

Nuclear Free Local Authorities **RADIOACTIVE WASTE POLICY**

Briefing No.43 – Siting process for a deep waste repository

Prepared for NFLA member authorities, October 2013

Review of the Siting Process for a Geological Disposal Facility – Advice note to NFLA Member Authorities in Responding to the Consultation

i. Overview of Policy Briefing

Since 2008, the UK Government has been pursuing a policy to find a suitable site for construction of a deep underground repository for the storage of high and intermediate level radioactive waste – often referred to by the Government and the Nuclear Decommissioning Authority as a ‘Geological Disposal Facility’. The Government has also been committed to a ‘voluntarist’ approach to seek community support for a suitable facility and has sought local authorities to ‘volunteer’ to host such a facility. The only Councils that have formally engaged this process were the District Councils of Copeland and Allerdale, in association with the waste management authority Cumbria County Council. In January 2013, after a thorough consideration of the process, the Cabinet of Cumbria County Council decided not to go ahead with the next stage of the process. Despite Copeland and Allerdale voting in favour of moving ahead with the ‘Managing Radioactive Waste Safely’ (MRWS) process, Cumbria’s decision effectively curtailed the process as it then stood.

In June 2013, the Department of Energy and Climate Change (DECC) issued a short consultation seeking ‘lessons learned’ from the MRWS process in order to consider how to take the policy forward, given Cumbria’s decision. The NFLA responded in detail to this consultation and its response can be downloaded from the NFLA website as Radioactive Waste Briefing 39 – http://www.nuclearpolicy.info/docs/radwaste/NFLA_RWB_39_MRWS_lessons_learned.pdf. DECC have published the over 180 responses to this consultation and they can be downloaded from the following website: <http://www.gov.uk/government/consultations/managing-radioactive-waste-safely-call-for-evidence-on-the-siting-process-for-a-geological-disposal-facility>.

DECC have now considered these responses and have launched a new consultation on how to take forward the MRWS policy. The consultation can be downloaded from the following UK Government web address: <http://www.gov.uk/government/consultations/geological-disposal-facility-siting-process-review>.

This NFLA Policy Briefing, developed for it by the NFLA Policy Advisor Pete Roche, seeks to provide an overview of the radioactive waste debate and a model response to enable NFLA member authorities to respond to the consultation. The NFLA formal response will contain the information in this briefing and it was agreed by members of the NFLA Steering Committee at its meeting in Manchester on the 4th October 2013.

The NFLA Secretariat strongly encourages member authorities to respond to the DECC consultation using this model response as a template. The closing date for responding to the consultation is the 5th December 2013. All consultation submissions should be emailed to DECC at the following address: radioactivewaste@decc.gsi.gov.uk. It should be noted that, though this is a UK wide consultation, the Scottish Government has developed a different policy for dealing with intermediate and high level radioactive waste, so this consultation relates to England and Wales.

A number of special regional workshops and a NGO workshop to discuss the consultation was announced by DECC at the DECC NGO Forum meeting in London on the 1st October, but dates and locations for the workshops have not been announced. In the NFLA’s view such workshops should have been announced when the consultation was initially published in September, as has NFLA Radioactive Waste Briefing 43 – Siting of a deep underground radwaste repository

been custom and practice with previous nuclear policy consultations. The NFLA Secretariat will endeavour to attend these workshops and advertise them to member authorities. The NFLA Secretary has been asked by DECC to be part of a small sub-group to monitor progress with the consultation and will provide a report of these meetings at the NFLA Steering Committee being held in Cardiff on December 6th 2013.

1. Introduction

The June 2008 White Paper on “A Framework for Implementing Geological Disposal” (1) set out an approach to the siting of a geological disposal facility (GDF) based on voluntarism and partnership. This process failed, partly because of the intractability of the nuclear waste problem, but also because of the Government’s refusal to accept most of the recommendations of its own advisory committee – the Committee on Radioactive Waste Management (CoRWM).

The new proposals, set out in the latest consultation document (2) represent a highly counter-productive move back to centralised control, whilst continuing to pay lip service to voluntarism. To many it will look like a thinly disguised attempt to change the rules so a new site selection process can start in West Cumbria despite opposition from the County Council. The former Conservative Leader of Cumbria County Council Eddie Martin called the proposed changes laid out in DECC’s new consultation as “astonishingly undemocratic”.

