

November 2008

Greenpeace welcomes the opportunity to respond to the *Consultation on the Strategic Siting Assessment Process and Siting Criteria for New Nuclear Power Stations in the UK and related documents*ⁱ, including a study of the environmental and sustainability effects of the proposed siting criteria ('the environmental study'), and a Habitats Regulations Assessment Screening Report.

Greenpeace has the following comments to make on the process for strategic siting assessment.

Process and timelines

Other consultations and processes aimed towards new build

It is important to note that different consultations and processes are being carried out at the same time, or overlap with each other, which can hinder the engagement and response to these important processes. But from available documents it is impossible to determine exactly how the different processes and timelines for the HSE's Nuclear Installations Inspectorate (NII) and the Environment Agency's (EA) Generic Design Assessment (GDA) process; the MRWS process and the SEA/SSA/NPS processes - along with the processes and timelines on determining a Fixed Unit Price for waste management and disposal - fit together (if at all). This damages both the process of consultation and public confidence in the validity of any conclusion reached by Government.

The documents do not explain how this SSA/SEA process fits in with all other processes related to the development of new nuclear power stations. This problem was raised by a number of respondents to the scoping document - but has not been answered. This means that a full consultation and assessment of strategic siting and how it interlinks with other considerations and decisions can not yet be done properly.

There is no clarity on major issues, e.g. waste management. We do not know how waste from new build is to be dealt with from creation through to disposal; whether, where and if so how waste is to be stored and disposed of clearly impacts on siting criteria.

This issue should not be left to a later stage in the new build processes but has to be considered at a strategic stage in order to inform consultation and proposals on e.g. siting, justification, risk, cost and informed community consent.

Other relevant processes - related National Policy Statements (NPS)

At least three other national policy statements which relate to nuclear power have yet to be undertaken: Overarching Energy, Transmission and Electricity Networks.

There is no information on exactly when these other NPSs will be consulted on or finalised nor how and when the considerations on nuclear power fit into them.

The Government should publish a timetable and explain how work on the other NPSs fit with all the nuclear related processes. Without this information it is impossible fully to comment on the SSA, or the SEA of the SSA.

In addition, the Government should explain how work on the above NPSs - and the Nuclear NPS (NNPS) - will be reconciled with that on renewables and grid connections, as recently raised in the House of Lords European Union Committee 27th Report of Session 2007-08 The EU's Target for Renewable Energy: 20% by 2020. ⁱⁱ An explanation should also be given on how the outcomes of the Energy Bill (2008) (e.g. any conclusions that might be reached on grid access and renewables and microgeneration), or Ofgem's work on Long-Term Electricity Networks Scenarios fit in with all

of these NPSs.ⁱⁱⁱ

Without this information it is impossible to comment on the SSA and its potential effect on e.g. renewable energy production.

Pre-emptive siting/arrangements/grid connection upgrades

The proposed merger of EDF-BE clearly shows which sites are earmarked for specific reactor designs^{iv}. EDF has also applied for a 1750MW connection at Hinkley. In 2007, BE applied for grid connections at four existing sites - Bradwell, Sizewell, Hinkley and Dungeness - and E.on has applied for a significant grid connection at Oldbury.

Greenpeace is concerned that decisions which have already been taken, such as the EDF/BE agreement, is driving the consultation process and risks pre-empting the outcome and determining which sites will be chosen. Government is asked to explain the relationship between the EDF/BE merger agreement and the selection of sites.

Similarly, there is no explanation as to how the announcement of the NDA's auction of land at nuclear sites fits in with the consultation or the proposed nomination procedure.

Environmental Study (SEA) and alternatives

The environmental study is said to be 'an important step in the development of' the Strategic Environmental Assessment of the proposed Nuclear National Policy Statement ('NPS')^v and is said to take into account the results of the SEA scoping report published on 13 March 2008, on which the Government obtained views from statutory consultees and nuclear regulatory bodies.

