

EDMS1/800D99C7/B/SD4003  
Issue 1

# **AWE ALDERMASTON & BURGFIELD**

## **Energy Strategy**

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Produced by AWE, with support from RPS

Issue 1

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## Summary

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- S.1 This Energy Strategy document has been prepared to set out the intentions of AWE for sustainable energy management and the approach to be adopted for the design, construction and operation of existing, refurbished and new buildings and infrastructure.
- S.2 This Strategy has been developed taking into consideration the expectations of our stakeholders, including our customer the MOD, regulatory requirements, policy drivers and energy market influences.
- S.3 The underlying principles of this strategy are to use less energy, use energy efficiently, and use renewable energy, with the aim of reducing resource use and carbon dioxide emissions, as well as providing cost savings.
- S.4 The following objectives were developed to provide the framework for the strategy:
1. **Energy management and awareness shall be improved**
  2. **Energy improvements will be made to existing buildings and site infrastructure**
  3. **All new and refurbished buildings will be energy efficient**
  4. **All new plant and equipment selected will be energy efficient**
  5. **By 2010, AWE will aim for at least 10% of the site energy provided from low or zero carbon sources**
  6. **Efficient use of water within all buildings**
- S.5 A programme of activities has been developed to achieve these objectives. The programme will be updated as and when more detail or additional information becomes available regarding specific replacement developments and refurbishments together with the feasibility of certain renewable energy technologies at AWE are investigated further.

# 1 Introduction

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## Purpose

- 1.1 The Energy Strategy explains how the Atomic Weapons Establishment (AWE) intends to manage the use of energy and water involved with the modernisation of AWE Aldermaston and AWE Burghfield in order to reduce overall environmental impact.
- 1.2 The Energy Strategy sets out the principles, objectives and commitments that AWE intends to implement to ensure a sustainable approach is adopted for the design, construction and operation of new buildings and refurbishment of existing buildings, with regard to energy use and management.
- 1.3 This Strategy will evolve during its lifetime as and when more detailed or additional information becomes available regarding specific replacement developments and refurbishments together with the feasibility of certain renewable energy technologies at AWE are investigated further. The Strategy will therefore be considered a "living" document that will be regularly monitored and reviewed by the AWE Energy Focus Group.

## AWE Policy

- 1.4 AWE's commitment to sustainable energy management is demonstrated through the Company's Environment Policy which has been signed up to by AWE's Executive Board (see below).

AWE's Environment Policy<sup>1</sup>

*"AWE ensures its activities comply with and meet obligations relating to the protection of the environment, by ensuring compliance with all relevant customer, statutory, regulatory and internal requirements. AWE takes into account the environmental effects of its activities, measures and assesses the impact of its activities on the environment and makes arrangements to minimise any effect.*

*AWE is committed to the following endeavours:*

- a) introducing sustainable development into all our processes and activities;*
- b) preventing or minimising pollution wherever practicable;***
- c) reducing the consumption of resources (material, fuel and energy);***
- d) minimising waste through a commitment to recovery and recycling where feasible;*
- e) ensuring that the amount of waste produced and accumulated on AWE sites is kept as low as reasonably practicable; with all waste produced as a result of AWE's activities appropriately contained, controlled, classified, recorded, and transferred to the appropriate waste handling, storage or disposal facility, as soon as is reasonably practicable;*
- f) minimising the holdings and use of hazardous materials, including radioactive materials and explosives;*
- g) actively managing the ecology and heritage of our sites."*

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<sup>1</sup>AWE's Environment Policy can be found in the "AWE Compendium of Company Policies, Managing for Excellence" document, Issue 3, January 2006 (reference AWE/DSDG/A/PS/AD/011) (ref 2):

## Key Drivers

- 1.5 AWE's Energy Strategy has been developed taking into consideration the regulatory / policy driver, customer expectations (outlined in Appendix 1 and 2) and energy market influences. To summarise, the key drivers are:

- The requirement for AWE to drive down its carbon dioxide emissions to meet EU Emissions Trading Scheme and UK Climate Change Agreement targets, designed to support the UK's Kyoto commitment.
- Current and future building regulations which promote energy efficiency and reduced carbon emissions through improved building design.
- Planning policy which promotes renewable energy technologies and seeks provision of appropriate design principles which facilitate energy efficiency in proposals for new development.
- Government Estate / MOD targets aimed at reducing absolute carbon from fuel and electricity used in buildings, improving energy efficiency of buildings and promoting use of renewable energy - In particular, the target "Government Departments to source at least 10 per cent electricity from renewable sources by 31 March 2008."
- The predicted increases in energy costs
- Uncertainty of future energy supply - The UK is becoming more dependent on imported fossil fuels to meet the country's heating and electrical generation requirements.

## Scope

- 1.6 The document includes strategic objectives for energy use and water use within all buildings.
- 1.7 The maximisation of the effects of natural lighting, ventilation and solar gain is addressed in the AWE's Architectural Design Principles Document.

## Structure

- 1.8 The Energy Strategy sets out a series of objectives and commitments with regard to energy management. It comprises three sections:-
- **Part A Energy Strategy** This section defines the overall principles for managing energy use and minimising CO<sub>2</sub> emissions. It also outlines how the Energy Strategy would be implemented.
  - **Part B: Objectives and Commitments** This section sets out the detail of the objectives and commitments that will be undertaken.

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## Part A - Energy Strategy

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### A1 AWE's Energy Strategy Principles

A1.1 The underlying principles of AWE's Proposed Energy strategy are threefold:

1. Use less energy
2. Use energy efficiently
3. Use renewable energy

A1.2 By following these principles, AWE will minimise both direct and indirect CO<sub>2</sub> emissions from the Aldermaston and Burghfield Sites, and in addition, provide cost savings due to improved energy efficiency.

### A2 Energy Strategy Objectives

A2.1 Using the underlying principles as defined above, AWE has set out six objectives:

1. Energy management and awareness will be improved.
2. Energy improvements will be made to existing buildings and site infrastructure
3. All new and refurbished buildings will be energy efficient
4. All new plant and equipment selected will be energy efficient
5. By 2010, AWE will aim for at least 10% of the site energy provided from low or zero carbon sources
6. Efficient use of water within all buildings

### A3 Implementation

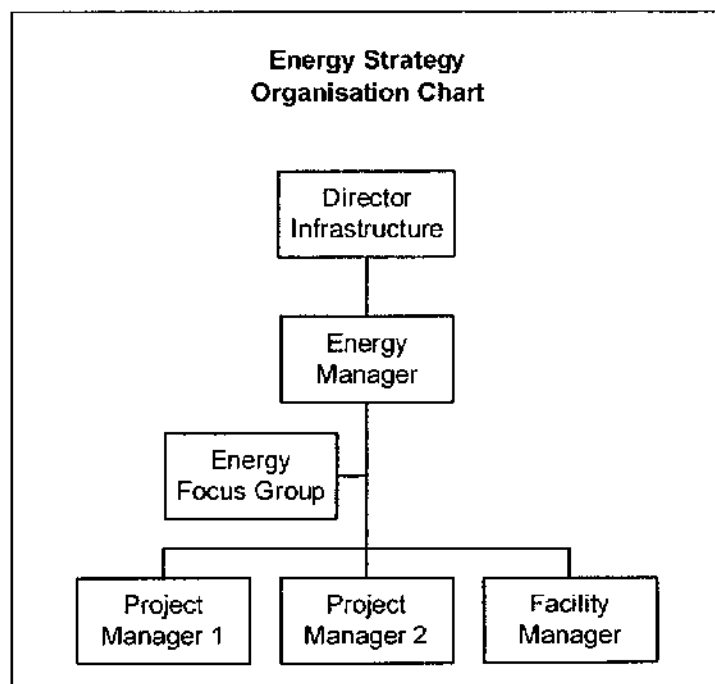
#### Responsibilities

A3.1 Responsibility for the delivery of this Strategy is illustrated in the diagram below. The Director Infrastructure will have overall responsibility, reporting achievements to the Executive Board on a regular basis. The Energy Manager will be responsible for preparing and delivering the



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programme of implementation and leading the Energy Focus Group (as described below). Individual Project Managers and Facility Managers will have responsibilities for the delivery of specific commitments set out in the Strategy. These responsibilities will be defined within the programme of implementation.