He went on to say: "David Cameron talks about the big society and localism but abandons them when they do not suit him. (Cumbria County Council’s decision)...was a decision taken after much thought, hundreds of hours of work and visits to Canada and Sweden." (3)

Such comments have been reiterated in letters by the interested general public to the local West Cumbrian media. To quote one correspondent to *The Whitehaven News*:

“...it is a brazen, shameless, unlawful and outrageous attempt to usurp our democratic rights to get the result they want ... [a] pathetically transparent attempt to re-launch MRWS as a national process. Government has been obsessed with siting the GDF in West Cumbria since the 1980s and is intent on rigging the process and also cooking the geological books to achieve this.” (4)

In the NFLA’s view, the UK Government should scrap this consultation and go back to the drawing board.

2. Priority should be storage

The scope of this consultation is focussed solely on finding a site for a geological repository. In the NFLA’s view, this looks very rushed with a steering group and consultative partnership formed in areas where there may be a reasonable prospect of finding suitable geology in as little as two years from now. The consultation has also been issued without concurrent workshops, which are only now being suggested as an afterthought a month after the consultation was issued.

The clean up and management of existing legacy wastes especially at Sellafield is clearly a more immediate priority. As CoRWM pointed out, given the uncertainties surrounding the implementation of geological disposal, there needs to be a focus on the safe and secure management of wastes in robust interim stores, not just for the period while we await the opening of a GDF, but also because of a risk of delay or failure in the repository programme. The possibility storage might be required for the long term or even indefinitely needs to be considered. The Government should instead be consulting on strategies for interim storage and the implications new reactors will have for long term storage, including the need to find appropriate and secure locations for spent fuel stores into the far future.

CoRWM was clear – the deep ‘disposal’ of radioactive waste is far from a proven technology. It recommended an intensified programme of research and development into the long-term safety of geological disposal, but also a robust programme of interim storage.

It is currently not possible to demonstrate with any scientific credibility that radiation doses to people from a GDF would be at an acceptably low level into the far distant future. There are simply too many uncertainties about how packaged nuclear waste will behave underground. For instance, it is possible that radioactive carbon in methane could breach acceptable dose limits on the surface after that repository has been closed for just 40 years. (5)

3. Openness and transparency a prerequisite

CoRWM also recommended a process in which stakeholders and the public had confidence with a high level of engagement, openness and transparency to ensure continuance of and a building on that confidence. The Government has manifestly failed to implement this. The first step in any new process must be to develop a comprehensive programme of research and development into examining the uncertainties of disposal, and improving robust interim storage. Technical and scientific uncertainties as well as ethical issues should be examined in a process which is accessible and open to scrutiny.

4. What do we want geology to achieve?

Most people would be astonished to learn that the Government is not searching for the best geology which can achieve maximum containment of radionuclides. This was a key factor in Cumbria County Council's decision to withdraw from the process. Its leader, Eddie Martin said "*The key question for us, however, is whether or not Cumbria is the optimum location.*" (6)

The Government's view is that "*there is no 'best' or 'most suitable' generic type of geology*" and that "*engineered elements can be tailored*" to meet the requirements of different geologies. (7) It was clear in the West Cumbria Managing Radioactive Waste Safely Partnership Report that RWMD is only looking for a site which is "*sufficiently good*". RWMD's view is that "*although characterising and demonstrating safety is more challenging for a comparatively complex site [as sites in West Cumbria would be geologically speaking] than for a simpler site this does not prevent complex sites from being considered*". (8) This issue is too important to be left to RWMD and DECC to decide between them. There should be a national debate about whether we are looking for the best geology for the job or whether we are happy to use mediocre geology and rely more heavily on engineered barriers.

5. Do we know enough about the science to make a safety case?

Geological disposal purports to involve immobilising radioactive waste within multiple, engineered barriers, and then isolating it deep inside a suitable rock formation to ensure that no harmful quantities of radioactivity ever reach the surface environment. But radioactive chemicals can migrate from a repository by dissolving in underground water or by being carried to the surface through rock fractures as a gas. This involves complex chemical and geological, processes. The government and its agencies have so far failed to demonstrate an ability to gather sufficient accurate information to enable a sufficiently rigorous calculation of the extent to which radioactive chemicals will escape – and hence they are unable to provide a robust evaluation of the safety and give the assurances on health and environmental contamination communities require.

