

# *Nuclear Free Local Authorities* new nuclear monitor



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## **Response of the Nuclear Free Local Authorities to the National Nuclear Policy Statement Consultation**

### **NFLA response and how to provide individual local authority responses**

This official response of the Nuclear Free Local Authorities (NFLA) has been compiled by the NFLA Policy Adviser, Pete Roche in conjunction with the NFLA Secretary, Sean Morris. It has been formally endorsed by the NFLA Steering Committee at its meeting on January 29<sup>th</sup> 2010.

NFLA member authorities are strongly encouraged to respond to the Government's consultation, endorsing the NFLA response and adding in appropriate local information. To respond to the consultation go to the following website:

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

To respond by post send complete responses to FAO Robin Clarke, OPM, 252b Gray's Inn Road, London, WC1X 8XG, or email [energynpconsultation@opm.co.uk](mailto:energynpconsultation@opm.co.uk).

The consultation officially closes on **22nd February 2010**. The NFLA has also responded to the Parliamentary Energy and Climate Change Committee and the Parliamentary North West Select Committee on their inquiries into the Energy National Policy Statements. These can be found on the NFLA website.

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

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

The NFLA has also responded to the Government's separate draft decision on the justification of new nuclear reactors. This response is available in New Nuclear Monitor 20, which can be found at the NFLA website or contacting the NFLA Secretariat using the details below. This consultation also closes on 22<sup>nd</sup> February 2010, and NFLA member authorities are encouraged to respond formally to it.

The NFLA response solely concentrates on EN-1, the Overarching Energy NPS, and EN-6, the Nuclear NPS, which are in its direct remit. Local Authorities may wish to also respond to EN-2 – EN-5, which considers other forms of electricity generation.

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**THE LOCAL GOVERNMENT VOICE ON NUCLEAR ISSUES**

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## **NFLA Response to Overarching Energy National Policy Statement (EN-1)**

### **1. Do you think that the Government should formally approve ('designate') the draft Overarching Energy National Policy Statement?**

No. The draft Overarching National Policy Statement for Energy (EN-1) does not set out clearly what the criteria are for pushing utilities in a certain direction with regard to deciding the future generation mix.

EN-1 suggests the UK might need a generating capacity of around 100GW by 2020, of which around 43GW is expected to be new capacity. 26GW of this would need to be renewable to meet the UK 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.

EN-1 says the precise mix will depend on decisions by the utilities. However, it specifically encourages the nuclear industry, quite prominently, (para 3.1 page 13) to contribute as much as possible towards meeting the need for 25GW of non-renewable capacity by 2025, but only mentions briefly that offshore wind has the potential to provide an extra 25GW by 2020 (para 3.4.4 page 23).

Similarly, small-scale renewables are only expected to provide 2% of electricity – or around 4GW (para 3.3.18 page 20). This compares with the 12% which the European Photovoltaic Industry Association expects to be able to provide with just solar PV across Europe. (1) And the Chief Executive of National Grid, Steve Holliday, says that 15% of the country's electricity production could come from so called "embedded generation" in homes and offices by 2020 as micro-generation becomes increasingly viable after the £9 billion rollout of "smart meters" for every home in Britain. (2) This higher figure will include micro-CHP as well as small-scale renewables.

The NFLA believe the arguments in EN-1 on energy efficiency and decentralised energy as alternatives to new large scale electricity generation are weak and vague. (paras 3.3.16 to 3.3.19 pp19-20) The document claims that energy efficiency savings are likely to be limited and offset by 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'.

Unlike nuclear, energy efficiency and renewables are not encouraged to aim high.

If the generation mix is not being left to the market, but utilities are being pushed in certain directions, EN-1 should set out clearly the criteria being used in decision-making about the mix. This is particularly important given that both EDF and Eon have asked the Government to set a maximum contribution for renewables – at around the 30% level - so as not to constrain nuclear. (3) The criteria should set out the Government's priorities for electricity generation, for example stating the need to meet its sustainable development objectives by not generating radioactive waste or carbon emissions.

