

**Title: Ensuring security during the construction phase of new nuclear power stations**

**Lead department or agency: DECC**

**Other departments or agencies:**

This document is the public version of the full Impact Assessment which has had a restricted circulation within Government.

## Impact Assessment (IA)

**IA No: DECC0039P**

**Date: 20 May 2011**

**Stage: Final**

**Source of intervention: Domestic**

**Type of measure: Primary legislation**

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## Summary: Intervention and Options

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

The UK has in place a comprehensive regulatory regime to ensure that security in the UK's civil nuclear industry is robust and effective. This is one of the Government's highest national security priorities. The security regime was set up in its current form in 2001-2003 when the construction of new nuclear power stations was not thought likely. As a result the new regime was concerned with locations including existing civil licensed nuclear sites where nuclear material or other radioactive material was already present. It did not take account of any new civil nuclear facilities which might be constructed.

### What are the policy objectives and the intended effects?

Now new nuclear build is a realistic prospect with eight potential sites for new nuclear power stations identified in the draft nuclear national policy statement that the Government consulted on in October 2010. All of these sites are adjacent to existing civil nuclear facilities. Construction activity taking place in the vicinity of these existing facilities may have potential security implications, and it is also desirable that security measures are built into new nuclear facilities rather than retrofitted. This Impact Assessment addresses these issues.

### What policy options have been considered, including any alternatives to regulation? Please justify preferred option (further details in Evidence Base)

The following policy options have been identified. Option 5 is preferred.

**Option 1:** rely on existing measures.

**Option 2:** the Government negotiates a responsibility deal with organisations constructing new nuclear facilities under which agreed security measures are put in place during the construction phase.

**Option 3:** additional security arrangements at neighbouring civil nuclear facilities are required under existing security regulations.

**Option 4:** existing security regulations are amended so that regulation commences from the time of issue of a nuclear site license.

**Option 5:** the powers in existing primary legislation are widened so that existing security regulations can be amended with regulation commencing at the start of ground clearance during the construction of new civil nuclear sites.

**Will the policy be reviewed?** It will be reviewed. **If applicable, set review date:** 12/2014

**What is the basis for this review?** Statutory review **If applicable, set sunset clause date:** Month / Year

**Are there arrangements in place that will allow a systematic collection of monitoring information for future policy review?**

No

### 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: 6/6/11

## Summary: Analysis and Evidence

## Policy Option 4

Description: Amend existing security regulations to regulate security at construction sites from the time of issue of a site license, which is likely to be some time after the start of construction

Price Base Year 2011	PV Base Year 2011	Time Period Years 10	Net Benefit (Present Value (PV)) (£m)		
			Low: -1.9	High: -2.8m	Best Estimate: -2.4m
<b>COSTS (£m)</b>	<b>Total Transition (Constant Price) Years</b>		<b>Average Annual (excl. Transition) (Constant Price)</b>		<b>Total Cost (Present Value)</b>
Low	n/a		0.32		1.9
High	n/a		0.46		2.8
Best Estimate	n/a		0.39		2.4
<b>Description and scale of key monetised costs by 'main affected groups'</b>					
The operator of the construction site would bear the cost of ensuring security including the costs of the security regulator OCNS to ensure compliance, and the operator's own administrative costs. It is estimated that these costs in total will have a NPV of between £1.9m and £2.8 m over the construction period.					
<b>Other key non-monetised costs by 'main affected groups'</b>					
n/a					
<b>BENEFITS (£m)</b>	<b>Total Transition (Constant Price) Years</b>		<b>Average Annual (excl. Transition) (Constant Price)</b>		<b>Total Benefit (Present Value)</b>
Low	n/a		n/a		n/a
High	n/a		n/a		n/a
Best Estimate	n/a		n/a		n/a
<b>Description and scale of key monetised benefits by 'main affected groups'</b>					
No monetised benefits					
<b>Other key non-monetised benefits by 'main affected groups'</b>					
<b>Key assumptions/sensitivities/risks</b>					<b>Discount rate (%)</b>
NPV calculation is based on a 10 year appraisal period (2011-2020)					3.5
<b>Direct impact on business (Equivalent Annual) (£m):</b>			<b>In scope of OIOO</b>	<b>Measure Qualifies as</b>	
Costs: 0.28	Benefits: 0	Net: 0.28	Yes	IN	

