

## ANNEX B

### Summary: Intervention & Options

Department/Agency: <b>DECC</b>	Title: <b>Impact Assessment of revisions to UK Strategy for Radioactive Discharges and associated Statutory Guidance to the Environment Agency</b>	
Stage: Final	Version: Final	Date: July 2009
Related Publications: 1. UK Strategy for Radioactive Discharges to 2030; 2. Statutory Guidance to the Environment Agency concerning the regulation of radioactive discharges into the environment		

Available to view or download at:

<http://www.decc.gov.uk>

Contact for enquiries: T Brown

Telephone: 0300 068 6103

What is the problem under consideration? Why is government intervention necessary?

The OSPAR Radioactive Substances Strategy (RSS) has an overall objective to prevent pollution of the maritime area, as defined under the OSPAR Convention, from ionising radiation, through progressive and substantial reductions of discharges, emissions and losses of radioactive substances and an intermediate objective to reduce concentrations of radioactive substances in the marine environment by 2020. The ultimate aim of the RSS is to achieve concentrations in the environment near background values for naturally occurring radioactive substances and close to zero for artificial radioactive substances. As a Contracting Party to the OSPAR Convention the UK is required to produce a national plan to demonstrate how we will achieve these objectives. The revised UK Strategy for Radioactive Discharges forms our national plan. Statutory Guidance to the Environment Agency will provide guidance on the implementation of the UK Strategy in England and Wales. Separate Statutory Guidance applies in Scotland. Contracting Parties are also required to apply Best Available Techniques (BAT) to reduce radioactive discharges. BAT will replace Best Practicable Means (BPM) and Best Practicable Environmental Options (BPEO) in England and Wales. Scotland and Northern Ireland will continue to use BPM and BPEO.

What are the policy objectives and the intended effects?

The objectives of the Strategy are; rigorous and transparent implementation of the UK's obligations in respect to the OSPAR RSS intermediate objective, provision of a clear statement of Government policy on radioactive discharges, and a strategic framework for discharge reductions to inform decision making by industry and regulators. The intended effects of the Strategy are; progressive and substantial reductions in radioactive discharges taking into account the uncertainties described in chapter 6 of the Strategy; progressive reductions in concentrations of radionuclides in the marine environment from radioactive discharges such that by 2020 they add close to zero to historic levels; progressive reductions in human exposures to ionising radiation resulting from radioactive discharges, as a result of planned reductions in discharges, and delivery of the UK's commitments to OSPAR without compromising the UK energy policy.

The objective of the Statutory Guidance is to provide the Environment Agency with strategic high-level guidance on the implementation of the UK Strategy in particular on the change from BPM and BPEO to BAT in England and Wales. BAT will deliver the equivalent level of environmental protection as BPM and BPEO, is consistent with the terminology of the environmental regimes of the other Contracting Parties to the OSPAR Convention, and other regimes in England and Wales. Scotland and Northern Ireland will continue to apply the concept of BAT via BPM and BPEO. Scotland published its separate Guidance to the Scottish Environment Protection Agency in 2008.

What policy options have been considered? Please justify any preferred option.

Option 1: do nothing. Do not update the 2002 Strategy for Radioactive Discharges or provide formal Guidance to the Environment Agency

Option 2: Revise and widen the scope of the 2002 Strategy to include the non-nuclear sector, aerial and decommissioning discharges and extend the period covered to 2030. Update and issue Statutory Guidance to the Environment Agency.

Option 2 was the preferred Option as in addition to meeting the UK's commitments made under the OSPAR RSS it sets out a comprehensive picture of radioactive discharges in the UK and a common set of principles to underlie their regulation. Extending the period covered to 2030 will allow industry more time to shape their strategic planning for tackling and reducing radioactive discharges. BAT will deliver an equivalent level of environmental protection as BPM and BPEO and is more consistent with the terminology used in the environmental protection regimes of the other Contracting Parties to the OSPAR Convention and other regimes in England and Wales. It is necessary to provide Statutory Guidance to the Environment Agency on the implementation of the UK Strategy for Radioactive Discharges in England and Wales.