Obviously, in order to meet the Government's climate change objectives one criterion is going to have to be that the electricity generation should be low carbon. Para 2.3.2 of the Nuclear NPS (EN-6) claims that emissions from the nuclear cycle are around 7 - 22gCO<sub>2</sub>e/kWh. However, a recent meta-study which looked at 103 lifecycle studies concluded that the figure is more likely to be around 66g CO<sub>2</sub>e/kWh - worse than all the renewable alternatives, including solar PV. (4) If this is the main criterion being used to direct utilities in a certain direction then the Government needs to commission an independent investigation into what the real emission levels are. In particular, it needs to investigate whether, with increasing demand for uranium, ore quality will decrease causing emissions

from the whole nuclear cycle to rise substantially before the end of the life of proposed new reactors. (5)

**2. Does the draft Overarching Energy National Policy Statement provide the Infrastructure Planning Commission with the information it needs to reach a decision on whether or not to grant development consent?**

No. 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.

**3. Does the draft Overarching Energy National Policy Statement provide suitable information to the Infrastructure Planning Commission on the Government's energy and climate policy?**

No. Part 3 of EN-1 (Need for New Energy Infrastructure) focuses almost exclusively on electricity, rather than looking at heating and transport as well. The trouble is that electricity only provides around 18% of UK energy demand. (6) Transport and most space heating are provided by other sources of energy. Nuclear power provides around 20% of UK electricity, which only amounts to about 8% of total energy. Allowing for losses at the power station, nuclear power's current contribution to the UK's final energy consumption is only 3.6 % (80 TWh/y out of a final consumption of about 2,250 TWh/y). (7)

Therefore, replacing nuclear reactors will save only around 4% of the UK's carbon emissions. EN-1 makes no attempt to put proposals for new reactors into perspective in this way. The Government has said elsewhere that it challenges the view that 4% is not worth bothering with, and that it has to look across all forms of energy, especially because there will be a greater need to start using more electricity for transport and heating. (8) However, the IPC will need to be absolutely sure that by approving new nuclear reactors it is not going to negatively impact on the ability to deal with the other 96% of emissions.

The UK Government's Sustainable Development Commission (SDC), (9) Warwick Business School (10) and the Environment Agency (11) have all warned that a decision to proceed with new reactors could seriously undermine the development of a low carbon energy system.

SDC points out that, even with a doubling of nuclear capacity from current levels, cuts of at least 50% would still be needed from other measures if the UK is to meet its climate targets for 2050. (12) So it is important that our capacity to implement other carbon abatement measures is not damaged by any decision to go ahead with the construction of new reactors. SDC says a new nuclear programme would give out the wrong signal to consumers and businesses, implying that a major technological fix is all that's required, weakening the urgent action needed on energy efficiency. A new reactor programme will require "*a substantial slice of political leadership ... political attention would shift, and in all likelihood undermine efforts to pursue a strategy based on energy efficiency, renewables and more CHP.*" (13) Sir Jonathon Porritt, former chair of the Commission, says nuclear power is already seriously diverting attention from the hard decisions required to solve the UK's energy challenges. (14)

Furthermore, Warwick Business School argues that, far from complementing the necessary shift to a low carbon economy, the scale of the financial and institutional arrangements needed for new nuclear stations means they would fatally undermine the implementation of low carbon technologies and measures such as demand management, and therefore will ultimately undermine the shift to a true low carbon economy. (15)

The Government has a legal obligation to ensure that 'as far as is reasonably practicable, persons do not live in fuel poverty' by 2016 in England and 2018 in Wales, widely interpreted

as 'eradicating' fuel poverty. The Government is also committed to ending the blight of fuel poverty for vulnerable households by 2010. (16) Yet EN-1 only briefly mentions the issue. Para 2.1.20 appears to suggest that tackling fuel poverty will simply be left to the market:

*"...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".*

More than seven million households struggle to pay their fuel bills, almost double the official estimate, according to research published by the National Housing Federation. (17) Ofgem has estimated that renewing infrastructure and meeting carbon targets is likely to require an investment of up to £200 billion which will mean significant increases in domestic energy bills of between 14% and 25% by 2020. (18) Clearly climate policy also has to take into account fuel poverty. Without an integrated strategy for both there is a danger that climate policy will end up worsening the situation with regard to fuel poverty.

