



# **Nuclear Decommissioning Authority Carbon Accounting Procedure 2012**

**Introduction**

Carbon accounting refers to the act of measuring and reporting on an organisation's greenhouse gas emissions. It considers all six of the Kyoto Protocol greenhouse gases (GHG) - carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFC), perfluorocarbons (PFC), and sulphur hexafluoride (SF<sub>6</sub>).

Carbon accounting procedures typically aim to measure and report on the emissions that a company is directly responsible for, but they can also track emissions that result from a firm's supply chain and the activities of its partners, customers and staff. This Carbon Accounting Procedure (CAP) summaries how we assess our carbon footprint and other sustainability information and record these in our Sustainability Report. It is not possible to quantify every aspect of our activities in terms of carbon/GHG. Therefore we state what the scope of our activities is, how we measure or calculate our emissions, what assumptions we use and where any data is missing or unavailable.

The NDA's Sustainability Report is intended to show our sustainability performance, alongside related financial information, as required by HM Treasury's Financial Reporting Manual (FReM)<sup>1</sup>. It is also part of DECC's effort to improve transparency on sustainability performance under Greening Government Commitments (GGC)<sup>2</sup> as well as delivering our own Environmental Management System (EMS) targets and sustainability commitments.

**Scope**

The basis of the scope is an organisational carbon footprint which measures the GHG emissions from all the activities across the organisation, including energy used in buildings, processes and company vehicles. The boundary for this scope is for the NDA administrative organisation (core NDA) as this covers direct organisational control. As a result the scope is for a normal multi-office based organisation. The NDA's subsidiaries and wider nuclear site estate are outside the reporting boundary as these are exempt by agreement with Government.

The reporting periods are financial years with the baseline year being FY 2009/2010, against which performance trends are measured. Most targets have an achievement date of 2015 i.e. end of FY 2014/2015.

Our reporting scopes are:

<b>Scope 1</b>	<b>Scope 2</b>	<b>Scope 3</b>
Direct emissions that result from NDA's activities within our control.	Indirect emissions from activities we do not directly control but have indirect responsibility for GHG.	Any other indirect emissions from sources outside our direct control.
<b>Included:</b> Gas& oil for heating Pool cars Refrigerant losses	<b>Included:</b> Electricity	<b>Included:</b> Business mileage
		<b>Excluded:</b> Staff commuting and relocating mileage Process and transportation, emissions from waste disposal and water Embedded emissions in products used

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<sup>1</sup> [http://www.hm-treasury.gov.uk/frem\\_sustainability.htm](http://www.hm-treasury.gov.uk/frem_sustainability.htm)

<sup>2</sup> <http://sd.defra.gov.uk/gov/green-government/commitments/>

For some of our offices NDA has overall operational control. However for some offices we are tenants and get a pro rata proportion of resource consumption for a building, usually based on floor space. We do not reported resource usage components where these are not independently metered or identified in tenant service contract charges i.e. some water and waste disposal charges which are not separately billed for.

In FY 2012/2013 NDA has 2 controlled offices (West Cumbria and Harwell) and 4 tenanted offices (at Warrington, Thurso, Sellafield site and London). There are no sub-meters available for the office on the Sellafield site and it is not appropriate to account for this office's consumption on a pro rata basis with the Sellafield nuclear site. Therefore the resource usage for the NDA staff in this office is accounted for by an equivalent number of non-NDA staff (contractors and some Cumbrian based INS staff) working out of NDA's headquarters - Herdus House in West Cumbria. These accounting arrangements are consistent with previous years and the baseline year scope.

NDA does not purchase carbon offsets.

### **Assessment**

During the reporting year, on a monthly or quarterly basis dependent when information is available, we assess our emissions either by calculation using emission factors for each source or as supplied by our service providers.

On a quarterly based we calculate our emission and other sustainability metrics (e.g. water use) using (where possible) primary data entered into a Government provided carbon equivalence calculator tool. This provides a definitive and consistent reporting methodology using standard Defra emission factors (<http://www.defra.gov.uk/publications/2012/05/30/pb13773-2012-ghg-conversion/>) and replaces any previous intermediate emissions values. At end of Q2 and Q3, data and values are checked and forward projections made to estimate what the end of year performance may be.

At the end of the year data is checked and finalised. As necessary any in-year values are amended for a definitive and updated full year value e.g. staff number FTE. Performance values showing resource usage changes are calculated against the previous year and the baseline year values.

