

# Nuclear Free Local Authorities

## new nuclear monitor



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### Government announces sites nominated for Strategic Siting Assessment Process.

*This edition of New Nuclear Monitor has been developed by the NFLA Scotland Policy Adviser, Pete Roche. It enables NFLA member authorities to respond to an important government announcement on the potential sites for new nuclear power stations. NFLA members are encouraged to participate in the short consultation.*

#### 1. Introduction and arrangements to respond to the Government's announcement of sites

On 15 April 2009, the Government published the list of sites which have been accepted into the Strategic Siting Assessment process and could be potential hosts to a new nuclear power station. Details of the Government's Department of Energy and Climate Change policy announcement can be found at:

<http://www.decc.gov.uk/en/content/cms/news/pn042/pn042.aspx>

The eleven sites are:

- Hartlepool nominated by EDF Energy
- Heysham nominated by EDF Energy
- Dungeness nominated by EDF Energy
- Sellafield nominated by NDA
- Kirksanton nominated by RWE
- Braystones nominated by RWE
- Wylfa Peninsula nominated by NDA and RWE
- Oldbury nominated by NDA and EON
- Hinkley Point nominated by EDF Energy
- Bradwell nominated by NDA
- Sizewell nominated by EDF Energy

The Government's map of the sites is available at: <http://www.nuclearpowersiting.decc.gov.uk/nominations/>

An interactive map of the sites is available at:

<http://www.guardian.co.uk/environment/interactive/2009/apr/15/nuclear-power>

Members of the public now have the opportunity to *comment* on the nominated sites for just **one month**, with comments required by 14 May 2009.

These sites will be assessed by Government using the information received during the public consultation and the advice of specialists such as the Nuclear Installations Inspectorate (NII), the Environment Agency and others. The sites will be assessed against the conditions for nominating and the exclusory and discretionary criteria.

## THE LOCAL GOVERNMENT VOICE ON NUCLEAR ISSUES

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The process is set out in the Government's January 2009 document "Towards a Nuclear National Policy Statement". <http://www.berr.gov.uk/files/file49865.pdf> (See pages 21 & 22)

The criteria against which sites will be assessed are listed here: <http://www.nuclearpowersiting.decc.gov.uk/criteria/>

After the assessment, which is expected to be done over the summer, sites that are found to be suitable for the development of new nuclear power stations will be listed in the draft Nuclear National Policy statement which will be published around September. There will then be a period of further consultation and parliamentary scrutiny.

The Government has published a leaflet on how nuclear power station sites will be chosen and how the public can have a say here:

<http://data.nuclearpowersiting.decc.gov.uk/docs/leaflet.pdf>

The Government's dedicated website - "Choosing Sites for New Nuclear Power Stations" - <http://www.nuclearpowersiting.decc.gov.uk/> - indicates that to comment on a nomination you need to register and submit comments via the website here <http://www.nuclearpowersiting.decc.gov.uk/signup/>

The website does not give people outside of England and Wales the opportunity to comment, and it requires comments to be directed specifically at one of the eleven sites.

However the Office for Nuclear Development does give people (including people outside of England and Wales) the opportunity to comment by post using a form which can be printed from the website <http://www.nuclearpowersiting.decc.gov.uk/unabletoregister/> and posted to:

Office for Nuclear Development Public Comments  
Freepost SEA 12430  
Thornton Heath  
CR7 7XT

Completed forms can be e-mailed to: [nuclearsitingpubliccomments@dialoguebydesign.com](mailto:nuclearsitingpubliccomments@dialoguebydesign.com)

*But a separate form must be filled out for each of the eleven sites.*

This one month period for comment is **not** a formal consultation period - that will come later with the consultation on the Nuclear National Policy Statement (NPS). Clearly the Government is trying to limit comments at this stage to a discussion of whether the sites meet the Strategic Siting Assessment Criteria.