The environmental study is not in line with the First Environmental Report envisaged in DECC's SEA scoping report published earlier this year.^{vi}

Greenpeace notes that the focus of the July 2008 environmental study is the *proposed SSA criteria*, not the Nuclear NPS as a whole. The main purpose of the environmental study is said to be 'to allow a consideration of the potential environmental impacts of applying the proposed SSA criteria to influence the development of the criteria.'^{vii} Greenpeace also notes that the environmental study is not in line with the 'First Environmental Report' that was envisaged in the SEA Scoping report, and that all SEA requirements, including full and proposed consideration of alternatives, will need to be addressed, and consulted upon, as part of the 2009 'Environmental Report'.

As a result, and because the information outlined above is still lacking, it is not possible to give a fully informed view on the proposed criteria.

In the scoping document the consideration of alternatives to nuclear energy under a SEA was not mentioned. The process on siting, which also covers the SEA process, does not cover what alternatives there could be to using a potential new build site. There are no alternative energy uses or other scenarios considered

As the RSPB response to the scoping document noted: 'Currently, the alternatives considered in the scoping report are not much more than different scenarios for how to actually produce the NPS. In order to comply with the SEA Directive, "reasonable alternatives taking into account the objectives and the geographical scope of the plan must be identified, described and evaluated." SEA Article 5(1).

The SSA/SEA scoping document did not raise the issue of alternatives to nuclear per se - as the SEA directive states should be done. We therefore assume that all SEA requirements, including full and proper consideration of alternatives, be addressed and consulted upon, as part of the 2009

"Environmental Report. "

To fail to consider alternatives risks serious and unintended consequences for e.g. regional authority plans for renewables, CHP or indeed any other scheme in the same area or using the same resources.

The nomination process. Nominator; owner, develop, operator?

The document outlines the process by which sites can be nominated. It defines what is a 'credible nuclear power operator' and other bodies which can nominate sites as well. However, throughout the document the term nominator is seemingly interchanged with developer, owner and operator. The different status - legal or otherwise - should have been explained, but is not.

As well as the confusion created by the language, the proposal for the process for site nomination lacks transparency, including that the identity of the nominator is to be kept secret in the NNPS.

Similar confusion is created by the use of the word 'community' which is not defined. How will a 'community' response be judged, and by whom?

Government will be aware that having being criticised (by the High Court and by the MRSB) for serious errors and bias in its earlier consultations, which have undermined the legitimacy of its decisions on nuclear power, it should carefully consider concerns about fairness, bias and pre-empting results at every stage of the consultation process.

Given the proposed planning reforms, this lack of openness and full consultation is of particular concern if it disadvantages the populations near to proposed nuclear sites.

Reactors and wastes

Reactor designs

Neither the SSA nor the SEA document gives a description of what a nuclear reactor entails - the implication is that the site considerations relate purely to the reactor. Spent fuel and stores are mentioned but no detail is provided.

It also appears that key issues about reactors and waste/spent fuel stores will be known only once site specific applications are made. This prevents these vital issues being discussed at a strategic level, as well as by national groups, local populations and other consultees who want to comment now. Without specific information the 'strategic' worth of sites - and the level of local acceptance of all aspects of new build - cannot be understood or determined.

It is not possible to decide on siting criteria or sites before there have been decisions made about the designs themselves, the footprint of all buildings (including all spent fuel and other waste storage), waste packaging and where the waste from any nuclear new build will be disposed of. A through-life cycle analysis of all operations and associated activities should have been part of the information provided for this consultation.

