

Nuclear Free Local Authorities

new nuclear monitor



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Overview for NFLA members on the National Policy Statement Consultation and the National Nuclear Policy Statement (NPS)

1. Introduction

This briefing, compiled by the NFLA Scotland Policy Adviser, Pete Roche with additional points added by the NFLA Secretary, Sean Morris, provides member authorities with an overview of the Government's consultation on national policy statements, particularly in relation to nuclear power generation. Member authorities are encouraged to respond to this important consultation. This briefing highlights some of the key issues which the Nuclear Free Local Authorities will be concentrating on in its response.

The Government currently envisages 12 National Policy Statements (NPS), lying at the centre of the new planning regime for England and Wales covering major infrastructure projects. The first six of these, covering energy, were published for consultation on **9th November 2009**. One of these covered energy in general (1) and another dealt with nuclear power. (2)

When finalised or 'designated' NPS's will be one of the most powerful statements of government policy *ever produced*. The new Infrastructure Planning Commission (IPC) must take its decisions in accordance with the NPS's. This means, for example, that the principle of new nuclear reactors at the sites designated cannot be questioned, except in very limited circumstances.

The Government has set up a website for the consultation on the Energy Infrastructure National Policy Statements: <https://www.energynpsconsultation.decc.gov.uk/>

A series of national and local consultation events are happening around England and Wales. Information on these is given here:

<https://www.energynpsconsultation.decc.gov.uk/home/events/>

The consultation closes on **22nd February 2010**. The Parliamentary Energy and Climate Change Committee are also considering the NPS, and request comments on the **15th January 2010**. The NFLA Secretariat is seeking to reply to both deadlines.

A consultation document - "Consultation on Draft National Policy Statements for Energy Infrastructure" is available at:

<http://data.energynpsconsultation.decc.gov.uk/documents/condoc.pdf>

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2. Draft Overarching National Policy Statement for Energy (EN-1)

The Nuclear NPS stresses that it must be read in conjunction with the overarching Energy NPS (EN-1). This sets out Government policy with regard to Energy Infrastructure Development. It highlights the Government's climate change, energy security, and fuel poverty elimination commitments.

2.1 No prioritization

EN-1 gives no indication of priority (geographical) areas for new energy infrastructure provision, nor does it seek to steer investment away from certain areas where such developments would be undesirable. The approach leaves it entirely to the market to decide where proposals for new electricity generating infrastructure might be brought forward. 43GW is expected to be new capacity.

EN-1 suggests the UK might need a generating capacity of around 100GW by 2020 of which around 26GW of this new capacity would need to be renewable to meet the target of providing 30% of electricity from renewables by 2020. 17GW would be other types of electricity generation. By 2025 these figures could increase to 35GW and 25GW respectively.

There is only limited direction concerning the source of electricity generation - the precise mix will depend on decisions by the utilities. However, EN-1 encourages the nuclear industry, quite prominently, (para 3.1) to contribute as much as possible towards meeting the need for 25GW of non-renewable capacity. Yet EN-1 only mentions (para 3.4.4) briefly that offshore wind has the potential to provide an extra 25GW by 2020.

Given that both EDF and Eon have been asking the Government to set a maximum contribution for renewables – at around the 30% level proposed in the Renewable Energy Strategy - so as not to constrain nuclear (3) - it would be sensible for EN-1 to state clearly that Government priority is for electricity to be generated by sustainable renewable methods which do not generate waste – radioactive or otherwise.

Life cycle carbon emissions might have been another criterion which could have been mentioned to assist prioritization. Typical lifecycle emissions from nuclear plants have recently been reported to be about 66 gCO₂e/kWh¹ - more than 10 times industry estimates, and worse than all the renewable alternatives, including solar PV. (4)

2.2 Fuel poverty left to the market

Rather confusingly para 2.1.20 states that:

“provision of new energy infrastructure contributes to ... reducing fuel poverty ... because the availability of appropriate infrastructure supports the efficient working of the market so as to ensure competitive prices for consumers”.

Yet, according to Ofgem, renewing infrastructure and meeting carbon targets is likely to require an investment of up to £200 billion meaning increases in domestic energy bills of 14% to 25% by 2020. (5) Clearly, without a large domestic energy efficiency programme it will be impossible to meet both climate change and fuel poverty commitments.