It is impossible to demonstrate with any scientific credibility that radiation doses to people from a nuclear waste repository would be at an acceptably low level into the far distant future, if we can't be sure how nuclear waste will behave underground. For instance, methane and carbon dioxide will be produced in bulk in a GDF and the extent to which these gases are radioactive will depend on how much radioactive carbon is in the waste. Originally it was thought that these gases would combine with cement placed around waste drums, but now it is thought that this won't happen with methane. This serves to illustrate the huge uncertainties involved in estimating the behaviour of radioactive chemicals underground.

RWMD has listed 900 outstanding scientific and technical issues, which need to be resolved but because 400 of these were internally raised and work on resolving them is already in-hand they were removed leaving 500 issues listed in a March 2012 RWMD report. (9) The process of resolving the 900 issues needs to be much more open and transparent.

6. Model Response for Consultation Document Questions

Question 1: Do you agree that a test of public support should be taken before the representative authority loses the Right of Withdrawal? If so, what do you think would be the most appropriate means of testing public support, and when should it take place? If you do not agree with the need for such a test, please explain why.

The consultation document is, to all intents and purposes, conflating the idea of “community” with the phrase “representative authority”.

We know that during the previous process that out of 88 local and parish councils in Copeland and Allerdale, 53 expressed a view on moving on to the site selection phase of the process with only 8 in favour and the rest against. (10) The West Cumbria Managing Radioactive Waste Safely Partnership carried out an opinion poll which found that a small majority of those asked were in favour of moving on to the next stage. But 19% of those asked had never heard of the proposals; and 61% had either just heard of it or knew ‘just a little’ about it. (11)

The system being proposed is one in which a steering committee made up of the “representative authority”, RWMD and the Government could decide to go-ahead with very limited support from an ill-informed population. The establishment of a hierarchical system with all other organisations such as Parish Councils and the County Council relegated to a consultative committee will not work. If the process is to achieve widespread community support, all levels of government and civil society need to be part of the decision-making process rather than simply being consulted.

Public support needs to be measured on the basis of informed consent. Excluding the County and Parish Councils from the Steering Group will make it impossible for the representative authority to demonstrate *informed* public support.

District Councils and representative authorities should also be in a position where they are fully informed about the issues. Representative authorities should not just have to show community support, but also need to show that they and their community are supporting the project on the basis of informed consent, rather than simply being attracted by the idea of a community benefits package.

The idea that because District Councils have full-time staff they can somehow become better qualified to make a judgement on a highly complicated area of scientific controversy is absurd, particular in this era of public spending cuts. Communities asked to consider any kind of highly complex technological development, such as a GDF, should be funded so that they can obtain independent and impartial scientific advice rather than being forced to rely on the advice given by those working to support the development. As well as local (Parish, District and County) councils this should also apply to grassroots community organisations and NGOs.

In Sweden, any Non Governmental Organisation above a certain size can apply for funds from the Swedish Waste Fund established by the nuclear industry to monitor and become involved in the final repository project. The Swedish NGO Office for Nuclear Waste Review (MKG) was set up by a coalition of environmental organizations in 2004. MKG is participating in the consultation process, but aims to provide a critical voice.

Question 2 – Do you agree with the proposed amendments to decision making within the MRWS siting process? If not, how would you modify the proposed phased approach, or, alternatively, what different approach would you propose? Please explain your reasoning.

The Government is proposing a “*national public awareness and engagement programme*” to ensure “*a greater general awareness and understanding of the issues, leading to a more balanced and well informed debate on GDF across the country*”. This will supposedly allow potentially interested community representatives to find out more from the Government and RWMD, without the risk of pressure to take early decisions.

This public awareness programme is to be followed by a 'learning phase'. The description of this in the consultation document only mentions the "representative authority" learning from Government and RWMD.

Deep geological disposal is not only highly controversial, but also an area of huge scientific uncertainty. Public awareness programmes and "learning phases" are in danger of being seen as simply indoctrination campaigns if all the learning is from one side of the debate represented by the Government and RWMD.

It is the Government and its agency RWMD that wants to build a GDF. Any public awareness campaign needs to be organised by an independent body, not the developer, and should be carried out on the basis that all sides of the debate are represented fairly with equal resources.

Question 3 – Do you agree with this approach to revising roles in the siting process set out in the White Paper? If not, what alternative approach would you propose and why?