### Implementation Plan

A3.2 A programme of implementation will be developed with key deliverables, milestones and responsibilities identified against each objective and commitment described in the next section.

### Energy Focus Group

A3.3 AWE will take an active role in monitoring and reviewing the delivery of the objectives and commitments defined in this Energy Strategy.

A3.4 An Energy Focus Group will be established and will meet on a periodic basis to review progress against the programme of implementation. The focus group will represent the main internal stakeholders and where appropriate, include representatives from the main AWE sub-contract organisations.

A3.5 This Strategy document will evolve during its lifetime and will be considered a "living" document that will be regularly monitored and reviewed by the AWE Energy Focus Group. It will be updated as and when required.

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## Part B – Objectives and Commitments

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### Objective 1:

#### Energy Management and Awareness will be improved

##### Introduction

B1.1 It will be important to implement an effective energy management regime to support the Strategy and to drive improvements forward. The key focus will be on raising awareness, improving monitoring and measurement, assigning local accountability for energy use, and implementing a company-wide reward and recognition scheme. In addition, we will seek to ensure that energy efficiency is adequately addressed at the design stage through the AWE project delivery process.

##### Commitments

###### *Energy awareness programme*

B1.2 To achieve the commitment necessary to implement this strategy and achieve the energy reductions that will be required it shall be important to raise the awareness of the issues and to gain 'buy in' at all levels in the Company. An energy awareness programme will be developed, targeted at all AWE staff and contractors. We will look to re-establish the post of 'Energy Wardens' within the major facilities who will act as a focal point for the management of the energy resource.

###### *Reward and recognition scheme*

B1.3 Work will be undertaken to develop and implement a scheme that will reward energy efficiency improvements and innovation and recognise the contribution this makes to both the company and the local community.

###### *Effective monitoring and measurement of energy use at AWE*

B1.4 The implementation of any measures identified relies on effective monitoring and measurement systems to guide the decision making process. An effective metering network for the major energy and water users will be established.

B1.5 In addition, we will seek to establish a series of KPIs which will be used to drive and demonstrate improvements in energy use. The initial focus will be on the top energy users.

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#### *Financial Accountability*

B1.6 A feasibility assessment of increasing the accountability of the major users for their energy use will be undertaken. This should look at the following areas:-

- Establishing financial accountability of major energy users
- Setting of energy efficiency targets at facility and project level
- Ensuring through life costs are considered within the design review process.

#### *Energy Design Principles*

B1.7 To communicate the technical improvements identified through the development of the Energy Strategy, an Energy Design Principles document shall be produced to provide clear instruction to architects. The AWE Project Delivery Process shall be updated to ensure that energy efficiency is adequately addressed throughout all stages of the design process.

#### *Application of BAT (Best Available Technique) to heating requirements*

B1.8 As a requirement of the PPC permit for major combustion plant (which will apply to all heating and combustion systems on the Aldermaston site), a BAT assessment will need to be undertaken for new and modified systems. This will need to show that the option taken is the best choice in terms of its total environmental impact.

This is a regulatory requirement for the Aldermaston site but the principle should also be applied to the Burghfield site.

#### *Interface with the Maintenance Contractor*

B1.9 The maintenance of the majority of the systems that can have a direct impact on AWE's energy consumption are now managed by two sub-contract companies. A forum will be established to ensure that energy management is incorporated within their operations and further, to consider how their broader experience can be applied at AWE.