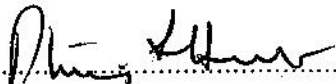
When will the policy be reviewed to establish the actual costs and benefits and the achievement of the desired effects?

The costs and benefits in moving from BPM and BPEO to BAT will be monitored and feedback will be sought from operators and the Environment Agency. However, it should be noted that operators who currently meet the requirements of BPM and BPEO will satisfy the current requirements of BAT. The application of BAT is not a step change and will develop over time (as have BPM and BPEO) as new "state of the art" technology or techniques become practicable to apply. The UK Strategy will be updated in around 2014.

**Ministerial Sign-off**

*I have read the Impact Assessment and I am satisfied that, given the available evidence, it represents a reasonable view of the likely costs, benefits and impact of the leading options.*

Signed by the responsible Minister:



Date: 14/7/09

## Summary: Analysis & Evidence

**Policy Option: 2**

**Description: UK Strategy for Radioactive Discharges to 2030 and Statutory Guidance to the Environment Agency**

<b>COSTS</b>	<b>ANNUAL COSTS</b>		Description and scale of <b>key monetised costs</b> by 'main affected groups' It has been difficult to assess the costs of the move to BAT as it has yet to be applied to radioactive waste disposal in England and Wales. Information from industry has been limited to one large operator has provisionally estimated costs of around £80,000 (for training and awareness, revising codes of practice and guidance). We anticipate that costs for smaller operators to be proportionate to this estimate.	
	<b>One-off (Transition)</b>	<b>Yrs</b>		
	<b>£ No Quantitative</b>	1		
	<b>Average Annual Cost (excluding one-off)</b>			
	<b>£ Not currently quantifiable</b>		<b>Total Cost (PV)</b>	<b>£ No Quantitative</b>
Other key non-monetised costs by 'main affected groups'				

<b>BENEFITS</b>	<b>ANNUAL BENEFITS</b>		Description and scale of <b>key monetised benefits</b> by 'main affected groups' The quantitative benefits of the moving to BAT are too difficult to extract from the overall benefits of the change. That said we anticipate that the cost and the benefits, though not significant should, result in a long term benefit – the benefits have therefore been expressed below in qualitative terms.	
	<b>One-off</b>	<b>Yrs</b>		
	<b>£ Not quantifiable</b>	0		
	<b>Average Annual Benefit (excluding one-off)</b>			
	<b>£ No quantitative</b>	0	<b>Total Benefit (PV)</b>	<b>£ No Quantitative</b>
Other key non-monetised benefits by 'main affected groups' Extension to 2030 will enable industry to improve its strategic planning. Extension to deal with the non-nuclear sector and gaseous discharges provides a consistent approach. Moving to BAT will reduce requirements for operators as only one approach will be used across the environmental regimes, reducing the number, and hence the cost, of regulatory submissions (currently separate submission are needed for the BPEO and BPM assessments – moving to BAT requires a single submission) which are made once every five to eight years for each authorisation - moving to BAT also improves our international reputation. The Statutory Guidance provides regulatory certainty.				

Key Assumptions/Sensitivities/Risks 1. The change to BAT will not add significantly to the regulatory burden on industry and should bring savings from fewer assessments and consistency with other regulatory regimes. 2. Long term it will provide business efficiencies as all the costs are a one off/upfront cost. 3. Potential small costs in representing information in England/Wales and Scotland due to Scotland's intention to continue with BPEO assessments. 4. Economic development in the nuclear sector can be accommodated while reducing environmental discharges.