It is clear now that the 2010 target is unobtainable. There are parallel worries about the achievability of the 2016 target. The numbers of those suffering still appears to be growing. This worsening fuel poverty would be constraining policy options for climate change alleviation, if the Government were serious about tackling both. Moving towards more electric heating, for example, would not be an option. On the other hand, policies that focus on energy efficiency for the fuel poor, including insulation and appliances would be necessary and appropriate. (19)

If the Government is to meet its target to reduce carbon emissions by 80% by 2050, AND eliminate fuel poverty by 2016, it will need to implement a set of policies which can cut emissions from the domestic sector by 80% by 2050. Every house will need excellent insulation and some form of Low and Zero Carbon Technology – micro-generation or community heating schemes. This means carrying out installations in all of the UK's 25 million dwellings over the next 40 years or 625,000 dwellings every year between now and 2050. (20)

Clearly, there are strong policy synergies between the need to reduce fuel poverty and the need to reduce carbon emissions. Brenda Boardman, Emeritus Fellow with the Lower Carbon Future at the Environmental Change Institute at Oxford University – the person who in many ways can be said to have identified and defined fuel poverty says:

*"The real challenge is to make sure that both sets of policies focus on both sets of priorities, at the same time."* (21)

EN-1 needs to be re-written to take this into account. Attempts to tackle fuel poverty through fuel pricing policy as suggested by EN-1 have failed for 30 years.

#### **4. Does the draft Overarching Energy National Policy Statement provide suitable direction to the Infrastructure Planning Commission on the need and urgency for new energy infrastructure?**

The question should be asking whether EN-1 provides suitable direction to the IPC on the need and urgency to reduce carbon emissions whilst maintaining security of supply. The answer to this question is that no it doesn't.

To tackle climate change, the speed with which carbon abatement measures are introduced is important. Para 3.5.2 refers to the urgent need for low carbon forms of electricity to contribute to the energy system, but makes it clear that the earliest a new nuclear reactor could start contributing is 2018. By 2025 a new nuclear programme might have reduced UK emissions by 4% compared with what they would have been without new reactors.

Unless we make significant progress before 2025 then the chances of meeting the required targets will be very slender indeed, because the cumulative emissions between now and 2025 will be so high that greater reductions requiring huge additional investment will be needed after 2025 if there is to be any hope of keeping the global temperature increase below 2°C. And it will be much more difficult to achieve the required 80% cuts in carbon emissions by 2050. (22)

During the period when reactors are being constructed, capital is tied up and therefore unavailable for investing in alternative carbon abatement techniques, yet reductions in carbon emissions do not begin until the reactor is operational. Because nuclear investments are also inherently slower to deploy, then such investments also retard carbon displacement. Spending on energy efficiency measures can be put into effect much more quickly. (23)

The UK Association for the Conservation of Energy, for example, says if one new nuclear reactor is operating by 2020, it could be delivering perhaps just over one million tonnes of carbon saving. In contrast energy efficiency "could save around 25 million tonnes of carbon through cost-effective energy efficiency measures" by that date. (24)

Similarly, decentralised energy can be installed quickly without needing complex regulatory processes. Keith Barnham, Emeritus Professor of physics at Imperial College says the most significant feature of the newer wind turbine and PV systems is that they come in small units and can be installed very quickly - much shorter lead-in times than the 10-year wait for nuclear stations and installations can grow exponentially. (25)

EN-1 fails to express the urgency with which we need to start reducing carbon emissions. The failure of the Copenhagen Conference to come up with a legally binding set of climate targets means all public agencies must redouble their efforts to open up new fronts at the local and grassroots levels to reduce carbon emissions.

