

Highways Agency Specification 2013-14 – Technical Note

Field	Notes
Short Title	Achieve 22% Reduction in Carbon Dioxide Emissions by 2015.
Performance Specification Reference	Output 11 – PS 5.3a
Requirement / Output Details	The network operator should deliver its contribution to the Greening Government commitment by achieving a 22% reduction in its carbon emissions by 2015 against the 2009-10 baseline.
Technical Definition	<p>This measures the carbon dioxide equivalents (or CO₂e) in tonnes associated with the Highways Agency's (HA's) activities.</p> <p>The measure will focus on a subset of this carbon footprint covering Scope 1, Scope 2 and the business travel element of Scope 3 as defined by the Greenhouse Gas (GHG) Protocol. This organisational coverage aligns with the HM Treasury (HMT) minimum reporting requirements for Departments' and Agencies' annual reports and the Greening Government Commitments (i.e. emissions relating to suppliers, road users and staff commuting are outside the accounting boundary). Scope 2 aspects also align with new reporting requirements under the Carbon Reduction Commitment (CRC) Energy Efficiency Scheme implemented by the Department for Energy and Climate Change (DECC).</p> <p>We will continue to monitor and publish the HA's overall carbon footprint, segmented into the three 'scopes' in line with existing GHG reporting protocols. This includes the dominant Scope 3 supplier emissions relating to network construction, maintenance and operation activity.</p>
Rationale	<p>The HA is committed to contributing to the Government's targets for GHG emissions reductions. In June 2007, it published its first Sustainable Development Action Plan (SDAP) which established, amongst other things, a requirement to report on HA's carbon footprint from construction, maintenance and network operations.</p> <p>In September 2008, the HA carbon calculation framework was launched to measure the GHG emissions associated with delivering our business. This is derived by using CO₂e in tonnes as the measure, which allows for the capture of information related to the six GHGs covered by the Kyoto Protocol.</p> <p>By 2009 we were able to report our organisational carbon footprint in alignment with the then draft HMT minimum reporting requirements for Departments' and Agencies' annual reports.</p> <p>All of the above contributes to achieving an SRN which minimises its negative impact on users, local communities and the environment.</p>

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Formula	The components of the Scope 1, Scope 2 and Scope 3 elements of the HA's organisational carbon footprint are set out below.																									
	<table><tr><th>Source</th><th>Scope</th><th>Coverage</th><th>Method of measurement</th></tr><tr><td>Facilities main offices & Regional Control Centres (RCCs)</td><td rowspan="2">Scope 1</td><td>Gas</td><td>Consumption from metered main offices and the RCCs</td></tr><tr><td>Traffic Officer Service (TOS) vehicles</td><td>Fuel – diesel</td><td>Traffic Management Directorate (TMD) fleet manager collates TOS fuel use (card purchases)</td></tr><tr><td>Facilities main offices & RCCs</td><td rowspan="2">Scope 2</td><td>Electricity</td><td>Consumption from metered main offices and the RCCs</td></tr><tr><td>Network energy</td><td>Electricity (roadside equipment incl. lighting and communications)</td><td>Consumption metered and unmetered</td></tr><tr><td rowspan="4">Business travel</td><td rowspan="4">Scope 3</td><td>Road – hire and grey fleets</td><td rowspan="4">Modal split of business travel is compiled from data collected in the HA Management Systems incl. iExpenses.</td></tr><tr><td>Rail</td></tr><tr><td>Air</td></tr><tr><td>Bus and taxi</td></tr></table>	Source	Scope	Coverage	Method of measurement	Facilities main offices & Regional Control Centres (RCCs)	Scope 1	Gas	Consumption from metered main offices and the RCCs	Traffic Officer Service (TOS) vehicles	Fuel – diesel	Traffic Management Directorate (TMD) fleet manager collates TOS fuel use (card purchases)	Facilities main offices & RCCs	Scope 2	Electricity	Consumption from metered main offices and the RCCs	Network energy	Electricity (roadside equipment incl. lighting and communications)	Consumption metered and unmetered	Business travel	Scope 3	Road – hire and grey fleets	Modal split of business travel is compiled from data collected in the HA Management Systems incl. iExpenses.	Rail	Air	Bus and taxi
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	Consumption figures are converted to CO ₂ e tonnes using factors specified in 'Guidelines to Department for Environment, Farms and Rural Affairs (DEFRA)/DECC's GHG Conversion Factors for Company Reporting'.																									
	These factors are set by DECC and relate specifically to the year(s) they cover.																									
Unmetered supplies are permissible under certain circumstances strictly in accordance with Statutory Instrument (SI) 2001 No. 3263 ¹ and implemented through the BSCP 520 Regulations ² .																										
¹ Electricity (Unmetered Supply) Regulations 2001 SI 2001 No. 3263.																										