## **Objective 2:**

### **Energy improvements will be made to the existing buildings and site infrastructure**

#### **Introduction**

B2.1 Approximately 90% of the total energy used by both the Aldermaston and Burghfield site is directly attributable to the building services (maintaining temperature, ventilation and humidity) and is not directly related to staff operations.

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B2.2 Due to the nature of the processes undertaken in the main production facilities at AWE, there is a need to maintain strict temperature, ventilation and in some cases, humidity control. The energy used by the general office and support buildings is only a small proportion of the total energy requirement. Monitoring of the site electrical consumption shows that the remaining 10% is due to staff operations as the demand profile aligns with the normal working day.

B2.3 In support of work recently undertaken on the application for the IPPC permit for the combustion processes on the Aldermaston site, it has been estimated that of the energy used by the centralised site steam heating system only around 45% is used by the buildings. Of the remainder, around 15% is lost at the boiler houses and a further 40% energy is lost through the distribution system. When the overall system efficiency is viewed on an annual basis the performance of the centralised steam system may be as low as 11% this compares against a seasonal efficiency for a modern gas boiler system of around 91%.

### **Commitments**

#### *Identifying improvements at facility level*

B2.4 An energy audit will be undertaken of the top energy consuming facilities to enable the development of an energy reduction action programme.

#### *Burghfield Site Gasification*

B2.5 A project has been initiated at the Burghfield site that will result in the closure of the centralised heavy fuel oil fired boiler house and the steam distribution system being replaced by a number of zonal gas fired boiler packages. This will lead to a substantial energy saving and reduction in direct CO<sub>2</sub> emissions.

B2.6 It is currently envisaged that the gas infrastructure will be in place and the programme initiated to move to local gas boiler plant by early 2009.

#### *Aldermaston Site Gasification*

B2.7 The site development programme has identified that, compared to a centralised steam system, the more efficient heating system for the new buildings is based upon local gas package boiler plant support. In support of this development there will be a renewal of the Aldermaston site gas infrastructure within the Main Site area and refurbishment of the centralised steam distribution systems for the remaining parts of the site.

B2.8 The upgrade of the gas infrastructure will allow the more extensive use of local and zonal gas boiler plant, a reduction in the system losses associated with the steam distribution network and a marked improvement in the overall energy consumption.

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*Aldermaston Site heating assessment*

- B2.10 In support of the PPC permit application for the combustion processes an energy assessment of the current heating system will be required to fully characterise the overall heat balance. This will enable targeted improvements to be made to the system prior to its eventual upgrade or replacement.

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### **Objective 3:**

#### **All new and refurbished buildings will be energy efficient**

##### **Introduction**

- B3.1 To meet the energy efficiency regulatory requirements for new and refurbished buildings, reduce emissions, meet the AWE policy aims and to minimise operating cost there is a need to minimise energy use and to maximise the use of renewable energy sources.
- B3.2 Though it must be accepted that all buildings will have an energy requirement, the primary goal within this objective is that an energy consuming solution should only be used where a zero energy option is not financially viable. Where possible, the design of the buildings should maximise the use of the natural lighting, ventilation and solar gain and minimise the uncontrolled energy losses from the structure.

##### **Commitments**

###### *Energy reductions through energy efficient building and process design*

- B3.3 The energy performance of all new and refurbished buildings will meet and if economic to do so, exceed the national standard set by the requirements of the Building Regulation part L. The carbon performance of the design will need to be determined and a Building CO<sub>2</sub> Emission Rate (BER) and a Target CO<sub>2</sub> Emission Rate (TER) calculated for the project. At the design stage and through construction and commissioning it will need to be shown that the actual BER has not exceeded the initially defined TER. Failing to achieve compliance will mean that final Building Regulation approval will not be issued. The BER will be required to show an improvement on the TER (calculated to the 2002 standard of the regulations) by between 15 and 20%. Additionally there is a requirement for the inclusion of at least 10% of the energy from Low or Zero Carbon energy sources, but this can be offset by further improvements in the energy efficiency.

###### *Provision of a Log Book*

- B3.4 Further, to assist with the ongoing energy management of the new and refurbished buildings, and as required by the Building Regulation, all buildings shall be provided with a log book.