The arguments in EN-1 (paras 3.3.16 to 3.3.19) on energy efficiency and decentralised energy as alternatives to new large scale electricity generation are weak and vague. The document claims that energy efficiency savings are likely to be limited and offset by

¹ Para 2.3.2 of the Nuclear NPS claims that emissions from the nuclear cycle are around 7 - 22gCO₂e/kWh

increases in the use of electricity for heating and transport. It also claims that decentralised and community energy systems are '*unlikely to lead to significant replacement of larger-scale infrastructure*'. Only 4GW is expected to be generated by small-scale renewables – around 2% of electricity demand compared with the 12% which the European Photovoltaic Industry Association expects to be able to provide with just solar PV across Europe. (6) Unlike nuclear, energy efficiency and renewables are not encouraged to aim high. The IPC should be able to examine whether a utility proposing to build a new power station might be better able to meet Government policy objectives on fuel poverty and carbon emission reductions by reducing demand instead.

2.3 Climate Change Impacts

The risk of sea level rise and flooding to energy infrastructure developments on the coast is dealt with in several places (para 4.20 & 4.22). A recent study published in the Proceedings of the National Academy of Sciences (7) has predicted that global average sea levels are likely to rise by between 75cm and 190cm by 2100 – three times faster than official predictions of the Intergovernmental Panel on Climate Change (IPCC) which estimates a maximum rise of 59 centimetres by 2100. (8)

Given the uncertainties involved in predicting sea-level rises, the IPC should be required to consider the most up-to-date climate projections and to take a precautionary approach. In some cases the mitigation of flood risk to a given site may have an adverse effect on the flood risk elsewhere. If measures are required on nearby land not owned by the applicant, EN-1 does not make clear how these measures might be implemented.

2.4 Socio-economic impacts

EN-1 mentions “the changing influx of workers” during the different lifetime phases of a large energy infrastructure project, which may alter the demand for services and facilities. (para 4.27.3) Few adverse effects are mentioned, and an applicant is only expected to describe the socio-economic impact. Short duration, capital intensive construction projects have been shown to seriously distort the local labour market. Often the bulk of those employed are from outside of the area. After the project is completed many migrant workers remain in the area compounding local employment problems. (9) Applicants should be required to implement mitigation measures to avoid these problems.

3. Consultation on Draft National Policy Statements for Energy Infrastructure.

This document is intended to help navigate through the huge quantity of information, which has been release along with the six NPS's. It explains that the consultation is intended to identify whether the draft NPS's are “fit for purpose” or whether they provide a suitable framework for the IPC to make decisions on applications to build energy infrastructure. The consultation also seeks views on the Appraisals of Sustainability and Habitats Regulations Assessments.

This is where the huge volume of information available, which has to be read, digested and commented on by 22nd February, becomes apparent. Pages 40-42 include an index and short description of the documents associated with the Nuclear NPS. The DECC website also has a page with this index, but with clickable links:

<https://www.energynpsconsultation.decc.gov.uk/nuclear/summary/>

3.1 Sustainability and Habitats

The Appraisal of Sustainability (AoS) on the Draft Nuclear National Policy Statement: Main Report is 172 pages long. (10) There are 200 pages of appendices which appear separately. (11) There are AoS reports on each of the ten sites, as well as Dungeness, Druridge Bay,

Kingsnorth and Owston Ferry. The Bradwell report, for example, is 67 pages long (12) with seven pages of maps (13) and 137 pages of appendices (14).

Then there is the Habitats Regulations Assessment (HRA) of the draft Nuclear National Policy Statement, Main Report (15) which is 116 pages long. There are also 14 site specific HRAs. The report for Bradwell is 46 pages long (16) together with 357 pages of appendices.

Given that Dungeness was the only site out of the eleven sites originally nominated which has been dropped, and that this was on nature conservation grounds, many people at other sites might want to also read the HRA for Dungeness. (17) Any new reactor on the proposed site would need to be built further back from the coastline to enable adequate sea defences to be put in place which in turn would destroy the shingle ridges which are the subject of strict environmental protection. Natural England made a strong case for the protection of the fragile eco-system at Dungeness, as did the RSPB. (18) But Michael Howard – the MP for Folkestone and Hythe – has launched a campaign to have Dungeness re-instated on the list of sites. (19)

Rather bizarrely, none of the Appraisal of Sustainability documents appear to include a definition of sustainability. The Government has previously defined sustainable development as development which enables all people throughout the world to satisfy their basic needs and enjoy a better quality of life, without compromising the quality of life of future generations. (20) This is open to wide interpretation, particularly where a process which produces dangerous nuclear waste is involved.