## **2. Strategic Environmental Assessment**

The Government is proposing to publish an Environmental Report alongside publication of the draft Nuclear NPS as part of the Strategic Environmental Assessment (SEA) for that NPS. An SEA is required to identify reasonable alternatives to the plan and assess the likely effects on the environment of the evolving plan, and its alternatives. Failure to consider alternatives risks serious and unintended consequences for example regional authority plans for renewables, Combined Heat and Power or indeed any other scheme in the same area or using the same resources. (1)

Responders to this consultation should **ask the Government when it is going to assess launching a 'local energy revolution' – based on energy efficiency and decentralized energy – as an alternative to designating sites for new nuclear reactors. A non-nuclear "Green New Deal"- type of economic stimulus package would create alternative employment opportunities around the eleven proposed sites.**

### 3. Information on each nominated site

For each nominated site there is a suite of documents available including:-

(a) A site nomination report, including maps and a letter from a Credible Nuclear Operator.

(For example the nomination report for Bradwell is available here:-

<http://data.nuclearpowersiting.decc.gov.uk/docs/bradwell/nomination.pdf> )

(b) Evidence of awareness raising in the local area.

(c) A note on why flood risk is low and a flood map

[http://data.nuclearpowersiting.decc.gov.uk/docs/bradwell/flooding\\_test.pdf](http://data.nuclearpowersiting.decc.gov.uk/docs/bradwell/flooding_test.pdf)

(d) Maps of sites of ecological importance.

Each of the eleven nominated site sections on the DECC websites gives details of where the nomination information can be viewed and comment forms collected – generally council offices and libraries.

### 4. Strategic Siting Assessment Criteria

The Government wants comments which are related to the sites suitability with regard to the SSA Criteria. These are:-

- (1) Demographics
- (2) Proximity to Military Activities
- (3) Flooding Tsunami and Storm Surge
- (4) Coastal Processes
- (5) Proximity to hazardous industrial facilities and operations
- (6) Proximity to civil aircraft movements
- (7) Internationally designated sites of ecological importance
- (8) Nationally designated sites of ecological importance
- (9) Areas of amenity, cultural heritage and landscape value
- (10) Size of site to accommodate operation
- (11) Access to suitable sources of cooling

### 5. Demographics

The Government no longer considers that it is necessary to apply the remote siting criteria, which were applied to both the first generation Magnox reactors and proposals to build Pressurised Water Reactors (PWR) at Sizewell B and Hinkley Point. Because the PWR was a new design to Britain a precautionary approach was taken. Instead the semi-urban criteria, which were applied to Britain's second generation AGRs will be used. The designs of reactors currently being assessed through the Generic Design Assessment (GDA) are considered to be modern designs which do not require a precautionary policy to be applied.

However, the nomination process did not require nominators to submit demographic information because of the complexity of the calculation required to decide whether a site meets the semi-urban siting criteria.

A major study of reactor hazards by two leading scientists and an international energy specialist, published by Greenpeace in April 2005, concluded that risks from the new types of reactors currently being assessed under the Nuclear Regulators (Nuclear Installations Inspectorate and Environment Agency) Generic Design Assessment, although heralded as fundamentally safe, have their own specific safety problems. In addition they cannot be sufficiently protected against a terrorist threat. There are several scenarios – aside from a crash of an airliner on the reactor building – which could lead to a major accident. (2)

**In the absence of demographic information provided by the nominees, responders to the consultation should (a) insist that the Government applies remote siting criteria and (b) recommends a full, independent, examination of each site, and the possible effects of a nuclear accident or emergency (including a terrorist attack) at the reactor or spent fuel store, to see whether the production of a credible emergency plan, including evacuation, is possible.**

## **6. Emergency Planning**

New risks have emerged since nuclear reactors were built on the existing sites, such as the risk of terrorist attack, flooding due to climate change and the storage of spent fuel on site, increasing the overall level of risk to nearby communities.

An examination of the possibility of evacuating Mersea Island, for example, which is only around 2 miles just across the Blackwater estuary from the Bradwell site, gives cause for concern. The Strood is the road leading off Mersea Island to the mainland, the one exit route in the case of a nuclear incident. It also floods twice a day at the highest tides in Spring and Autumn, sometimes for as much as two hours. Mersea Island has a large additional summer population of perhaps 5,000 tourists, many of whom would be at caravan and camp sites, without the shelter of permanent accommodation. This would further compound the difficulty of implementing an evacuation plan.