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	<p>² Balancing and Settlement Code Procedures BSCP 520 Regulations – Unmetered Supplies Registered with SMRS (Supplier Meter Registration Service).</p> <p>Example (illustrative, including example conversion factors not current)</p> <p>Scope 1</p> <p>Gas consumption $3,200,000 \text{ kWh} \times 0.18523 = 592,736 \text{ kgCO}_2\text{e}$ Diesel usage $2,400,000 \text{ litres} \times 2.672 = 6,412,800 \text{ kgCO}_2\text{e}$ Total Scope 1 expressed in tonnes: 7,005 tCO₂e</p> <p>Scope 2</p> <p>Electricity office consumption $1,100,000 \text{ kWh} \times 0.54522 = 599,742 \text{ kgCO}_2\text{e}$ Electricity network consumption $205,000,000 \text{ kWh} \times 0.54522 = 111,770,100 \text{ kgCO}_2\text{e}$ Total Scope 2 expressed in tonnes: 112,370 tCO₂e</p> <p>Scope 3 (business travel)</p> <p>Road hire and grey fleets $3,500,000 \text{ km} \times 0.20825 = 728,875 \text{ kgCO}_2\text{e}$ Rail $5,800,000 \text{ km} \times 0.05651 = 327,758 \text{ kgCO}_2\text{e}$ Domestic flight $140,000 \text{ km} \times 0.20515 = 28,721 \text{ kgCO}_2\text{e}$ International flight $210,000 \text{ km} \times 0.116 = 24,360 \text{ kgCO}_2\text{e}$ Total Scope 3 (business travel) in tonnes: 1,110 tCO₂e</p> <p>Scope 1, Scope 2 and Scope 3 (business travel) total summing the above: 120,485 tCO₂e.</p>
Start Date	June 2011.
Performance	<p>CO₂e emissions to reduce over time.</p> <p>Our organisational carbon footprint should meet or exceed the Greening Government Commitment, “Reduce greenhouse gas emissions by 25% from a 09/10 baseline from the whole estate and business-related transport”.</p>
Behavioural Impact	Making use of the collected data should encourage behaviours to reduce the HA’s carbon footprint.
Comparability	HA’s organisational coverage aligns with the HMT minimum reporting requirements for Departments’ and Agencies’ annual reports.

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Collection Frequency	Performance metrics of the HA's organisational coverage for Scope 1, Scope 2 and Scope 3 business travel will be monitored quarterly and will be reported annually in the annual report and accounts.
Clearance Process	As annual report and accounts.
Time Lag	Three months.
Data Source	<ul style="list-style-type: none"> • HA Management Information System (HAMIS) Travel Manager and Oracle. • iExpenses (business travel). • Traffic Officer Services (Fuel – diesel) amount of fuel purchased supplied monthly via fuel card supplier. • Metered bills and unmetered bills from energy suppliers. • Unmetered network supplies are calculated using an electricity industry approved method. • HA Offices – metered bills from energy suppliers.
Type of Data	Management information.
Robustness and Data Limitations	<p>All metered / invoiced data is considered to be robust. For unmetered network energy, supplies are calculated using an electricity industry approved method. HA's business travel data is retrieved from HA management systems which is partially dependent on the information provided by users.</p> <p>Where consumption data is not available for reporting, estimates will be used in accordance with:</p> <p>https://www.gov.uk/government/publications/guidance-on-how-to-measure-and-report-your-greenhouse-gas-emissions</p> <p>It should be noted that all information related to carbon emissions reported in the HA's Annual Report will be subject to review by National Audit Office (NAO), as a result of new requirements laid down by HMT.</p>
Collecting Organisation	Highways Agency.
Return Format	Tonnes of carbon dioxide equivalent (CO ₂ e).
Geographical Coverage	England.

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How Indicator Can be Broken Down	<p>HMT have asked for reporting to be broken down by scope. Analysis of the HA's organisational coverage emissions relate to the following areas:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <input type="checkbox"/> Office Gas Consumption (Scope 1). <input type="checkbox"/> <input type="checkbox"/> Traffic Officer Fuel Consumption (Scope 1). <input type="checkbox"/> <input type="checkbox"/> Network Electricity (Scope 2). <input type="checkbox"/> <input type="checkbox"/> Office Electricity Consumption (Scope 2). <input type="checkbox"/> <input type="checkbox"/> Business travel (Scope 3 business travel) with more detailed analysis by mode available.