The 2003 Energy White Paper promised a "step change" in policies and programmes to deliver energy efficiency with local authorities taking the lead, acting as catalysts for change. (26) The UK is still waiting for this step change. Energy efficiency schemes implemented by local authorities have the potential to make dramatic carbon savings quickly. The trailblazing work of a few local councils, such as Manchester and Kirklees, is beginning to show how grassroots campaigns can be turned into effective action. A groundswell of actions by individual communities led by local authorities will need all the financial support they can get from national government. But if the Government is focused on getting new nuclear reactors built to the exclusion of building a local decentralised energy system, then it will be difficult for local authorities to continue this exciting leadership role, and without the central government support these schemes will never be ambitious enough or at the scale required to meet carbon abatement targets.

The Local Government Association (LGA) agrees that local government is pivotal to delivering the step-change in CO<sub>2</sub> emissions reductions required. (27) The scope for local authority action is significant. Through delivery of services such as transport, planning and housing as well as through their influence on all sectors of the community, local authorities can make reductions in emissions from corporate activities and through stimulating savings in the wider community. Such action can help to deliver joint social, economic and environmental aims and link together initiatives to maximise their impact.

**5. Do the assessment principles in the draft Overarching Energy National Policy Statement provide suitable direction to the Infrastructure Planning Commission to inform its decision-making?**

Part 4 of EN-1 on Assessment Principles and Generic Impacts lacks a coherent message. Given that, rather surprisingly, none of the Appraisal of Sustainability documents appear to

include a definition of sustainability, it would make sense to give the IPC some direction on assessing the 'sustainability' of an energy infrastructure project.

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. (28) 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. (29) 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.

**6. Does the draft Overarching Energy National Policy Statement appropriately cover the generic impacts of new energy infrastructure and potential options to mitigate those impacts?**

**Climate 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). Para 4.8.6 only requires applicants to take account of the latest UK Climate Projections, but does not specify whether they should take into account high medium or low emission scenarios. (30) This is a fast moving area of research. For example, recent study published in the Proceedings of the National Academy of Sciences (31) 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 (32) (and compared with around 40-50cm in the UK's high emission scenario climate projections).

Given the uncertainties involved in predicting sea-level rises, applicants (and 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.

**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. (33) Applicants should be required to implement mitigation measures to avoid these problems.

**7. Do you have any comments on any aspect of the draft Overarching Energy National Policy Statement not covered by the previous questions?**

The IPC is required to have regard to any local impact report submitted by a relevant local authority. The IPC should also encourage local authorities to submit reports on alternatives to the applicant's proposal.

Any new energy infrastructure project will have an opportunity cost - the cost of forgoing the alternative outcomes that could have been purchased with the same money. This is not reflected in EN-1. This particularly impacts on local authorities who, in the case of new nuclear reactors, could achieve far more if the money were spent instead on energy efficiency and renewables.

The proponents of nuclear power argue that, because climate change is serious we need to promote renewables, energy efficiency *and* nuclear power. This suggests the UK has infinite sources of finance to spend on large numbers of energy projects, which is clearly not the case, and particularly so given the extent of the public finances and a worldwide economic recession. A scarcity of resources means anything that is spent on nuclear power will not be available to be spent on other energy projects. Since tackling climate change is an urgent priority, so the UK, as a nation, needs to spend its limited resources as effectively as possible. There should be some recognition in EN-1 of the need to assess the effectiveness of spending decisions compared with alternative spending scenarios. It is imperative that we maximize the carbon reductions achieved with every pound spent. Investing in expensive nuclear power is not cost effective. Energy efficiency can be up to seven times more cost effective. So investment in new reactors effectively worsens climate change because each pound spent is buying so much less of a 'solution' than if it were spent it on energy efficiency measures. (34)

### **Response to Nuclear National Policy Statement (EN-6)**

**16. Do you think that the Government should formally approve ('designate') the draft Nuclear National Policy Statement?**

No. The NFLA answer to question 19, in particular, explains why EN-6 is not "fit for purpose".