###### *Energy Efficiency Assessments*

- B3.5 As part of the project approval system, an energy assessment process should be developed that will identify the planned energy consumption and ensure that adequate review is

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undertaken. This process should also encompass the requirements of the Building Regulations and the through life cost assessment.

*Recovery and reuse of waste energy*

- B3.6 A number of the existing and new buildings have and will need large chilled water plants to maintain the internal environmental conditions. These plants have a significant power demand and generate a large volume of low-grade hot water, the heat from which is rejected to the atmosphere through associated cooling towers. A study will be undertaken into the options for the recovery and reuse of the waste heat generated to identify possible options that, if included as part of a new and refurbished building, will have paybacks on the cost premium of less than 4 years.
- B3.7 A set of energy recovery design principles will be produced to ensure that the appropriate technology is incorporated within the new developments. This will include a requirement to review the opportunities for maximising the use of waste energy when considering the location of new buildings.

**Objective 4:**

**All new plant and equipment selected will be energy efficient**

**Introduction**

- B3.1 The most economical time at which to include improvements to energy efficiency is either from new or as part of a refurbishment programme. The selection of equipment and plant with a greater efficiency can have a greater initial capital cost but this extra premium will be recovered through the reductions in operating costs.

**Commitments**

*Energy Efficient Equipment Procurement*

- B3.2 An AWE reference document and procurement policy will be produced which will identify energy efficient equipment or criteria to be used for all projects. This document shall include, where appropriate, information from the Energy Technology List (ref. [www.eca.gov.uk](http://www.eca.gov.uk)), the Defence Estates Organisation Design and Maintenance Guide 20 and other reference sources which sets out the criteria to be considered when selecting new plant and equipment.

*Condensing Boilers*

- B3.3 Where local gas boilers are shown to be the best available technique for the supply of heating and hot water then Condensing Boilers presenting a minimum efficiency of 90% will be used.



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## Objective 5:

### By 2010, at least 10% of the site energy will be provided from low or zero carbon sources

#### Introduction

B4.1 To ensure compliance with future Carbon Dioxide emission targets, reduce reliance on fossil fuels, meet the requirements of the Building Regulations and to be in line with Government Estate targets there will be a need to invest in technology that is sustainable and low in Carbon Dioxide emissions. New legislation aimed at addressing this requirement is focused at individual buildings and developments but due to the nature of the Aldermaston and Burghfield sites this objective will need to be addressed both at the building and site level.

#### Commitments

##### *Investigate Renewable Energy Opportunities*

B4.2 Further investigation shall be made of the feasibility of renewable energy opportunities at both Aldermaston and Burghfield. In particular, the following will be investigated:-

- Biomass heating systems
- Large Scale Wind Generation
- Investigation into the opportunities for use of other renewable energy technologies (e.g. heat pumps, solar panels, photovoltaics, renewable powered external lighting) with respect to new buildings planned for the company.

##### *Development of Renewable Energy Design Principles*

B4.3 Based on the above investigation, a set of renewable energy design principles will be produced to ensure that the appropriate technology is incorporated within the new developments.

##### *Green supply*

B4.4 Due consideration will be given to procuring a proportion of the electricity demand from green supply (i.e. from a low or zero carbon source).

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## Objective 6:

### Efficient use of water within all buildings

#### Introduction

- B5.1 The strategy for the supply and disposal of water, external to the buildings, is being addressed at AWE Aldermaston and Burghfield. The following defines the commitments for the management of water use within buildings.

#### Commitments

##### *Water Technology List*

- B5.2 Where possible, all new equipment should be chosen from, or meet the criteria of, the Water Technology List. The use of these lists at AWE will ensure that the equipment chosen has met a nationally defined level of performance for resource efficiency.

##### *Water Supply (Water Fittings) Regulation 1999*

- B5.3 Every water fitting must meet the requirements of the Water Supply Regulations, these relate to WC's, flushing devices, urinals, baths, sinks, showers, taps, washing machines, dishwashers and water for outside use.