Further clarity is provided by an organisation called *'The Natural Step'* which sets out four principles of sustainability. (21) These explain that sustainability must involve the elimination of our contribution to the progressive build-up of both substances extracted from the Earth's crust and substances produced by society. In other words, the UK should be aiming for a goal of zero production of all toxic/radioactive and/or persistent or bio-accumulative substances. Any production of such substances is likely to compromise the ability of future generations to satisfy basic needs and enjoy a better quality of life. Obviously these four principles represent the ideal to strive towards, but it is difficult to see how anything other than renewable energy can even begin to approach this ideal. The IPC should be directed accordingly.

3.2 Human Health

The individual site AoS's also deal with human health. The recent work of the Committee on Medical Aspects of Radiation in the Environment (COMARE) is discussed, along with the German KiKK study. (See for example paragraphs 4.41 – 4.47 in the Bradwell AoS – ref 12) Para 4.46 mentions that COMARE is currently undertaking a review of childhood cancers around nuclear power stations with particular reference to the KiKK study. It doesn't mention, however, that the results of this study will not be available until *after* this consultation has ended.

3.3 Scotland

The Energy NPS's may be a relevant consideration in planning decisions in Scotland because energy policy is not devolved (para 1.24). Secondly, the suite of NPS's does not include one on wave and tidal energy. The Government's intention is that the Secretary of State will decide on wave and tidal applications over 100MW until such time as an NPS is produced.

3.4 Nuclear Waste

Chapter 5 of the consultation document deals with the Draft Nuclear NPS (EN-6). With regard to nuclear waste (para 5.5) this chapter (including the summary of documents on

pages 40 – 42) gives a poor indication of the documents available and where to find them. These include: (a) Annex G of the consultation document (22); (b) Appraisal of Sustainability Waste Report (200 pages) (23); (c) The arrangements for the management and disposal of waste from new nuclear power stations: a summary of evidence. (53 pages) (24)

3.5 Greenfield sites

Chapter 5 also sets out the Government's preliminary conclusion that ten of the sites nominated into the Strategic Siting Assessment process are potentially suitable for new reactors. However, paragraph 5.46 notes the Government's "*considerable reservations about the practicability*" of the Braystones and Kirksanton sites for deployment by 2025. It says that credible nuclear power operators have been prepared to confirm these sites are deployable by 2025 and have undertaken to raise public awareness. This, it says, is not the case at Druridge Bay (Northumberland), Kingsnorth (Kent) and Owston Ferry (Lincolnshire), suggesting that these sites may be proposed for new reactor construction after 2025.

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

The draft Nuclear NPS (EN-6) differs from the other draft NPS's in that it lists sites judged to be potentially suitable for new reactors by the end of 2025. This list is the output from the Strategic Siting Assessment (SSA) process.

The draft NPS's will be subject to Parliamentary scrutiny. The Energy and Climate Change Committee has already called for written evidence to help it determine whether the energy NPSs are fit for purpose. The Committee will be receiving copies of written submissions made to the DECC's consultation but will also welcome additional comments. Although the consultation period is open until February 22nd, the Committee said it is only likely to be able to take account of submissions made before Friday January 15th. Oral hearings are set to take place in the New Year. (25)

Subject to this consultation and Parliamentary scrutiny, the Government intends to finalise and formally approve ('designate') the energy NPS's in 2010. The designated NPS's would then be the primary consideration for the IPC when it makes decisions on applications for development consent for nationally significant energy infrastructure.

4.1 The 'need' for nuclear power

Much of EN-6 covers the same issues dealt with in other documents mentioned above, but perhaps in more detail. For example Section 2 explains Government policy on nuclear power. Paragraph 2.5.1 repeats the contentious point is that nuclear power should be free to contribute as much as possible towards meeting the need for 25 GW of new non-renewable capacity, which means between 15 and 25 new reactors, depending on the type of reactor built.

Paragraph 2.5.6 continues: "*France has already demonstrated that it is technically feasible to build nuclear power stations at the rate that would be needed in the UK if new nuclear power stations were to be constructed on all 10 sites listed in this NPS by the end of 2025 ... it is, therefore, important for the IPC to consider and grant consent at a rate that is consistent with the rate at which energy companies may wish to build new nuclear power stations*".

4.2 Nuclear Waste

Probably the most contentious points made in this document concerns nuclear waste. The Government says its preliminary conclusion is that it is satisfied effective arrangements will exist to manage and dispose of the waste produced by new reactors. "*As a result the IPC need not consider this question.*" (para 3.8.20) Consequently the need to store spent nuclear fuel at the reactor sites for up to 160 years - is not even going to be examined by the new

IPC. Nor is the disposability of the new type of high burn up fuel which will be used in new reactors.