**17. Does the draft Nuclear National Policy Statement provide the Infrastructure Planning Commission with the information it needs to reach a decision on whether or not to grant development consent?**

Section 2 explains Government policy on nuclear power. Paragraph 2.5.1 repeats the contentious point 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.

Obviously, the generation mix is not being left to the market, but utilities are being pushed in certain directions (see response to question 1). The IPC will still need to know the criteria being used in decision-making about the mix in case conflicts arise, for example between decisions about proposed new reactors and proposed wind-farms. The criteria should set out the Government's priorities for electricity generation, for example stating the need to meet its sustainable development objectives by not generating radioactive waste or carbon emissions.

New nuclear reactor developments may also start to conflict with other Government policy objectives such as fuel poverty and climate change objectives.

**18. Does the draft Nuclear National Policy Statement provide suitable direction to the Infrastructure Planning Commission on the need and urgency for new nuclear power stations?**

It is important that the IPC considers problems occurring around the world with regard to reactor construction projects taking longer than scheduled and going over budget. If reactor construction fails to result in the replacement of existing capacity because of construction delays then it will be impossible for the Government to meet its climate change commitments.

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*".

It is also important for the IPC to consider problems occurring around the world with regard to reactor construction. Finland's Olkiluoto 3 reactor was supposed to be the showpiece of a nuclear renaissance, for example. Its modular design was supposed to make it faster and cheaper to build. After four years of construction and thousands of defects and deficiencies, the reactor's €3 billion price tag has climbed at least 50%. And while the reactor was originally meant to be completed in summer 2009, Areva, the French company building it, and TVO, the utility that ordered it, are no longer willing to predict when it will go online. (35)

In March 2006 EDF expected the second EPR reactor at Flamanville in France to cost €3.3bn, (10% more than the contracted Olkiluoto in Finland price) and the lead-time to be 54 months instead of the 48 month period forecast for Olkiluoto. But this increased to €4bn in 2008. (36)

Problems are not confined to Europe. Country after country has seen nuclear construction programmes go considerably over budget - for example, completion costs for the last ten Indian reactors have been 300% over budget. (37) China's Tianwan project began commercial operation in June 2007, more than two years later than planned. The Chinese regulator halted construction for almost a year on the first of two Russian-designed reactors while it examined welds in the steel liner for the reactor core. In Taiwan, the Lungmen reactor project was five years behind schedule. Difficulties included welds that failed inspections in 2002 and had to be redone. The World Energy Council says construction times for new reactors have risen from 66 months in the mid-1970s to 116 months - nearly ten years - for completions between 1995 and 2000. The unproven designs being proposed for the UK are likely to lead to more potential delays.

If reactor construction fails to result in the replacement of existing capacity because of construction delays or public opposition, the IPC needs to be able to assist with the implementation an alternative plan. Gordon MacKerron, former Chair of the Committee on Radioactive Waste Management (CoRWM), puts forward a worst-case scenario that following a commitment to nuclear new-build there is a sterilisation of non-nuclear investment and then the nuclear programme itself stalls. Such a scenario is far from a remote chance - the last time a UK government committed to 10 nuclear stations (Margaret Thatcher's in 1979) only one station was built, Sizewell, and then only after 15 years. If that were to happen again, carbon dioxide emissions would continue to increase. (38) Similarly, Bridget Woodman, formerly of Warwick Business School, suggests a "nightmare scenario" in which a commitment to new reactors leads to a stalling of renewables and combined heat and power stations, but nuclear power fails too, leading to an inevitable rise in carbon emissions. (39)

Another former CoRWM member, Professor Andrew Blowers of the Open University, warns that nuclear power provides the illusion of a solution. He says: "*It is this business-as-usual aspect of nuclear that is its most insidious characteristic. ... The danger is that by focusing on nuclear we refrain from recognizing the scale of the challenge we face and shirk our responsibility for dealing with it*". (40)

**19. Do you agree with the Government's preliminary conclusion that effective arrangements will exist to manage and dispose of the waste that will be produced by new nuclear power stations in the UK?**

No. The Government's conclusion that effective arrangements will exist to manage and dispose of waste produced from new nuclear power stations is not supported by the evidence. EN-6 is, therefore, not 'fit for purpose'.