All costs are per individual site

## Enforcement, Implementation and Wider Impacts

What is the geographic coverage of the policy/option?		United Kingdom			
From what date will the policy be implemented?		01/10/2011			
Which organisation(s) will enforce the policy?		Office for Civil Nuclear Security			
What is the annual change in enforcement cost (£m)?		Around 0.2			
Does enforcement comply with Hampton principles?		Yes			
Does implementation go beyond minimum EU requirements?		n/a			
What is the CO <sub>2</sub> equivalent change in greenhouse gas emissions? (Million tonnes CO <sub>2</sub> equivalent)		Traded: zero		Non-traded: zero	
Does the proposal have an impact on competition?		No			
What proportion (%) of Total PV costs/benefits is directly attributable to primary legislation, if applicable?		Costs: zero		Benefits: zero	
Distribution of annual cost (%) by organisation size (excl. Transition) (Constant Price)	Micro	< 20	Small	Medium	Large 100
Are any of these organisations exempt?	No	No	No	No	No

## Specific Impact Tests: Checklist

Set out in the table below where information on any SITs undertaken as part of the analysis of the policy options can be found in the evidence base. For guidance on how to complete each test, double-click on the link for the guidance provided by the relevant department.

Please note this checklist is not intended to list each and every statutory consideration that departments should take into account when deciding which policy option to follow. It is the responsibility of departments to make sure that their duties are complied with.

Does your policy option/proposal have an impact on...?	Impact	Page ref within IA
<b>Statutory equality duties<sup>1</sup></b> <a href="#">Statutory Equality Duties Impact Test guidance</a>	No	8
<b>Economic impacts</b>		
Competition <a href="#">Competition Assessment Impact Test guidance</a>	No	8
Small firms <a href="#">Small Firms Impact Test guidance</a>	No	8
<b>Environmental impacts</b>		
Greenhouse gas assessment <a href="#">Greenhouse Gas Assessment Impact Test guidance</a>	Yes	10
Wider environmental issues <a href="#">Wider Environmental Issues Impact Test guidance</a>	Yes	10
<b>Social impacts</b>		
Health and well-being <a href="#">Health and Well-being Impact Test guidance</a>	No	10
Human rights <a href="#">Human Rights Impact Test guidance</a>	No	10
Justice system <a href="#">Justice Impact Test guidance</a>	No	10
Rural proofing <a href="#">Rural Proofing Impact Test guidance</a>	No	10
<b>Sustainable development</b> <a href="#">Sustainable Development Impact Test guidance</a>	Yes	10

<sup>1</sup> Race, disability and gender Impact assessments are statutory requirements for relevant policies. Equality statutory requirements will be expanded 2011, once the Equality Bill comes into force. Statutory equality duties part of the Equality Bill apply to GB only. The Toolkit provides advice on statutory equality duties for public authorities with a remit in Northern Ireland.

# Summary: Analysis and Evidence

# Policy Option 5

Description: Widen *vires* in primary legislation and make new regulations under these to regulate security at construction sites from the start of construction