Price Base	Time Period	Net Benefit Range (NPV)	NET BENEFIT (NPV Best estimate)
Year 2008	Years 10	<b>£ No quantitative</b>	<b>£ No quantitative</b>

What is the geographic coverage of the policy/option?	UK								
On what date will the policy be implemented?	2009								
Which organisation(s) will enforce the policy?	EA/SEPA/NIEA								
What is the total annual cost of enforcement for these organisations?	£ No additional								
Does enforcement comply with Hampton principles?	Yes								
Will implementation go beyond minimum EU requirements?	No								
What is the value of the proposed offsetting measure per year?	£ None								
What is the value of changes in greenhouse gas emissions?	£ None								
Will the proposal have a significant impact on competition?	No								
Annual cost (£-£) per organisation (excluding one-off)	<table border="0" style="width: 100%;"> <tr> <td style="width: 25%;">Micro</td> <td style="width: 25%;">Small</td> <td style="width: 25%;">Medium</td> <td style="width: 25%;">Large</td> </tr> <tr> <td style="text-align: center;">None</td> <td style="text-align: center;">None</td> <td style="text-align: center;">Minimal</td> <td style="text-align: center;">Minimal</td> </tr> </table>	Micro	Small	Medium	Large	None	None	Minimal	Minimal
Micro	Small	Medium	Large						
None	None	Minimal	Minimal						
Are any of these organisations exempt?	<table border="0" style="width: 100%;"> <tr> <td style="width: 25%;">No</td> <td style="width: 25%;">No</td> <td style="width: 25%;">N/A</td> <td style="width: 25%;">N/A</td> </tr> </table>	No	No	N/A	N/A				
No	No	N/A	N/A						

Impact on Admin Burdens Baseline (2005 Prices)

(Increase - Decrease)

Increase of	£ None	Decrease of	£ None	<b>Net Impact</b>	£ None
-------------	--------	-------------	--------	-------------------	--------

Key: Annual costs and benefits: Constant Prices (Net) Present Value

## Evidence Base (for summary sheets)

### Background

- 1 The UK is a Contracting Party to the Convention for the Protection of the Marine Environment of the North-East Atlantic (the OSPAR Convention). The revised UK Strategy for Radioactive Discharges updates Government policy and describes how the UK will continue to implement its obligations under the OSPAR Radioactive Substances Strategy. The revised UK Strategy builds on our initial Strategy published in 2002, and widens its scope to include aerial and decommissioning discharges and the non-nuclear sectors. The revised Strategy was subject to a public consultation in 2008.
- 2 Regulation of radioactive waste discharges in the UK must be carried out within the context of current legislation – the Radioactive Substances Act 1993 (RSA93) - and the Government's radioactive waste management policies. RSA93 requires the accumulation and disposal of radionuclides to the environment to be managed by means of permits (Authorisations), issued and regulated by the environment agencies.
- 3 Currently, the key mechanisms by which the regulatory bodies ensure that discharges into the environment are adequately managed are through the setting of operating conditions within the Authorisation, including the application of the Best Practicable Environmental Option (BPEO), and the Best Practicable Means (BPM) to eliminate, minimise and reduce the impact of discharges. The BPEO condition only formally applies to Authorisations granted to sites which are also regulated under the Nuclear Installations Act 1965; it has not hitherto been applied to other – non-nuclear – sites.
- 4 On advice from the Environment Agency, the Government will replace the above concepts of BPEO and BPM with a single concept – Best Available Techniques (BAT) in England and Wales. Ministers are content that the application of BAT will deliver the equivalent level of environmental protection to BPM and BPEO, as described in the 2002 Strategy. The concept of BAT will continue to be applied via BPM and BPEO in Scotland and Northern Ireland. The Government, in its publication "Meeting the energy challenge: a White Paper on nuclear power" January 2008 has already stated that BAT will be used in considering any plans for new build nuclear power stations. BAT is already in use for other environmental regimes in the UK that operators have to comply with. It is also in use across all other EU Member States including the other Contracting Parties to the OSPAR Convention.
- 5 The waste management hierarchy is a framework that has become a cornerstone of sustainable waste management, setting out the order in which options for waste management should be considered based on environmental impact. Waste prevention and minimisation as part of this hierarchy will also be contributors to reduction in radioactive discharges.
- 6 The expected outcomes set out within the revised Strategy have been provided by the sectors themselves. They do not represent regulatory targets but reflect where operators think they will be at a certain point in time if there are no changes to current assumptions. The 2009 Strategy will be revised in around 2014.

