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Department for Work and Pensions

Carbon Management Plan

Year 3 refresh

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Foreword and Executive Summary from Mike Driver - Finance Director General



The [first DWP Carbon Management Plan](#) (CMP) was published in April 2011. It provided an initial baseline of carbon emissions and associated costs and a structured route-map to further reduce our carbon emissions through a series of strategic, administrative and technical actions. This Year 3 refresh updates the data, summarises the progress we have made towards our 2014/15 target and reports on our next steps.

DWP is one of the largest departments in government, currently with 927 buildings and 92,530 staff providing services to the majority of the UK population. As such, it has a pivotal role in reducing public sector carbon emissions. **Our vision is to maintain our position as one of the lowest carbon emitting (relative to size) departments in government.** This will be achieved by building on our recent successes and continually challenging ourselves and our suppliers to achieve our objectives whilst continuing to deliver high quality services to the public. To realise this vision we have refreshed governance, stakeholder and communications channels, thereby mainstreaming carbon reduction within our core business and operations.

The carbon baseline, based on the year 2009/10, for this CMP is 204,621tCO₂e. As shown at *Figure 1*, **by 2014/15 we aim to reduce our annual emissions by 25%, or 51,155tCO₂e** (the equivalent of around 10,000 households' emissions), meeting the DWP contribution to the Greening Government Commitments. If we can achieve this, **we will save 186,205tCO₂e and £164.4M cumulatively over the five years of the CMP.**

I am delighted to report that, despite a small increase last year (explained later in this CMP) we are ahead of our planned trajectory. As shown at *Figure 1*, by the end of 2012/13 we had planned to have reduced emissions by 19% (38,878tCO₂e) against 2009/10 levels. **We have actually reduced by 20.9% (42,759tCO₂e)**, placing us on track to meet our 51,155tCO₂e objective. **Cumulatively this has saved 111,527tCO₂e and £81.9M on energy and travel over the past three years.**

Year	Planned Trajectory	Savings Target (tCO ₂ e)		Savings Target (£M)	Savings Achieved (tCO ₂ e)		Savings Achieved (£M)
		Annual	Cumulative	Cumulative	Annual	Cumulative	Cumulative
2010/11	10%	20,462	20,462	13.7	18,122	18,122	18.9
2011/12	15%	30,693	51,155	37.2	50,646	68,768	48.9
2012/13	19%	38,878	90,033	70.2	42,759	111,527	81.9
2013/14	22%	45,017	135,050	112.4			
2014/15	25%	51,155	186,205	164.4			

Figure 1 – Summary of planned targets and progress to date

I would also stress that this latest success builds on previous performance. **Since 2006/07, DWP has reduced its annual emissions by 102,000tCO₂e, a massive 40%.**

Our successes, together with our plans for the future, helped us first achieve certification to the independent Carbon Trust Standard in 2009 and then re-certification in both 2011 and 2013. DWP remains one of the (if not the) largest public sector organisations to have achieved this, ranking the Department alongside many other well known public and private sector 'Standard Bearers'.



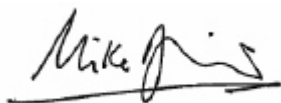
But we plan to go much further.

The Department is working closely with its key suppliers to deliver a range of measures to achieve its carbon management objectives. A number of projects are delivering and will continue to deliver these reductions. Technical measures include the transformation of IT to 'thin-client' cloud based services, printing and scanning improvements, and site-specific and equipment-specific investment schemes. In campaign terms, a series of Executive Team sponsored challenges on building temperatures and equipment have been implemented and will shortly be updated, Environment Champions are in place in almost all of our buildings, and awareness and behaviour change campaigns are ongoing. Travel avoidance and lower-carbon measures and estates rationalisation programmes are advanced. All of these initiatives will continue to deliver financial and carbon savings after the five year programme is complete, and we will press harder to increase the trajectory of reductions beyond 2015.

Funding (where required) will be provided both internally via Business Cases and externally via DWP's Private Finance Initiative (PFI) and managed service providers. We will also make use of third party funding such as Salix where appropriate.