### **Detailed assessment issues**

NDA's environmental aspects contributing to GHG emissions are heating/cooling, lighting, own vehicle use, business mileage (cars, trains and flights). Other aspects that are measured are waste, water consumption and paper use.

#### **Scope 1**

- Gas and oil consumption is measured via meters or provided on a pro rata basis by our landlords.
- Our pool cars have mileage recorded monthly – there are no owned fuel pumps and fuel cards are not used for emission calculation purposes.
- Refrigerant losses are taken from maintenance records.

#### **Scope 2**

- Electricity usage is measured via meters or provided on a pro rata basis by our landlords. Any mains green tariff electricity is taken from the value provided by the supplier.

### **Scope 3**

#### **Travel**

- Vehicle emissions are calculated from recorded mileages and have several components. Mileages are recorded from hire car agreements, expenses claims and via taxi contract invoices. From FY 2011/2012 we also converted taxi fares claimed by expenses into mileages by using standard fare tariffs and assuming a 5 mile journey. Emissions are calculated using an average fleet emission factor rather than specific engine type and size factors.
- Rail emissions are calculated using train journey distances for purchased tickets. From FY 2011/2012 we also included train journey mileages for free tickets obtained via a 'free tickets for used tickets' scheme.
- Emissions from aircraft flights are taken from flight mileages provided by our travel service provider. Flights are categorised as domestic, short or long haul. International air travel emissions include an uplift factor of 1.9 to account for radiative forcing, in accordance with [Government Carbon Offsetting Facility](#) (GCOF) rules. The number of flights is used rather than the number of tickets issued.

### **Other Sustainability Metrics**

#### **Waste**

Waste masses are assessed by a combination of direct measurement or calculation based on standard waste container volumes dependent on the type of waste. The amount of waste recycled is that for which recycling is arranged by NDA rather than by our landlords or by the waste service provider after treatment or segregation. The data does not include IT related values as redundant IT items are processed through our service provider, mainly for re-use or recycling.

#### **Water**

Water consumption is measured via meters or provided on a pro rata basis by our landlords. All water is mains supplied – there are no abstracted sources.

#### **Paper**

Paper consumption is measured in 2 ways - by A4 and A3 reams purchased and by the amount of paper used internally to the NDA. This latter value covers special paper types and sizes that may have been bought in bulk and used between different financial years.

#### **Financial Data**

Financial data is provided by NDA's Finance department from standard accounting and coding processes.

#### **CRC Scheme**

Due to a regulatory decision NDA has had to take on the CRC responsibilities for the Sellafield nuclear site's electricity usage and CHP gas emissions (due to a strict application of the "landlord/tenant" rule). This has required NDA to become a Full Participant under CRC. Sellafield Ltd therefore became an 'Information Discloser' only and does not have to provide any further information or buy allowances. It should be noted that NDA's CRC reporting scope does not align with our sustainability reporting scope.

### **Governance Arrangements**

NDA's environmental and sustainability performance arrangements are set out under our Internal Environmental Management Plan<sup>3</sup> of which version 2 was developed in 2010.

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<sup>3</sup> IEM Plan

Optimising internal environment management contributes to delivery of cost savings to the business, as well as delivering our targets and sustainability commitments to government. As part of our ISO14001:2004 certification <sup>4</sup> NDA has defined internal environmental performance targets which are to be achieved by 2015.

As a NDPB reporting to the Department of Energy and Climate Change (DECC), we have decided to harmonise our IEM Plan to include their targets under the Greening Government Commitments (GGC)<sup>5</sup> – although we have made some re-alignments to ensure consistency i.e. report in CO2 equivalents rather than CO2, paper purchasing rather than printing. Therefore our base targets are those from GGC and any original more ambitious IEM targets have become our stretch targets.

Internally we formally report performance against our targets to the responsible director (Chief Operating Officer) at the Health, Safety and Environment Committee 3 times a year and also communicate performance to staff by various routes. As part of our Environmental Management System the NDA's performance is examined by senior management at an annual management review.

Externally NDA's sustainability metrics are reported quarterly into DECC for it to collate and then report into central government. Our Sustainability Report is published annually as part of the NDA's Annual Report and Accounts (ARAC) <https://www.nda.gov.uk/news/ arac-2011-2012.cfm>.

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<sup>4</sup> LRQA Approval Certificate No: LRQ 4002929/A

<sup>5</sup> <http://sd.defra.gov.uk/gov/green-government/commitments/>