As indicated above, the value of Government providing information earlier in the programme is questionable, because it is likely to be seen as a biased supporter of one side of the debate.

For instance the Secretary of State for Energy and Climate Change Davey told *The Guardian* in July that: "

The waste from new nuclear will take up less volume – that would mean a slightly larger geological waste disposal facility than was needed anyway." (12)

This is a biased way of presenting the information, and, in fact the second part of the statement is factually incorrect. A proper analysis would show that volume is not the important criteria when discussing the amount of waste produced by new reactors – it is the radioactivity and the heat generated that is important. The Government's Committee on Radioactive Waste Management (CoRWM) estimated that a programme of ten new AP1000 reactors would increase the amount of radioactivity held in all nuclear wastes by 265% - in other words almost tripling the radioactivity. (13) The NDA says that a 10GW programme of new reactors would roughly double the size of the "repository footprint" – the area underground taken up by waste. A 16GW programme – the Government's rather ambitious target - would increase the footprint by up to three times. (14)

It is proposed that the NDA should advocate geological disposal as an essential enabler for its decommissioning and waste management responsibilities. The phrase "essential enabler" implies that decommissioning and waste management work will in some way be delayed if a GDF does not go-ahead. The NDA's role should be to stop producing new waste as quickly as possible, and to develop robust interim storage facilities for waste already created or which is unavoidable, not to make up excuses for rushing into geological disposal.

The consultation document says the UK Government is keen to explore options for more effective engagement with NGOs and other groups, some of whom may be opposed to the implementation of geological disposal, and that NGOs may be prepared to provide a constructive challenge function in the process, helping to ensure that it is robust. Without a clear commitment from the Government to organise an independent and unbiased public awareness process and learning phase which covers all sides of the argument this is simply consigning all those sceptical about geological disposal to a backwater without even the promise of funding to act as a critical voice in the process.

Question 4 – Do you agree with this proposed approach to assessing geological suitability as part of the MRWS siting process? If not, what alternative approach would you propose and why?

The Government is proposing that a geological assessment would be carried out by the British Geological Survey (BGS) in an area covered by the "representative authority" during the "learning phase". This is expected to provide sufficient information to enable an early judgement on whether there are 'reasonable prospects' of any particular area being suitable for a GDF. If there are

'reasonable prospects' of finding a suitable geological formation, then both the representative authority and the UK Government can decide to move into the 'Focusing' phase, when further assessments would be undertaken to identify potential sites.

The majority of respondents to the Government's Call for Evidence earlier this year called for earlier consideration of geological information in the siting process, with some seeking a technical screening of areas with the 'most suitable' geology before inviting volunteers to join the siting process. But the Government says it doesn't want to use criteria to identify (or 'pre-screen') areas that are considered 'suitable' or 'unsuitable' at the outset. It says this would risk excluding areas with suitable geology by oversimplifying the process. It says there is a large range of potentially suitable geological settings in the UK, so it is difficult to define simple high level criteria which could be applied effectively at a national level. Different sites will have different potential advantages, and the engineered elements can be tailored to these.

RWMD's view is that "*although characterising and demonstrating safety is more challenging for a comparatively complex site [as sites in West Cumbria will be geologically speaking] than for a simpler site this does not prevent complex sites from being considered*". (15) It says it is only looking for a site which is "*sufficiently good*".

Prof David Smythe, (Emeritus Professor of Geology at Glasgow University) on the other hand, says West Cumbria is, by any objective scientific standard, completely unsuitable. There are vast regions in eastern England where a suitable repository site could be found, either in thick clay or in hard crystalline rock below flat sedimentary layers. Nirex listed 537 UK sites in 1988, but the Sellafield site selected by Nirex for investigation in 1991 was not on the original list.

There is clearly a fundamental disagreement between those who feel we only need to find a site with mediocre geology and can then rely more heavily on engineered barriers, and those who think we should be looking for a site with excellent properties for containing nuclear waste into the far future. There should be a national debate about whether we are looking for the best geology for the job or whether we are happy to use mediocre geology and rely more heavily on engineered barriers. This could be started by asking BGS to weigh up West Cumbria against other UK regions - something the 1997 Nirex Inquiry Inspector asked for.

Question 5 – Do you agree with this proposed approach to planning for the geological disposal facility? If not, what alternative approach would you propose and why?