Price Base Year 2011	PV Base Year 2011	Time Period Years 10	Net Benefit (Present Value (PV)) (£m)		
			Low: -2.4	High: -3.3	Best Estimate: -2.8
<b>COSTS (£m)</b>	<b>Total Transition (Constant Price) Years</b>		<b>Average Annual (excl. Transition) (Constant Price)</b>		<b>Total Cost (Present Value)</b>
Low	n/a		0.34		2.4
High	n/a		0.48		3.3
Best Estimate	n/a		0.41		2.8
<b>Description and scale of key monetised costs by 'main affected groups'</b>					
The operator of the construction site would bear the cost of ensuring security including the costs of the security regulator OCNS to ensure compliance, and the operator's own administrative costs. It is estimated that these costs in total will have a NPV of between £2.4m and £3.3 m over the construction period.					
<b>Other key non-monetised costs by 'main affected groups'</b>					
No other monetised costs.					
<b>BENEFITS (£m)</b>	<b>Total Transition (Constant Price) Years</b>		<b>Average Annual (excl. Transition) (Constant Price)</b>		<b>Total Benefit (Present Value)</b>
Low	n/a		n/a		n/a
High	n/a		n/a		n/a
Best Estimate	n/a		n/a		n/a
<b>Description and scale of key monetised benefits by 'main affected groups'</b>					
<b>Other key non-monetised benefits by 'main affected groups'</b>					
Comprehensive regulation of security at new build construction sites.					
<b>Key assumptions/sensitivities/risks</b>					<b>Discount rate (%)</b>
NPV calculation is based on a 10 year appraisal period (2011-2020)					3.5
<b>Direct impact on business (Equivalent Annual) (£m):</b>			<b>In scope of OIOO</b>	<b>Measure Qualifies as</b>	
Costs: 0.34	Benefits: 0	Net: 0.34	Yes	IN	

All costs are per individual site

## Enforcement, Implementation and Wider Impacts

What is the geographic coverage of the policy/option?		United Kingdom			
From what date will the policy be implemented?		01/10/2011			
Which organisation(s) will enforce the policy?		Office for Civil Nuclear Security			
What is the annual change in enforcement cost (£m)?		Around 0.2			
Does enforcement comply with Hampton principles?		Yes			
Does implementation go beyond minimum EU requirements?		n/a			
What is the CO <sub>2</sub> equivalent change in greenhouse gas emissions? (Million tonnes CO <sub>2</sub> equivalent)		Traded: zero		Non-traded: zero	
Does the proposal have an impact on competition?		No			
What proportion (%) of Total PV costs/benefits is directly attributable to primary legislation, if applicable?		Costs: zero		Benefits: zero	
Distribution of annual cost (%) by organisation size (excl. Transition) (Constant Price)	Micro	< 20	Small	Medium	Large 100
Are any of these organisations exempt?	No	No	No	No	No

## Specific Impact Tests: Checklist

Set out in the table below where information on any SITs undertaken as part of the analysis of the policy options can be found in the evidence base. For guidance on how to complete each test, double-click on the link for the guidance provided by the relevant department.

Please note this checklist is not intended to list each and every statutory consideration that departments should take into account when deciding which policy option to follow. It is the responsibility of departments to make sure that their duties are complied with.

Does your policy option/proposal have an impact on...?	Impact	Page ref within IA
<b>Statutory equality duties<sup>2</sup></b> <a href="#">Statutory Equality Duties Impact Test guidance</a>	No	10
<b>Economic impacts</b>		
Competition <a href="#">Competition Assessment Impact Test guidance</a>	No	10
Small firms <a href="#">Small Firms Impact Test guidance</a>	No	10
<b>Environmental impacts</b>		
Greenhouse gas assessment <a href="#">Greenhouse Gas Assessment Impact Test guidance</a>	Yes	10
Wider environmental issues <a href="#">Wider Environmental Issues Impact Test guidance</a>	Yes	10
<b>Social impacts</b>		
Health and well-being <a href="#">Health and Well-being Impact Test guidance</a>	No	10
Human rights <a href="#">Human Rights Impact Test guidance</a>	No	10
Justice system <a href="#">Justice Impact Test guidance</a>	No	10
Rural proofing <a href="#">Rural Proofing Impact Test guidance</a>	No	10
<b>Sustainable development</b> <a href="#">Sustainable Development Impact Test guidance</a>	Yes	10

<sup>2</sup> Race, disability and gender Impact assessments are statutory requirements for relevant policies. Equality statutory requirements will be expanded 2011, once the Equality Bill comes into force. Statutory equality duties part of the Equality Bill apply to GB only. The Toolkit provides advice on statutory equality duties for public authorities with a remit in Northern Ireland.