### Options

- 7 Two options were considered for this Impact Assessment:
  - Option 1: Do nothing.**  
Do not update the 2002 Strategy for Radioactive Discharges or provide the Environment Agency with formal guidance;
  - Option 2: Update and extend the scope of the Strategy to include the non-nuclear sector, aerial and decommissioning discharges and extend the time period covered to 2030. Replace BPM and BPEO with BAT in England and Wales**

- 8 While the scope of the 2002 Strategy met the OSPAR requirements for national plans, and set targets for reducing discharges from each industry sector, Option 1 did not reflect changes in actual operations and discharges, and planning assumptions and projected discharges that have been made

maintain the momentum of progressive and substantial reductions in radioactive discharges and thus provide further reassurance to OSPAR that the UK will meet the objectives of the OSPAR Radioactive Substances Strategy. The revised Strategy includes:

- Aerial discharges from nuclear installations.
- Liquid and aerial discharges from the non-nuclear sector (regulated under RSA93).
- Separate forward profiles for discharges arising from decommissioning & clean-up.
- Discharges from the management of radioactive waste.
- NORM discharges from the fossil fuel sector.
- Replacing the concepts of BPEO and BPM with BAT in England and Wales.
- Extended time period (2006 – 2030 as opposed to 2001 – 2020).

9 Expanding the scope of the Radioactive Discharges Strategy in this way is considered not have any additional burdens on industry, since the additional categories of discharges are already authorised by and reported to the environment agencies. There will be benefits from providing a more comprehensive picture of radioactive discharges in the UK and, through the inclusion of aerial discharges, from demonstrating that reductions in discharges to the marine environment will not be achieved at the expense of higher discharges to air (which may give rise to higher human doses).

10 Option 2 is considered to take a holistic approach and looks at all discharges, reflecting what actually happens in practice, i.e. that all types of discharges from both nuclear and the non-nuclear sector are regulated and monitored by the environment agencies. The extended timescale will ensure that any planned programmes and modifications are taken into account to 2030, resulting in a forward look over 25 years, as opposed to the 20 years of the 2002 Strategy.

#### **Sectors and groups affected**

11 Five distinct major groups will be affected by the revised Strategy:

- Operators and owners of facilities, including those in public ownership, authorised to discharge radioactive wastes to the environment under RSA93.
- Environmental regulators who regulate radioactive discharges under RSA93, and NII who regulate the storage of waste under NIA65.
- Workers at nuclear installations and other facilities.
- General population, especially those populations close to authorised facilities.
- Contracting Parties of OSPAR.

#### **Analysis of costs and benefits**

12 In support of this assessment, an informal and selective consultation exercise, seeking information, was carried out in order to assess the potential impact the revised strategy could have upon sites authorised to discharge radioactivity under RSA93. A summary of stakeholders views on the change from BPM and BPEO to BAT in England and Wales is available from [www.decc.gov.uk](http://www.decc.gov.uk).

13 The Environment Agency will only revise authorisations every 5-8 years, unless prompted by the operator. So revising assessments and moving to BAT will take place over a number of years. As staff will often move on in a period of five to eight years it is likely that the representative of the operator preparing for the revised authorisation will be new to this activity, but may have experience of applying for other environmental consents and will be familiar with BAT. The Environment Agency is producing guidance on BAT.

14 Government's view on practical implications of the introduction of BAT is that there should be cost savings over a period of time and a rough assessment has been made of these. We have also made a rough estimate of the costs that might be incurred the first time BAT is used, but for the following reasons we believe there will be net benefits. The current procedure for regulatory submissions from the nuclear sector is for an assessment of BPEO, by way of an options analysis, to determine the most benign discharge route for those discharges which are inevitable. Subsequently RPM tests are applied

iterative, with the outcomes of BPM tests being used to revisit the BPEO analysis. Combining the two processes into one unified procedure should, we believe, result in less staff time and expenditure, and improved quality and clarity of regulatory submissions. These arguments appear to be borne out by the responses received from stakeholders.