The Government's confidence that it will find a suitable site in a community which has expressed a willingness to host a site is misplaced. The three Cumbrian authorities looking into whether or not to volunteer will not finish the first round of consultation until 31<sup>st</sup> 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 fact that 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 has completely undermined the voluntary approach and suggests that Cumbria could be forced to accept waste whether it wants to or not. (41)

The Government says because it is satisfied effective arrangements will exist to manage and dispose of the waste produced by new reactors "*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. No information is given on how this waste might be transported away from reactor sites eventually, and whether facilities might be required in future for, for example, encapsulating the waste. The public living around the proposed nuclear sites are to be given almost no say on whether their area should be allowed to become a *de facto* nuclear waste storage site for the foreseeable future. This is in sharp contrast to the voluntarist approach recommended by the Committee on Radioactive Waste Management.

The Government cannot assume that waste produced by new reactors can be safely disposed of - along with legacy waste - in a deep geological disposal facility, because a whole host of issues connected to disposal have yet to be resolved. Technical problems associated with a disposal facility are legion and most are recognised by the Environment Agency, thereby making any assertion of confidence in the disposability of radioactive waste premature. (42) Thus, the assumption that adequate arrangements for the long term management of radioactive waste from new reactors will exist when required is highly questionable.

If the Government is dropping its voluntarist approach to nuclear waste management and moving back to the previous decide-announce-defend position it should state this clearly. Under the Planning Act 2008 the Nuclear NPS consultation appears to be the last chance to challenge the principle that new nuclear reactors should be built at the ten proposed sites, and that these reactors should be permitted to generate spent nuclear waste fuel which may be stored on the sites for up to 160 years. The Justification consultation quotes the International Commission on Radiological Protection (ICRP) Publication 77 which states that:

*"Waste management and disposal operations are an integral part of the practice generating the waste. It is wrong to regard them as a free standing practice that needs its own justification."* (43)

In other words, the disposal of spent fuel and nuclear waste from new reactors may well be subject to no further public scrutiny after 22<sup>nd</sup> February 2010. The Government needs to explain what the process will be should an application for permission to construct a deep geological disposal facility be received. 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 and that any planning application only needs to be examined with regard to local planning issues. There will effectively be no Nirex Inquiry Part 2. In other words, Cumbria, or anywhere else, could be forced to accept a geological disposal facility against its will without even so much as a public inquiry.

**20. Does the draft Nuclear National Policy Statement appropriately cover the impacts of new nuclear power stations and potential options to mitigate those impacts?**

No. EN-6 is not fit for purpose because the examination of the KiKK study being carried out by the Committee on Medical Aspects of Radiation in the Environment (COMARE) has not been completed in time for this consultation, and has not been subjected to an independent critique.

The individual site Appraisals of Sustainability (AoSs) deal with human health in more detail than the main EN-6 report. The recent work of 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.

It is not acceptable for something as important as the COMARE review to be published after this consultation has closed.

**21. Do you agree with the Government's preliminary conclusion on the potential suitability of sites nominated into the Strategic Siting Assessment, as set out below? You can respond in general terms on the assessment as a whole, or against one or more specific sites.**

No. Evidence strongly suggests that sea level rise and storm surges on the level of the 1953 floods will be the inevitable consequences of climate change (and coastal sinking) during the next century. The decision to consider building such hazardous facilities as nuclear power stations and their associated waste storage facilities on low lying land which in many cases is vulnerable to subsidence and rising sea level, is not sensible.