The Government says it has looked at: (a) whether geological disposal is technically achievable; (b) whether a suitable site can be identified for the geological disposal of higher activity waste; and (c) whether safe, secure and environmentally acceptable interim storage arrangements will be available until a geological disposal facility can accept the waste. (para 3.8.6)

The Government relies on the recommendations of the Committee on Radioactive Waste Management (CoRWM) on legacy waste, and concludes that spent fuel from new reactors does not raise significantly different technical problems. This is wrong on two counts. Firstly it ignores CoRWM's recommendation that confidence in deep disposal requires, amongst other things, an intensified research and development programme. Since this scientific requirement has not been met it is not possible to conclude that effective arrangements 'exist or will exist', even for legacy waste.²

It also ignores CoRWM's recommendation that the management of radioactive waste from new reactors should be subject to a separate process of examination. There will, as current planning arrangements stand, be no opportunity for communities selected for new nuclear power stations to consider whether they wish to volunteer to host a long term radioactive waste facility for up to 160 years: it would simply be imposed upon them. Therefore the social conditions (the principle of volunteerism) recommended by CoRWM would not have been met, which also means it is not possible to conclude that effective arrangements will exist.

Secondly, given the high burn up fuel expected to be used in new reactors which contains more enriched uranium, and is left in the reactor for longer, making it hotter and more radioactive, questions have been raised about its disposability. (26) The Government says *"despite some differences in characteristics ... spent fuel from new nuclear build would not raise such different technical issues compared with nuclear waste from legacy programmes as to require a different technical solution"*. (para 3.8.10)

Disposability assessments have been carried out by the NDA, for both the EPR and AP1000 reactors, (27) on behalf of the reactor construction companies for submission to the Generic Design Assessment (GDA). They concluded that no new issues arise that challenge the fundamental disposability of the spent fuel. The Environment Agency has yet to review these NDA assessments, but expects to consult on this in May or June 2010 – too late for those wishing to make a submission to the NPS consultation. (28)

In addition to concerns raised by CoRWM, there are far more fundamental concerns that were originally raised in the 1990s 'Public Inquiry into the nuclear industry (Nirex) plans to initiate a nuclear waste repository programme'. This proposal was rejected on generic scientific grounds (as well as for site specific reasons). These problems have still not been resolved.

Under the current Government proposals, it appears that the disposal of spent fuel and nuclear waste from new reactors may not be subject to further public scrutiny after 22nd February 2010. It looks likely that, as things stand at the moment, the IPC will be simply told that the strategic question of whether nuclear waste should be disposed of in a geological repository has already been decided. Therefore as a result, the Government position is that any planning application for a geological disposal facility only needs to be examined with regard to local planning issues.

2. Four former members of the government's Committee on Radioactive Waste Management, including its Chairman, Professor Gordon MacKerron, have written to Secretary of State for Energy and Climate Change, Ed Miliband, informing him of their concerns about the government's interpretation of radioactive waste management policy. (See http://www.no2nuclearpower.org.uk/news/CoRWM1_Letter_201109.pdf)

In August 2009 the Environment Agency produced a new list of nine “*major knowledge limitations on the technical issues*”, (29) and in its November 2005 review of Nirex's disposal plans, the Agency listed ten ‘key technical challenges’ “...where further work is needed before an acceptable repository safety case could be generated.” (30) In October 2009 the EU Joint Research Centre has listed nearly 40 technical issues that indicate that Nuclear Waste Disposal is not a proven technology. (31) It is hardly surprising then that in November 2009, Clive Williams of the Environment Agency specifically stated that: “*work may or may not indicate that an acceptable safety case can be made.*”³

The Government's confidence that it will find a suitable site in a community which has expressed a willingness to host a site is also misplaced. The three Cumbrian authorities looking into whether or not to volunteer will not finish the first round of consultation until 31st March 2010, and will not look at the radioactive waste inventory until later in 2010. The full extent of the new reactor programme is still unknown and may require a second deep geological disposal facility. Cumbria may yet decide against hosting a deep geological disposal facility, or it may decide it is only willing to host a facility for legacy waste. The Government has explicitly stated it is prepared to “*explore other approaches*” i.e. override a Community's wishes – if the voluntarism approach to disposal does not work. (32)

Clearly, the issue of dealing with nuclear waste already created (legacy waste) is far from resolved. The Government cannot, therefore, assume that waste produced by new reactors can be safely disposed of - along with legacy waste - in a deep geological disposal facility. Thus, the assumption that adequate arrangements for the long term management of radioactive waste from new reactors will exist when required is highly questionable.

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