategic level screening exercise commissioned by the Government to identify all sites in England and Wales that are potentially suitable for the deployment of new nuclear power stations by the end of 2025 that had not been nominated as part of the SSA
AP-1000	A new nuclear reactor designed by Westinghouse that is being assessed by the NII as part of GDA
CLG	Department for Communities and Local Government
deployment	Commencing operation of one or more new nuclear power stations
DECC	Department of Energy and Climate Change
DfT	Department for Transport
EA	Environment Agency
EIA	Environmental Impact Assessment
EN-1	Overarching NPS for Energy
EN-5	The NPS for Electricity Networks Infrastructure
EN-6	The NPS for Nuclear Power Generation (or the Nuclear NPS)
energy NPSs	The suite of six energy NPSs produced by DECC (EN-1 to EN-6)
energy NSIPs	Nationally significant energy infrastructure projects, applications for which will be considered by the IPC in accordance with the energy NPSs
EPR	European Pressurised Reactor - a new nuclear reactor designed by Areva that is being assessed by the NII as part of GDA
European Sites	A network of internationally important sites designated for their ecological status, comprising Sites of Community Importance (SCI), Special Protection Areas (SPAs), Special Areas of Conservation (SACs), candidate Special Areas of Conservation (cSACs) and European Offshore Marine Sites (EOMS). For the purposes of the Nuclear NPS this term also includes Ramsar sites and potential SPAs
Flags for Local Consideration	Siting criteria that were identified through the SSA process, but which were considered would be more appropriately assessed at the project level
GDA	Generic Design Assessment
generic impacts	Potential impacts of any energy NSIPs, the general policy for consideration of which is set out in Part 5 of EN-1
Habitats Directive	The European Directive (92/43/EEC) on the Conservation of Natural Habitats and Wild Flora and Fauna
HSE	Health and Safety Executive

⁵³ This glossary sets out the most frequently used terms in this NPS. There is a similar list in each of the energy NPSs. The glossary set out in EN-1 will also be useful when reading this NPS.

HRA	Habitats Regulations Assessment
IPC	Infrastructure Planning Commission
IROPI	Imperative Reasons of Overriding Public Interest (see Annex A of this NPS)
MW	Megawatts
NDA	Nuclear Decommissioning Authority
NII	Nuclear Installations Inspectorate
NPS	National Policy Statement
Nuclear AoS	The AoS for EN-6
Nuclear Impacts	Potential impacts of new nuclear power stations where additional policy is provided in Part 3 of EN-6 in addition to that set out in EN-1
Nuclear HRA	The HRA for EN-6
Nuclear Regulators	The EA, the NII, the OCNS and the DfT
OCNS	Office for Civil Nuclear Security
SSA	Strategic Siting Assessment

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