However, our understanding is that the current stage (Step 3) in the GDA process, will not be complete until late 2009 which means the regulators will not have 'signed off' on 'through life cycle' for spent fuel until after the nomination process has closed. The whole GDA process will not be completed until 2011 at the earliest. In relation to this we note the following (underlined):

1.2 The proposed Nuclear National Policy Statement (Nuclear NPS) will list sites that have been found to be strategically suitable through the SSA. The list of sites will not say that a site is suitable for a particular reactor design. However, we will take account of which designs are likely to be built when considering whether the site is large enough and in considering how the impact of a design configuration (if specified) could be capable of mitigation. The list of sites will also not specify who has nominated the site.

This seems inconsistent with the EDF/BE merger proposal which clearly shows that some sites have been earmarked for EPRs.^{viii} or it is incomplete or misleading information. Moreover, whilst this view may be acceptable to Government and industry, it is questionable whether local populations asked to take part in a nomination process will view it the same way. The documents constantly refer to reactors but do not give a full account of *all* the facilities needed to support new reactors. More information from Government is needed.

We give, below, some examples of why this information should be provided to enable meaningful consultation on siting criteria:

- To date none of the companies which have submitted designs to the NII/EA for consideration under the GDA process have supplied 'through life - plans for waste management and disposal. The NII/EA has said this will have to be supplied in the next rounds of the GDA process.
- There are major concerns over the 'disposability' of spent fuel from new build which should be resolved before site nominations go ahead - in particular so that people know how long storage on site may be^{ix}
- There are no criteria against which to judge whether a site is a suitable place to keep spent fuel for 100 years.^x

Spent fuel management

The SEA appears to place the issue of nuclear waste and spent fuel management and disposal under the Managing Radioactive Waste Safely (MRWS) process. Yet, it is not clear from the relevant documents how MRWS process aligns with the timing of all the other related processes and activities and operations described under the SSA/SEA process. For example, reference is made in the SEA documents to the process for disposing of waste - but there is no timeline for that.

CoRWM's recommendations on a separate assessment process for new build waste are not mentioned, and without information about that this consultation is incomplete and misleading. Nor is there any mention of the paper from April 2008, commissioned by CORWM2, which re-iterated the position of CoRWM1 on new build wastes^{xi}

Without this information, this consultation is incomplete and misleading in relation to the waste produced by new nuclear power stations and the information is an inadequate basis for site selection criteria.

We refer here to the NII and EA updates spent fuel and GDA process.^{xii} We note that the EA and the NII do not have complete information about waste and spent fuel, none of which is mentioned in this consultation document.

Information which should be provided for consultation and taken into account in any site selection criteria include considerations contained in e.g. *Process and Information Document for Generic Assessment of Candidate Nuclear Power Plant Designs*^{xiii} (which includes what the EA expects under the GDA process and issues to do with the management of spent fuel) all of which impact on site selection criteria.

Similarly, the documents *The Environment Agency's Submission to DTI - Pre Licensing Assessment of New Nuclear Power Stations and Streamlining the Regulatory Process*^{xiv} and the NII's *Nuclear Power Station Generic Design Assessment - Guidance to Requesting Parties*^{xv} - which cover spent fuel and radioactive waste management - raise issues which should be to be resolved before the Government embarks on site selection.

If these issues are not to be included as part of the environmental assessment of the siting criteria,

then clearly they will have to be included in the full strategic environmental assessment of any sites included in the National Policy Statement.

Fixed Unit Price

Starting in spring 2009, there is to be consultation on Fixed Unit Price for spent fuel and ILW disposal from new build. This could impact on waste management as there is an interdependency on waste policy, management and pricing. Different ideas have been postulated which vary significantly from current policy. It is not clear when this will be settled and how it will impact on a series of reactors and spent fuel management in particular.

In various consultation documents the Government said that stores will have to be built at reactor sites which will last for 100 years.^{xvi} This issue is yet to be fully assessed by the NII and EA during the Generic Design Assessment (GDA) process.

The Government has said that 'plans exist or will exist' for the management and disposal of wastes, but different views on what might happen are emerging which challenge this which suggest that there are no firm 'plans' as opposed to wishful thinking.