##### *Water Recycling*

- B5.4 A significant proportion of the water used within an industrial and commercial building is used for toilet flushing and grounds maintenance. This water does not need to be of a potable standard and can be replaced by water from recycling or rainwater harvesting. A review of the opportunities for water recycling and rainwater capture will be undertaken.

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## Appendices

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## Appendix 1

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### Regulatory Framework

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### **Kyoto Protocol**

The Kyoto Protocol to the United Nations Framework Convention on Climate Change sets legally binding greenhouse gas (GHG) emissions targets for Annex I (developed) countries. The Protocol aims to arrest and reverse the upward trend in GHG emissions from these countries.

Under the Protocol, the EU member states have collectively agreed to reduce their GHG emissions by 8% below 1990 levels between 2008 and 2012. The UK's Kyoto target is to reduce 1990 GHG emissions by 12.5% by 2008-2012. The UK has also set a domestic target to reduce carbon dioxide emissions by 20% by 2010.

The UK Climate Change Programme published on 17<sup>th</sup> November 2000, details actions to be taken by UK Government to meet the UK Kyoto commitments.

The Protocol moves the international community one step closer to achieving the Convention's ultimate objective of preventing "dangerous anthropogenic (man-made) interference with the climate system".

### **EU Emissions Trading Scheme**

The EU Emissions Trading Scheme (EU ETS) is a mandatory scheme targeted across Europe at the large emitters of Carbon Dioxide. The scheme came into force on the 1 January 2005 and the first phase runs for three years, the second phase is for 5 years from the 1 January 2008 through to 2012 when the national Kyoto agreed targets must be met. The effect of the scheme on organisations such as AWE is that a 'cap', i.e. an upper limit, has been imposed on the direct emissions that can be generated from our combustion processes.

### **Climate Change Agreements**

As from the 1 April 2001, all commercial and industrial organisations have been subjected to an increase on the energy costs due to the Climate Change Levy (a tax on the business use of energy). In parallel, organisations that met certain criteria can apply for up to 80% exemption on the Climate Change Levy (CCL) in return for a commitment to meet voluntary energy reduction targets over the period up to 2010.

AWE has made such a commitment, via a voluntary climate change agreement (CCA) with DEFRA, and has agreed to achieve primary energy reductions in line with bi-annual consumption targets.

The CCA covers the Aldermaston site only, and includes gas, oil and electricity (direct and indirect

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emissions). Eligible facilities are those facilities whose combustion activities fall under the activities listed in Schedule 1 of The Pollution Prevention and Control (England and Wales) Regulations 2000, (although capacity and volume limits do not apply).

### **UK Emissions Trading Scheme**

AWE has entered the UK Emissions Trading Scheme (UK ETS) which runs from March 2002 until 2007. This scheme is voluntary and was introduced by Government as a means of encouraging participants to reduce greenhouse gases (GHGs). AWE has entered the scheme as an 'Agreement Participant' (as it has a Climate Change Agreement in place). Under the scheme AWE can buy allowances (carbon credits) to meet the CCA targets, or sell allowances via the UK trading market if overachieved. [The difference between actual allowance and target allowance (KWh) can be converted to equivalent mass of carbon dioxide using conversion factors for electricity, gas and oil.] The carbon credits must be purchased via the UK ETS.

### **Building Regulations**

#### *The Building Regulations 2000 – Part L*

Part L of the Building Regulations sets requirements for the energy conservation of new and refurbished buildings. The current requirements (since April 2002) included ensuring reasonable provision for energy efficiency in terms of building fabric, space heating and hot water systems, air conditioning and mechanically ventilated systems and lighting systems.

Further revisions to the Part L are proposed to be implemented in April 2006. These include more stringent requirements, and the need to calculate predicted carbon emissions based on detailed design and to then recalculate following full building pressure testing to confirm emissions 'as built'. The revisions will set maximum carbon dioxide emissions for whole buildings. There is no requirement proposed for "low and zero carbon" technologies. However, the revisions to Part L will raise performance standards to a level that will provide a strong incentive to designers to consider such systems.