15 Other benefits are thought to derive from the increased scope of the strategy and the move to BAT. As a Contracting Party to the OSPAR Convention the UK is required to use BAT, and must report on how BAT is being applied every three years. The concept of BAT will continue to be given effect via BPM and BPEO in Scotland and Northern Ireland. BAT is already in use throughout the rest of the EC and in the UK for other environmental regimes and there will therefore be benefits to businesses from making submissions to regulators in a consistent manner. By bringing aerial discharges and the non-nuclear sector into the strategy we offer greater transparency to external stakeholders by presenting all the information on radioactive discharges together and in a consistent format. This change does not imply any increase in costs as this information is already recorded and collated by the non nuclear sector.

### **Summary of costs**

16 It has been difficult to assess the costs of moving to BAT as it has yet to be applied to radioactive waste disposal in England and Wales. As a result, information from industry on likely costs is limited and varies from little or no anticipated costs to estimates from large operators of between £60,000 to £80,000 relating mainly to training and awareness on BAT, revision of Codes of Practice and revising internal guidance. However, it should be noted that operators who currently meet the requirements of BPM and BPEO will satisfy the current requirements of BAT. The move to BAT will not be a step move but will occur as part of operators' normal review-frequency of their documentation systems though new build will need to apply BAT from the outset.

### **The Small Firms' Impact Test**

17 The revised Strategy will impact on the nuclear industry, the oil industry and some public concerns such as the medical and research sectors. None of these come within the 'small firms' definition. Some small firms providing services to the nuclear sector (e.g. closed source disposal companies) may come within the definition of 'small firms' but such firms are not responsible, themselves, for discharges directly to the environment. There are non-quantifiable benefits (but no costs) to some small firms in the areas of fishing and tourism, but these benefits do not create competition advantages or disadvantages for any particular concern at the expense of another.

### **Competition Assessment**

18 The revised Strategy will not affect competition in the market significantly. Most parties licensed under RSA 93 are in the public sector. Others (Rolls-Royce Derby and DML, for instance) are not in competition with other UK companies or each other to provide equivalent services or goods. GE Healthcare is in competition with other health product suppliers in the UK and overseas and British Energy is in competition with other electricity providers. However, Government would argue that the revised Strategy and associated Guidance to the Environment Agency does not represent a significant change in current standards of regulation and control. BAT is already in use in all other Member States.

### **Sustainable Development, Health Impact, and Environmental Assessment**

19 These three issues are implicit in the routine assessments for BAT, BPM and BPEO carried out by the environmental regulators. They are not dealt with separately in this Impact Assessment because they are considerations which are made by the regulators on a case-by-case basis. In other words, the national discharges strategy and associated statutory guidance provides a framework under which the environmental regulators can apply these principles to industries using radioactive materials, and to discharges to the environment from these industries.

### **Legal Aid**

20 The policy is not going to introduce any new criminal sanctions or civic penalties. The proposals should therefore not have an impact on legal aid in England and Wales.

### **Carbon Assessment**

21 The changes are unlikely to affect emission of greenhouse gases.

### **Equality Assessment**

22 It is not expected that the proposals will have an impact, negative or positive, on any of the equality target groups.

### **Human Rights, Gender Equality and Disability Equality**

23 It is not expected that the policy will create any human rights, gender or disability issues.

### **Rural Proofing**

24 The policy is unlikely to have a different impact in rural areas.



## Specific Impact Tests: Checklist

Use the table below to demonstrate how broadly you have considered the potential impacts of your policy options.

**Ensure that the results of any tests that impact on the cost-benefit analysis are contained within the main evidence base; other results may be annexed.**

<b>Type of testing undertaken</b>	<b><i>Results in Evidence Base?</i></b>	<b><i>Results annexed?</i></b>
Competition Assessment	Yes	
Small Firms Impact Test	Yes	
Legal Aid	Yes	
Sustainable Development	Yes	
Carbon Assessment	Yes	
Other Environment	Yes	
Health Impact Assessment	Yes	
Race Equality	Yes	
Disability Equality	Yes	
Gender Equality	Yes	
Human Rights	Yes	
Rural Proofing	Yes	