It is inconceivable that the selection of sites on vulnerable coasts in southern England represents 'good sense', given that the risks from climate change in the form of sea level rise, storm surge and coastal erosion at the favoured sites are serious and increasing over time. 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 coastal sites like the Sizewell nuclear site on the Suffolk coast might have to be abandoned. It 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 until 2180 or later. (44) The Flood Hazard Research Centre at Middlesex University concluded that there could be problems at three of the favoured sites, Bradwell, Hinkley, and Sizewell, as well as Dungeness. 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*". (45)

Emergency Planning issues clearly need to be examined in more detail before concluding the nominated sites are suitable.

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. (46)

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.*" (47)

**26. Do you have any comments on any aspect of the draft Nuclear National Policy Statement or its associated documents not covered by the previous questions?**

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

The Government dismisses concerns about terrorism risks saying it believes the regulatory framework will ensure that risks are minimised and sensibly managed by the industry. The regulatory framework requires nuclear power stations to have their security arrangements approved by the Office for Civil Nuclear Security. The Generic Design Assessment (GDA) is also considering a wide range of hazards including the ability of reactors to withstand accidental aircraft crash or malicious activity. (48)

Nuclear terrorism has the potential to cause a large number of deaths, and the risk of a successful attack will increase if more nuclear power stations and radioactive waste stores are built. (49) Yet local authorities have very little input into these areas. In fact, information on nuclear reactors and radioactive waste facilities is likely to be increasingly withheld, because of security risks, reversing the trend of the last decade to allow greater openness and transparency in what has traditionally been a highly secretive industry. (50) So great is the risk of a terrorist attack on nuclear facilities that some say nuclear power should no longer have a role to play in supplying energy. (51)

Leaked documents by EdF on the vulnerability of the new European Pressurised water Reactor (EPR) to terrorist attack revealed a dangerously flawed approach to security. (52) Nuclear engineering consultancy, Large and Associates, has assessed the secret EdF document and concluded that it includes seriously flawed assumptions about whether the reactor could withstand a potential terrorist attack using hijacked commercial aircraft. (53) Clearly modes of attack other than crashing a passenger aircraft into a nuclear site also need to be considered, such as attacks involving vehicles loaded with explosives, or suicide bombers. (54) NFLA believes that if these issues cannot be debated in an open and transparent way because of security concerns, then we have to conclude that new reactors are not compatible with an open and democratic society.

**28. Does this package of draft energy National Policy Statements provide a useful reference for those wishing to engage in the process for development consent for nationally significant energy infrastructure, particularly for applicants?**

No. The sheer volume of material which it is necessary to read in order to comment makes it impossible for ordinary members of the public to engage with the process. This whole exercise needs to be re-thought and started again from scratch.

29. **Do you have any comments on any aspect of the draft energy National Policy Statements or their associated documents not covered by the previous questions?**

The NFLA is seriously concerned about how the Planning Act represents an attack on democratic accountability. (55) In the case of applications to build nuclear power stations the removal of the right to cross examine witnesses is particularly disturbing. The new Act means that the IPC will normally make decisions without even a public hearing. The Government could go some way towards rectifying this situation by instructing the IPC to hold public hearings in the case of applications for nuclear power stations.

NFLA is also concerned that there may be a perception, amongst some community groups, of potential collusion between the applicant and the local authority when a Planning Performance Agreement is reached, with funding going from the applicant to the local authority. The "perception" of collusion could seriously strain relationships between the local authority and its citizens, because of the danger that any funding from the developer will compromise the local authority's final recommendations. The Government should seriously consider making alternative funding arrangements for the planning authority.

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## Information on the NFLA

The NFLA is the principal local authority organisation in the UK and Ireland working on nuclear issues. It has 70 member authorities and its terms of reference can be found at the NFLA website – <http://www.nuclearpolicy.info>.