To ensure all of this happens, DWP has a dedicated Sustainability and Climate Change Team to develop the strategy and influence, monitor and report progress, fully supported by commercial, estate, IT and finance teams across the Department. This is complemented by the work of Spending Wisely Team, challenging and informing delivery through engagement, and by our suppliers in presenting possible innovations.

I believe this plan, and specifically the projects within it, will continue to deliver real and sustainable carbon emission and cost reductions, and make a positive contribution to the climate change challenge.



Our low carbon vision

Our vision is to be one of the lowest carbon emitting (relative to size) departments in government, building on our recent successes and continually challenging ourselves and our suppliers to deliver our commitment to sustainable development and Greening Government, our continued certification to the Carbon Trust Standard, saving public money and at the same time continuing to deliver high quality services to our customers.

Our aim is simple - to build on our 23% reduction in the 3 years to 2009/10 by reducing our carbon emissions by a further 25% by 2014/15.

Context and drivers for carbon management

DWP accepts the overwhelming evidence that demands a significant reduction in greenhouse gas emissions and is seeking to define strategic and operational measures capable of reducing CO₂ emissions by levels agreed nationally and internationally.

The CRC Energy Efficiency Scheme (CRC) also imposes a requirement on major public and private sector organisations to purchase carbon allowances annually based on their energy consumption. Ongoing CRC costs to organisations will depend on their success in managing emissions from their energy consumption, which provides a significant financial incentive to manage emissions in addition to the direct costs of the energy itself.

All UK central government departments are subject to the Greening Government Commitments (GGC) which require reductions in carbon emissions from energy and travel (which align with this CMP's objectives), and also in water, waste etc.

Financial drivers are of particular importance. In 2009-10 DWP had an energy spend of approximately £29.5M and a travel spend of £57.7M. Delivering the objectives within this CMP will deliver significant in-year and cumulative savings, and will provide some protection (in cost avoidance terms) from rising energy prices.

The [first DWP Carbon Management Plan](#) (CMP) was published in April 2011. It provided an initial baseline of carbon emissions and associated costs and a structured route-map to further reduce our carbon emissions through a series of strategic, administrative and technical proposals. This Year 3 refresh updates the data, summarises the progress we have made towards our 2014/15 target and reports on our next steps. For fuller details on our approach, the initial Plan should be used.

Emissions baseline and objectives

Scope

This section details how the emissions baseline has been calculated. The baseline (2009/10) is used to measure the DWP's emissions reduction performance as carbon-saving initiatives are implemented during the lifetime of the Carbon Management Plan.

For the Year 3 refresh, the baseline has been amended to include better information on DWP's buildings, direct and indirect greenhouse gases, as well as fugitive emissions from pressurised equipment such as air-conditioning units. This ensures data is more complete and aligns with our [Annual Sustainability Report](#).

The assessment methodology is based on the DEFRA guidelines for Greenhouse Gas Emissions. All calculations of potential savings within this CMP use Carbon Trust methodology. The scope for the baseline and target is energy, fugitive emissions and all business travel. Waste, water, commuting, and supply chain related emissions have been excluded.

Included within the emissions for DWP are those for the corporate centre, Shared Services and our operations, which are delivered under the public-facing brands of Jobcentre Plus, the Pension Service, the Disability and Carers Service, and the Child Maintenance Group. Excluded are the Health and Safety Executive and other Arms-Length and Non-Departmental Public Bodies, except where these occupy DWP buildings.

Baseline

DWP reduced its greenhouse gas emissions from energy and road travel by 23% (61,000tCO₂) over the 3 years to 2009/10.

Using DEFRA conversion factors **DWP's baseline for the financial year 2009/10, and therefore for this CMP, is 204,621tCO₂e**. The baseline is a combination of emissions from energy (including fugitive emissions) and business travel as shown at *Figure 2*.

Summary of GreenHouse Gas emissions 2009/10	Emissions tCO ₂ e	Percentage
Energy	180,770	88.3%
Transport	23,851	11.7%
TOTAL	204,621	

Figure 2 – Carbon baseline 2009/10

These energy and transport baselines are a mix of emissions from electricity and gas (energy) and air, rail and vehicles (transport) as demonstrated in *Figure 3*.