## Evidence Base (for summary sheets) – Notes

Use this space to set out the relevant references, evidence, analysis and detailed narrative from which you have generated your policy options or proposal. Please fill in **References** section.

### References

Include the links to relevant legislation and publications, such as public impact assessment of earlier stages (e.g. Consultation, Final, Enactment).

No.	Legislation or publication
1	<u>Anti-terrorism, Crime and Security Act 2001</u>
2	Nuclear Industries Security Regulations 2003
3	Nuclear Industries Security (Amendment) Regulations 2006
4	

### Evidence Base

Ensure that the information in this section provides clear evidence of the information provided in the summary pages of this form (recommended maximum of 30 pages). Complete the **Annual profile of monetised costs and benefits** (transition and recurring) below over the life of the preferred policy (use the spreadsheet attached if the period is longer than 10 years).

#### Option 4 - Annual profile of monetised costs and benefits per site (£m) constant prices

	Y <sub>0</sub>	Y <sub>1</sub>	Y <sub>2</sub>	Y <sub>3</sub>	Y <sub>4</sub>	Y <sub>5</sub>	Y <sub>6</sub>	Y <sub>7</sub>	Y <sub>8</sub>	Y <sub>9</sub>
<b>Transition costs</b>	0	0	0	0	0	0	0	0	0	0
<b>Annual recurring cost</b>	0	0	0.48	0.35	0.57	0.35	0.57	0.35	0.09	0
<b>Total annual costs</b>	0	0	0.48	0.35	0.57	0.35	0.57	0.35	0.09	0
<b>Transition benefits</b>	0	0	0	0	0	0	0	0	0	0
<b>Annual recurring benefits</b>	0	0	0	0	0	0	0	0	0	0
<b>Total annual benefits</b>	0	0	0	0	0	0	0	0	0	0

- For non-monetised benefits please see summary pages and main evidence base section

**Option 5 - Annual profile of monetised costs and benefits per site\* - (£m) constant prices**

	Y <sub>0</sub>	Y <sub>1</sub>	Y <sub>2</sub>	Y <sub>3</sub>	Y <sub>4</sub>	Y <sub>5</sub>	Y <sub>6</sub>	Y <sub>7</sub>	Y <sub>8</sub>	Y <sub>9</sub>
<b>Transition costs</b>	0	0	0	0	0	0	0	0	0	0
<b>Annual recurring cost</b>	0	0.44	0.37	0.62	0.37	0.62	0.37	0.37	0.09	0
<b>Total annual costs</b>	0	0.44	0.37	0.62	0.37	0.62	0.37	0.37	0.09	0
<b>Transition benefits</b>	0	0	0	0	0	0	0	0	0	0
<b>Annual recurring benefits</b>	0	0	0	0	0	0	0	0	0	0
<b>Total annual benefits</b>	0	0	0	0	0	0	0	0	0	0

- For non-monetised benefits please see summary pages and main evidence base section