At this stage, it is clear that there are no guaranteed plans, and the Government policy in place for the disposal of nuclear waste is contradicted in other documents from government and in industry submissions.

Greenpeace is of the view that this consultation should have included full information on the lack of clear plans for waste storage and disposal and information on how this affects siting decisions.

Clearly, full information about waste disposal plans and policy will have to be included in the strategic assessment of the NPS.

Criteria - examples of wrong classification

It is not clear how the cumulative impacts of the various criteria will be assessed - in particular if some are dealt with as strategic and others left to 'local consideration'.

Transmission upgrade and grid access - strategic and local

In the document of the responses to the scoping document there is a letter from the Institution of Engineering and Technology which underlines the importance of transmission and grid issues being discussed with all other electricity sources and at a national level (pp 60-61-<http://www.berr.gov.uk/files/file47142.pdf>). We reproduce a relevant section below:

'Hence it is our strong recommendation that the Strategic Environmental Assessment (SEA) process should properly balance transmission with other issues when considering the environmental and social impacts of potential nuclear sites. The aims should be to produce a result that takes proper account of all impacts when appraising a site and ensures that they are dealt with by the same people, at the same time and using the same criteria. This is the only way to facilitate the best choice of sites when taking forward new power station projects, whether nuclear or otherwise.' (emphasis added)

Under the proposed system these criteria will be considered by different people at different times under different processes. On transmission/grid issues the DECC SSA document notes however that:

Criteria: Significant infrastructure resources – flag for local consideration 3.2

2.130 The Government recognises access to infrastructure will be an important factor for developers in making their assessments of the practicality of site development, and that to understand the potential impact of a new development on these important infrastructures,

there will have to be detailed project-specific assessments. For the purposes of the SSA, the Government proposes not to use a criterion related to the impact of new nuclear power stations on infrastructure. It will flag this as an issue for detailed local consideration.

and

Criteria: Access to transmission infrastructure – flag for local consideration 4.3 (page 71- 72)

2.141 The Government recognises access to electricity transmission will be an important factor for developers in making their assessments of the practicality of site development. However, an adequate mechanism already exists for dealing with the cost issues of new infrastructure. Through the separate Transmission NPS, the planning mechanism will ensure that the SSA gives proper consideration to the environmental consequences of grid developments, and the Government will, therefore, flag this issue for local consideration by the IPC.

In rejecting changes to status of criteria on transmission (page 81) the Government points to the NPS on transmission, but gives no timetable. It also notes:

*The Government did not consider it appropriate to add explanatory text to criterion 3.1 in relation to transmission upgrades since such issues are too specific to individual projects to be included in the SSA and would be more appropriately addressed through the **Electricity Networks NPS**.*

It is acknowledged in other reports that new build - particularly because of the generating capacity of new plants - cannot be viewed in isolation e.g. *Generating capacity of individual station units and overall combined capacity of proposed units at a particular sites may conflict with grid operational rules relating to unplanned outages.*^{xvii}

We also refer to the following which cover transmission/grid issues and reactor siting:

- Report of the Government expert siting group on siting by Jackson consulting.
http://www.jacksonconsult.com/content_pdf/Nuclear_Siting_Report.pdf
- *Our Energy Challenge: Securing clean, affordable energy for the long term.* Response by National Grid (April 2006)
- *Valuing nuclear sites*, Nuclear Engineering International September 2008
<http://www.neimagazine.com/story.asp?sectioncode=76&storyCode=2050837>

Given the issues raised in relation not only to how nuclear sites might be used for renewables, the Government must make transmission a strategic level criterion as well as a local one. This issue will have to be considered twice in the process.

The Government should also say how it intends to respond to issues around transmission for sites with no links or no good links to the grid (including the nomination of 'greenfield' sites) and how it plans (in practical and timing terms) to deal with the linked National Grid planning applications and siting issues for new pylons for new build.