The UK Government believes there are clear advantages to using the nationally significant infrastructure planning regime for the development of a GDF (in England). This would mean that the Planning Inspectorate would consider any development consent application for a GDF in England and make a recommendation to the DECC Secretary of State. The DECC Secretary of State would then make the ultimate decision on whether to grant or to refuse planning consent.

The Government says that it would require a demonstration of community support before development could proceed.

The Government proposes to publish a National Policy Statement, specifically for a GDF. A 'generic' (i.e. not site-specific) National Policy Statement would be developed shortly after the revised siting process is launched. The National Policy Statement would set out the assessment principles against which applications would be considered, together with background information on geological disposal, and how it is to be implemented in the UK. It would not consider specific potential sites or areas. The Government also wants to bring intrusive site investigations within the definition of a 'Nationally Significant Infrastructure Project' so that applications for test drilling would be considered by the Planning Inspectorate.

All this is, of course, necessary to remove planning powers from County Councils. The Government, of course, insists that the developer of a GDF is required to consult, but that is not the same as playing a part in the decision-making process. It represents a highly counter-productive move back to centralised control, whilst continuing to pay lip service to voluntarism.

Question 6 – Do you agree with this clarification of the inventory for geological disposal – and how this will be communicated with the volunteer host community? If not, what alternative approach would you propose and why?

As we saw during the investigations of the West Cumbria MRWS Partnership, the Baseline Inventory previously did not include waste (or spent fuel) from new reactors. Nor did it include military waste or spent fuel. The Partnership was, however, presented with an Upper Inventory which included waste and spent fuel from a 10GW new reactor programme as well as additional materials owned by the Ministry of Defence. (16)

The Government is now proposing to produce a revised Baseline Inventory should comprise the following waste and material types:

- ILW arising from existing nuclear licensed sites, and medical, industrial, research and educational uses, in England and Wales;
- That small proportion of LLW not suitable in a low level waste repository;
- HLW from Sellafield reprocessing operations;
- ILW and irradiated fuel (and any LLW not suitable for disposal in a low level waste repository) from the defence programme in England and Wales, and from sites in Scotland not covered by the Scottish Higher Activity Waste Policy;
- Spent Fuel from existing reactors; Sizewell B and AGRs (noting that some AGR SF will be reprocessed) and from legacy sites such as Sellafield and Dounreay;
- Uranium stocks;
- Spent Fuel (oxide) and ILW from a new build programme of a specified maximum size, such as the 16GW(e) for which nuclear operators have developed proposals;
- Spent Fuel (MOX) from conversion of the UK's plutonium stocks plus any residual plutonium not suitable for fuel manufacture.

The Government believes this should give potential communities the most complete possible picture of the inventory for disposal and give confidence that it will not expand materially over time.

The Government also says that because it has identified that its preferred approach for plutonium is to reuse it in the manufacture of mixed-oxide fuel (MOX) for use in reactors, it is now able to be clear that for the most part plutonium will not be disposed of in a GDF.

The previous concept was that there would be an agreed mechanism for updating the Baseline Inventory, so if any new waste was planned to be included this would be discussed with the host community. The Partnership produced a paper with a range of principles on the inventory, including principles for defining an acceptable process for inventory change and how the community could influence this. (17) The logical consequence of the Government's plan to produce a Baseline Inventory which includes more or less everything that might be disposed of in a GDF is that it will also remove the community's say on the waste inventory that it will play host to. Secondly, the new Baseline Inventory will further sideline CoRWM's recommendation that:

*“New build wastes would extend the timescales for implementation, possibly for very long, but essentially unknowable future periods. Further, the political and ethical issues raised by the creation of more waste area quite different from those relating to ... unavoidable wastes ... **a new build programme ... would require a quite separate process to test and validate proposals for the management of wastes arising**”.* [emphasis added] (18)

In July 2013 the Secretary of State for Energy and Climate Change told The Guardian he is confident that a site for the waste can be located democratically. He said: "... we already have NFLA Radioactive Waste Briefing 43 – Siting of a deep underground radwaste repository

huge amounts of waste left over now from the first two generations of nuclear reactors and from the military programme. We have to deal with that whether we build one single new nuclear reactor or not. It has to be dealt with."