## Evidence Base

1. The following policy options have been identified.
2. **Option 1:** rely on existing measures (including existing security measures at neighbouring civil nuclear facilities).
3. **Option 2:** the Government negotiates a responsibility deal with organisations constructing new nuclear facilities under which agreed security measures are put in place during the construction phase.
4. **Option 3:** additional security arrangements at neighbouring civil nuclear facilities are required under existing security regulations (the Nuclear Industries Security Regulations 2003).
5. **Option 4:** existing security regulations are amended so that regulation commences from the time of issue of a nuclear site license (the means by which safety at nuclear sites is regulated). This can be a number of years after the start of construction. (There are powers to do this under existing primary legislation, the Anti-terrorism, Crime and Security Act 2001.)
6. **Option 5:** the powers in existing primary legislation are widened so that existing security regulations can be amended with regulation commencing at the start of ground clearance during the construction of new civil nuclear sites.
7. **Option 5** is preferred because:
  - it will ensure that the coverage of the UK's security regime for the civil nuclear industry continues to be comprehensive;
  - it will ensure that the UK continues to meet its international commitments and obligations in the field of civil nuclear security (including the amended Convention on the Physical Protection of Nuclear Material); and
  - it will fulfil public expectations about security in the civil nuclear industry.
8. Clause 107 of the Energy Bill would widen the powers in the way described in Option 5. We would then make additional regulations to regulate security from the start of ground clearance.
9. We have carried out an initial estimate of the likely compliance costs that industry would face under Options 4 and 5. These would comprise the costs of security measures, of inspections by the security regulator for civil nuclear industry, the Office for Civil Nuclear Security (OCNS), and of the site operator's own administrative expenses. These are set out in the table below.

Summary of Estimated Discounted Compliance Costs (£m)			
	Low	Central	High
Option 4	1.9	2.4	2.8
Option 5	2.4	2.8	3.3

10. Such costs would be small in the overall economics of building new nuclear power stations.



11. We would carry out a more detailed assessment of compliance costs when drawing up any new regulations in the future. All costs would be associated with this secondary legislation.

### **Specific Impact Tests**

#### ***Statutory Equalities duties***

12. We have not yet collected all the data to carry out a full equality impact test.

#### ***Competition Assessment***

13. None of the options are likely to:

- directly limit the number or range of suppliers;
- indirectly limit the number or range of suppliers;
- limit the ability of suppliers to compete; and
- reduce suppliers' incentives to compete vigorously.

14. The proposals will impact equally on all sites due to undertake new nuclear build. The estimated costs of the regulatory options (NPV of around £3m per site over a construction phase of around 6 years) are very small relative to the overall costs of new nuclear build, and are unlikely to have any material impact of the competitiveness of nuclear relative to other generators of electricity.

#### ***Small Firms Assessment***

15. None of the consortia which are due to undertake new nuclear build are small firms. Indeed they include some very large companies indeed. They are:

- EDF
- Horizon (Eon and RWE)
- NuGeneration (Iberdrola, GDFSuez and SSE)

16. All are classified as large companies as they have more than 250 employees.

#### ***Sustainable Development Assessment / Greenhouse Gas Assessment / Wider Environmental Issues***

17. Ensuring that security is effective at new build construction sites will help to facilitate new nuclear build. New nuclear build will contribute to the UK's climate change and low carbon objectives.

## Annexes

Annex 1 should be used to set out the Post Implementation Review Plan as detailed below. Further annexes may be added where the Specific Impact Tests yield information relevant to an overall understanding of policy options.

### Annex 1: Post Implementation Review (PIR) Plan

A PIR should be undertaken, usually three to five years after implementation of the policy, but exceptionally a longer period may be more appropriate. If the policy is subject to a sunset clause, the review should be carried out sufficiently early that any renewal or amendment to legislation can be enacted before the expiry date. A PIR should examine the extent to which the implemented regulations have achieved their objectives, assess their costs and benefits and identify whether they are having any unintended consequences. Please set out the PIR Plan as detailed below. If there is no plan to do a PIR please provide reasons below..

<b>Basis of the review:</b> statutory (forming part of the secondary legislation)
<b>Review objective:</b> The objective of the review will be to ensure that regulation is effective and proportionate.
<b>Review approach and rationale:</b> Consider views of stakeholders, including the nuclear companies being regulated and the security regulator OCNS, ask for evidence and analyse the evidence they produce.
<b>Baseline:</b> There is at present no security regulation during the construction phase on new nuclear installations.
<b>Success criteria:</b> The security regime is assessed as being effective and proportionate and does not place any undue burdens on business.
<b>Monitoring information arrangements:</b> n/a
<b>Reasons for not planning a PIR:</b> n/a