In Cumbria the emergency planner has attacked plans to build nuclear power stations on farm land on two green field sites near Sellafield. David Humphreys, Cumbria County Council's Emergency Planner says at Sellafield "we already have a well developed emergency plan and a well educated local population. [But] what does concern me is the new reactors at Kirksanton and Braystones. What this does is it brings in an entirely new population being put at risk from these reactors. As an emergency planner it creates major new problems." (3)

## **7. Nuclear Waste**

Unlike existing reactors, the Government is not expecting new reactor operators to despatch their spent fuel to Sellafield for reprocessing. This means that highly radioactive spent nuclear fuel could remain at the new reactor sites for at least 160 years. The spent nuclear waste fuel will be particularly hot and radioactive as it is expected to be 'high burn-up' fuel that will be used in the reactors. There is still much uncertainty about how easy it will be to include this spent fuel in the "geological disposal facility" planned for all the nuclear waste we have already created.

## **8. Flooding**

Climate scientists warned at the international climate change conference in Copenhagen in March this year that rising sea levels pose a far greater danger to the planet than previously estimated. There is now a major risk that many coastal areas around the world will be inundated by the end of the century because Antarctic and Greenland ice sheets are melting faster than previously estimated. (4)

The International Panel on Climate Change (IPCC) - when it presented its most up-to-date report on the likely impact of global warming in 2007 - concluded that sea-level rises of between 20 and 60 centimetres would occur by 2100. These figures were derived from estimates of how much the sea will increase in volume as it heats up, and from projected increases in run-off water from melting glaciers. The IPCC now has a much better idea of what is going on in Greenland and Antarctica and can make much more accurate forecasts about ice-sheets melting and their contribution to sea-level rises. These revisions suggest sea-level rises could easily top a metre by 2100 - a figure that is backed by the US Geological Survey, which has warned that they could reach as much as 1.5 metres. And sea-level rises will continue for hundreds of years beyond 2100, even if we do manage to stabilise carbon dioxide emissions and halt the rise in atmospheric temperature.

Some scientists, and Ban Ki Moon, the Secretary-General of the United Nations, have warned that sea level rises could happen much more quickly, with a rise of up to 6 metres in a few decades. (5)

There will also be an increase in major storms, more intense gales and hurricanes and these, in turn, will produce massive storm surges as they pass over the sea. The result will be a "climatic double whammy" that will savage low-lying regions including Britain's south-eastern coastline, in particular East Anglia and the Thames Estuary.

The Institution of Mechanical Engineers says the Sizewell nuclear site on the Suffolk coast will certainly be affected by rising sea levels. Engineers say they can build concrete walls that will keep out the water throughout the working lives of these new plants. But that is not enough. Nuclear plants may operate for 60 years (up to around 2080), but it could take hundreds of years to decommission them, and spent nuclear waste fuel could be stored there for 160 years or more.

In 2007 a report for Greenpeace by the Middlesex University Flood Hazard Research Centre which looked at the effect of the expected sea level rises and increases in storm surge over the next 200 years on four reactors sites, concluded that: Dungeness appears to be highly threatened, Bradwell is under significant threat and Hinkley Point is also vulnerable. The situation at Sizewell is less clear, but none of these sites are completely threat-free as a location for a new nuclear power plant. It is also important to note that even the lowest estimates of sea-level rise could significantly increase long-term dependence on defence at the stations and increase the current rate of loss in the physical stability of the environments in which the stations are situated. It is currently difficult and costly, and in the future is likely to be increasingly unsustainable, to maintain the presence of power stations in three of the four sites studied.

The report concludes that defending the sites from sea water will mean they are "likely to become economically unsustainable" and they "cannot be considered as suitable locations for new reactors". (6)

## 9. Green Field Sites

**Kirksanton**, near Millom and **Braystones**: near Egremont are both green field sites in Cumbria. The White Paper on Nuclear Power states: 'We expect that applications for building new power stations will focus on areas in the vicinity of existing nuclear facilities.' This is not the case with these sites which are both green field sites. Kirksanton is some 23km from Sellafield, and Braystones is about 3.5km from Sellafield. Details of the proposed site nomination only emerged in February 2009, so there has been very little time for public discussion.