So the UK Government is prepared to allow a new programme of nuclear reactors to go-ahead which will produce waste with a radioactive content more than three times the waste we have already created on the basis of the Secretary of State's optimism that one of the most complicated scientific and technical projects ever undertaken can be made to work. On the other hand CoRWM's view was that although there are huge uncertainties concerning deep disposal for security and safety reasons it was worth a shot for waste we have already created. But the idea of creating new waste under these circumstances is extremely ethically dubious.

The Government should produce a baseline inventory which does not include new build reactors and a Maximum Inventory which shows the impact of a 16GW new build programme. It should enshrine in any future process the principle that any community willing to host nuclear waste facilities should get a say in the inventory of waste committed to those facilities.

Question 7 – Do you endorse the proposed approach on community benefits associated with a GDF? If not, what alternative approach would you propose and why?

The Labour MP for Copeland, Jamie Reed says "*there is no Plan B for the West Cumbrian economy without nuclear support*" (19) He says Cumbria's plans "*need to include three new nuclear reactors (on land just north of Sellafield at Moorside), a new Mox facility at Sellafield, and an underground repository*" (20) The industry and government likes to give the impression new nuclear developments are the only way to provide enough jobs in West Cumbria. In this age of austerity the community benefit system proposed adds to the impression for the local population that they have no alternative but to accept a GDF. There may well be other parts of the country where industrial decline will also push local communities into reluctantly accepting developments they would rather live without.

In order to assist communities to make a decision on nuclear waste proposals on the basis of informed consent, the Government should fund local authorities in the area to research and publish an alternative economic plan similar to the plan produced by Friends of the Earth West Cumbria and North Lakes called "Towards a Sustainable Cumbria". (21)

Question 8 – Do you agree with the proposed approach to addressing potential socio-economic and environmental effects that might come from hosting a GDF? If not, what alternative approach would you propose and why?

The Government is proposing to address local environmental and socio-economic issues earlier in the process, but only in relation to the impact of a GDF. Under the European Strategic Environmental Assessment (SEA) Directive and SEA Regulations an Appraisal of Sustainability is supposed to look at alternatives to the project under consideration. As well as looking at alternatives to the deep disposal of nuclear waste, this should also examine alternative economic strategies for the area under consideration, as suggested above.

8. Conclusions

1. The Government's proposals, set out in the latest consultation document represent a highly counter-productive move back to centralised control, whilst continuing to pay lip service to voluntarism. This consultation document should be withdrawn and the Government should go back to the drawing board.
2. The previous process failed partly because of the intractability of the nuclear waste problem, but also because of the Government's refusal to accept most of the recommendations of its own advisory committee – the Committee on Radioactive Waste Management (CoRWM).
3. CoRWM recommended a high level of public engagement in any future process. This was ignored.

4. The scope of this consultation is focussed solely on finding a site for a geological repository when the priority should clearly be the development of robust interim storage.
5. There should be a national debate about whether we are looking for the best geology for the job or whether we are happy to use mediocre geology and rely more heavily on engineered barriers.
6. RWMD has listed 900 outstanding scientific and technical issues, which need to be resolved. The process of resolving these issues needs to be much more open and transparent.
7. Any assessment of community support for a radioactive waste proposal needs to be on the basis of informed consent. The idea that because District Councils have full-time staff they can somehow become better qualified to make a judgement on a highly complicated area of scientific controversy is absurd. Funding needs to be provided so that Councils can commission independent advice and so that NGOs can provide a critical voice.
8. Any public awareness campaign needs to be organised by an independent body, not the developer, and should be carried out on the basis that all sides of the debate are represented fairly with equal resources.
9. The Government must drop the idea of using the nationally significant infrastructure planning regime for a GDF.
10. The Government should produce a baseline inventory which does not include new build reactors and a Maximum Inventory which shows the impact of a 16GW new build programme. It should enshrine in any future process the principle that any community willing to host nuclear waste facilities should get a say in the inventory of waste committed to those facilities.
11. The Government must re-visit CoRWM's idea of a separate process which can examine the ethics of produce more waste in the face of the uncertainties involved with nuclear waste management.
12. Communities faced with proposals for nuclear waste facilities in their vicinity should be funded to produce alternative economic strategies so that no-one has to decide to accept such a facility because they feel there is no alternative.

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- (21) Towards a Sustainable Cumbria is available at http://www.no2nuclearpower.org.uk/wp/wp-content/uploads/2013/06/Towards_Sustainable_Cumbria_210613.pdf