### **Integrated Pollution Prevention and Control**

An EU Directive on Integrated Pollution Prevention and Control (96/61/EC) came into force on 30<sup>th</sup> October 1996. Integrated Pollution Prevention and Control (IPPC) is a regulatory system that employs an integrated approach to control the environmental impacts of certain industrial activities, by reducing polluting emissions to air, water and land so as to achieve a high level of protection of the environment taken as a whole.

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The Pollution Prevention and Control (England and Wales) Regulations 2000 specifically require that installations should be operated in such a way that energy is used efficiently. The aim of the energy efficiency requirement is to minimise pollution arising from the consumption of energy in industrial processes and to reduce the associated environmental impacts.

At AWE the following processes are and will need to be managed in accordance with the Regulations, under a PPC permitting regime.

- Non Ferrous Metal's, as of 1 January 2002
- Combustion plant at Aldermaston, as of 1 April 2006.

To obtain a PPC permit, AWE will have to show that its proposals represent Best Available Technique (BAT) to prevent and minimise pollution and that no significant pollution is caused.

#### **Local Government Planning Policy**

National, regional and local planning policies drive the incorporation of energy efficiency measures and renewable energy provision within new developments.

In summary, the current statutory requirements are laid out in the West Berkshire Local Plan 1991 – 2006 (Adopted 2002), seeking provision of appropriate design principles which facilitate energy efficiency in proposals for new development.

To support this planning policy, West Berkshire has recently issued a draft Supplementary Planning Document (SPD) on design and sustainability issues (October 2005). This specifies that any new development should be accompanied by an Energy Efficiency / Sustainability Statement and that BREEAM/EcoHomes rating of "Excellent" should be achieved on all sites. It also requires the incorporation of renewable technologies into new developments wherever feasible. This SPD is currently out for consultation and may be subject to change.

The requirement to consider the provision of renewable technologies is supported by the current Berkshire Structure Plan 2001-2006 (Adopted 2005) stating that generation of energy from renewable resources should be considered, and implemented wherever feasible, in all development proposals, provided that adverse impacts on landscape, biodiversity and local amenity are avoided. The new draft South East Plan, which will be the regional planning policy for West Berkshire, also refers to the incorporation of renewable energy sources for new developments.



## Appendix 2

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### Government Estate Targets

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## Framework for Sustainable Development

The *Framework for Sustainable Development on the Government Estate* ([www.sustainable-development.gov.uk](http://www.sustainable-development.gov.uk)) provides the mechanism for improving and reporting sustainability performance of Government Departments. The Framework includes cross-Government targets on sustainability, including targets on energy. Each Department (including the MOD) is required to develop strategies to meet the agreed targets.

The *Framework* targets of specific relevance to AWE's Energy Strategy are given below:

E1 – Government Departments to reduce absolute carbon, from fuel and electricity used in buildings on their estate, by 12.5% by 2010 – 11, relative to 1999-2000.

E2 – Government Departments to increase the energy efficiency of the buildings on their estate, measured in terms of KWh of (1) fuel and (2) electricity use per square meter of buildings floor area, or estate area, by 15% per cent by 2010-11, relative to 1999-2000.

E3 – Government Departments to source at least 10 per cent electricity from renewable sources by 31 March 2008. This will be measured by kilowatt hours for a) purchasing of renewable energy and b) self-generation of renewable energy (excluding CHP).

E4 – Government Departments to source at least 15 per cent of electricity from Good Quality Combined Heat and Power by 2010. "MOD's commitment to meeting the cross government energy targets set out in the *Framework*, are outlined in JSP418 (see below).

The MOD Sustainable Development Strategy identifies sixteen priorities for MOD to focus on (see [www.mod.uk/dseff/](http://www.mod.uk/dseff/)). Of these energy management is an area that MOD must deliver upon across all sites and locations.