## 10. Conclusions for NFLA members to include in their submission(s)

The NFLA submission on the Strategic Siting Assessment consultation concluded that a wide ranging engagement process needed to be carried out with local communities around existing nuclear sites which did not just cover the possibility of new reactor building, but also looked at all the alternatives with a focus on producing energy. (7)

The Government's response to the consultation (8) highlighted the fact that several respondents were particularly interested in how alternative energy generation technologies will be addressed as part of the environmental assessment. The Government's response simply says it "continues to believe that it is in the public interest that new nuclear power stations should have a role to play in this country's future energy mix alongside other low-carbon sources.

The NFLA submission described the SSA process as "simply a way of legitimising nuclear siting decisions which have already been taken - a step backwards to the old and discredited 'Decide Announce Defend' approach." This informal consultation on the eleven nominated sites confirms that view. But this should not stop NFLA member authorities from responding.

Nuclear power will be **too late** to help tackle climate change and its contribution will **too little** when it eventually arrives; it will be **too expensive**, will create waste we have no idea what to do with; reactors pose a risk of serious accident and environmental contamination and they exacerbate problems of nuclear proliferation. Not only will new reactors divert attention and delay the implementation of a local energy revolution in the immediate vicinity of the proposed sites, but they will sap funding and political energy for implementing a green economic stimulus required by all NFLA member authorities.

The NFLA SSA consultation response also suggested a full independent assessment of the possible effects of a nuclear accident or emergency (from terrorist attack) on either a reactor or spent fuel stores. Now that the proposed list of sites has been published the emergency plans for each site need to be discussed in an open and transparent way.

An independent assessment of whether the proposed sites will require engineering work or should be excluded because of the likelihood of flooding should be carried out which is fully informed by recent advice from climate scientists needs to be carried out.

## 11. Footnotes

- (1) See for example the Renewable Energy Plan for South-West England – an area which includes two nominated sites. <http://www.southwest-ra.gov.uk/media/SWRA/Scrutiny/Sustainable%20Energy/14th%20March%202006/RegenSW.pdf>  
Placing Renewables in the East of England: <http://www.eera.gov.uk/GetAsset.aspx?id=fAAzADAANQB8AHwARgBhAGwAcwBIAHwAfAAwAHwAO>
- (2) Hirsch, H et al (April 2005) Nuclear Reactor Hazards Report. <http://www.greenpeace.org/international/press/reports/nuclearreactorhazards>  
See also Nuclear Reactor Safety, no2nuclearpower briefing January 2007. [http://www.no2nuclearpower.org.uk/reports/Nuclear\\_Safety.pdf](http://www.no2nuclearpower.org.uk/reports/Nuclear_Safety.pdf)
- (3) Whitehaven News 19<sup>th</sup> March 2009. [http://www.whitehaven-news.co.uk/news/strong\\_reaction\\_to\\_millom\\_nuclear\\_plan\\_1\\_529163?referrerPath=news/](http://www.whitehaven-news.co.uk/news/strong_reaction_to_millom_nuclear_plan_1_529163?referrerPath=news/)
- (4) Observer 8<sup>th</sup> March 2009. <http://www.guardian.co.uk/science/2009/mar/08/climate-change-flooding>  
Guardian 11<sup>th</sup> March 2009 <http://www.guardian.co.uk/environment/2009/mar/11/sea-level-rises-climate-change-copenhagen>
- (5) News Weather 16<sup>th</sup> Nov 2007. [http://www.newsweather.info/ban\\_ki-moon\\_warning.htm](http://www.newsweather.info/ban_ki-moon_warning.htm)
- (6) The Impacts of Climate Change on Nuclear Power Station Sites by the Flood Hazard Research Centre, Greenpeace 2007. <http://www.greenpeace.org.uk/files/pdfs/nuclear/8179.pdf>
- (7) NFLA Response to the Strategic Siting Assessment Consultation. [http://www.no2nuclearpower.org.uk/ground/SSAResponse\\_NFLA.pdf](http://www.no2nuclearpower.org.uk/ground/SSAResponse_NFLA.pdf)
- (8) Towards a Nuclear National Policy Statement: Government response to consultations on the Strategic Siting Assessment process 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. DECC Jan 2009. <http://www.berr.gov.uk/files/file49865.pdf> para 6.9