Demographics, accidents/terrorism - Emergency planning

Originally new-type facilities (such as the untried untested reactors proposed for new build) were - under the Nuclear Installations Inspectorate's Safety Assessment Principles (SAPs) - to be remotely sited. The NII dropped this from SAP in 2006, and the Government oversees this aspect of siting criteria.

Although the demographics criteria is exclusionary - and concerns how many people live near a nuclear site and how an accident might impact on the surrounding population (through contamination, emergency planning effectiveness etc) the issue of emergency planning with local

and regional authorities on the 'front line' cannot be left to local consideration - if only because the response to an accident/terrorist attack could draw on national resources and agencies. That the criteria on this is for 'local consideration' only is patently wrong.

The environmental study does not properly address either the risk of accident or terrorist attack on reactors or spent fuel stores and how this could impact not only on local populations, but across regions, the country and the continent. This has to be rectified in the environmental report.

In addition, issues around transmission (e.g. the need to have reactors close to centres of demand) could potentially clash with the criterion on the demographics around a site.

The document reiterates the Government's belief that new nuclear power stations would pose a very small risk in terms of safety, security and health, but there is no proper assessment of risk in this document.

For the purposes of the SEA of the SSA - or the Nuclear NPS itself - more must be done on this issue.

For example, it is imperative that the environmental report which will accompany the NPS includes:

- a full independent assessment and report on the possible effects of a radiological emergency (due to accident or from terrorist attack) on either a reactor or spent fuel stores - no matter how small the likelihood of such an event because the impacts could be so massive and;
- a similar assessment in respect of the routes of any nuclear material to and from the site.

This thereby concludes Greenpeace's submission to the *Consultation on the Strategic Siting Assessment Process and Siting Criteria for New Nuclear Power Stations in the UK*.

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- i <http://www.berr.gov.uk/consultations/page47143.html>
- ii <http://www.publications.parliament.uk/pa/ld200708/ldselect/ldecom/175/17502.htm>
- iii <http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=67&refer=Networks/Trans/ElecTransPolicy/lens>
- iv http://www.british-energy.com/documents/2.5_announcement_FINAL.pdf para 3.2.3
- v <http://www.berr.gov.uk/files/file47137.pdf> §§0.14; 0.30; 0.33
- vi <http://www.berr.gov.uk/files/file45240.pdf>
- vii <http://www.berr.gov.uk/files/file47136.pdf>, para. 24.
- viii http://www.british-energy.com/documents/2.5_announcement_FINAL.pdf para 3.2.3
- ix <http://www.robedwards.com/2008/04/nuclear-super-f.html>
- x The Energy Bill 2008 Consultation on Funded Decommissioning Programme Guidance for New Nuclear Power Stations para 4.2.42
- xi *Re-iteration of CoRWM's Position on Nuclear New Build*. September 2007
<http://www.corwm.org.uk/pdf/2162%20%20-%20CoRWM%20position%20on%20new%20build%20reiterated.pdf> and 2316 Nuclear new build Apr 2008 DISCUSSION PAPER ON CoRWM's position on nuclear new build 14 April 2008
- xii <http://www.hse.gov.uk/newreactors/reports/epreport.pdf> and <http://www.hse.gov.uk/newreactors/reports/ap1000public.pdf>: notes:
- xiii <http://publications.environment-agency.gov.uk/pdf/GEHO0107BLTN-e-e.pdf>
- xiv <http://publications.environment-agency.gov.uk/pdf/GEHO0606BLBD-e-e.pdf>
- xv <http://www.hse.gov.uk/nuclear/reactors/design.pdf>
- xvi On 50 years, in email from NDA 9th January 2008. On 100 years, see The Energy Bill 2008 Consultation on Funded Decommissioning Programme Guidance for New Nuclear Power Stations para 4.2.42
- xvii Potential New Build in Cumbria An Assessment of Implications for the County March 2006 IDM and ERM