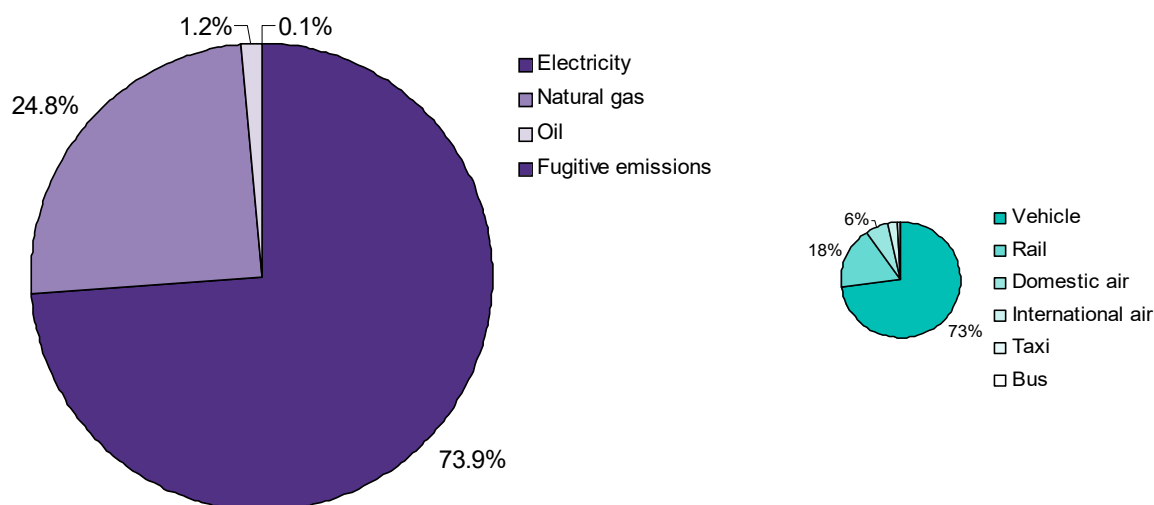


Figure 3 – Breakdown of energy and transport baselines, in proportion to their relative contribution

Targets and objectives

In May 2010, the Prime Minister set all government departments a challenging target to reduce emissions from the estate by 10% by May 2011, which DWP exceeded. This target, in common with the previous administration's targets for Sustainable Operations on the Government Estate (SOG) measured emissions in terms of CO₂. Emissions are, however, now measured as CO₂ equivalents (CO₂e) which include fugitive and other emissions, and the baseline has also been updated since May 2011. So whilst the 10% and SOG targets do not correlate to GGC, DWP's CMP 25% target does align with GGC, which aims to reduce emissions from energy use and business travel by 25% by 31st March 2015 from a 2009/10 baseline.

Additionally, and recognising the particularly damaging impact of air travel, the GGC commits to reduce the number of domestic air flights by 20% from a 2009/10 baseline of 21,931 (emitting 1,572tCO₂e).

Annual targets will not be set between 2011 and 2015. However for tracking purposes the trajectory is assumed to be as at *Figure 4*, with steep reductions in the earlier years and gentler reductions in later years.

Financial Year	Cumulative Trajectory	Cumulative Target(tCO ₂ e)
2009/10	Baseline	204,621
2010/11	10%	184,159
2011/12	15%	173,928
2012/13	19%	165,743
2013/14	22%	159,604
2014/15	25%	153,466

Figure 4 – Carbon reduction trajectory – reductions are quoted against baseline year

Performance to end of Year 3 (2012/13)

As explained earlier, in the 3 years to 2009/10, under the targets for SOG, DWP reduced its CO₂ emissions from energy and road travel by 23% (61,000 tCO₂).

This performance has continued under the GGC and for this CMP. As demonstrated at *Figure 5*, DWP is ahead of its planned trajectory. By the end of 2012/13, we planned to have reduced emissions by 19% on 2009/10 levels. **We have actually reduced by 20.9%**, emitting 161,862tCO₂e in 2012/13 (3,881tCO₂e below our trajectory).

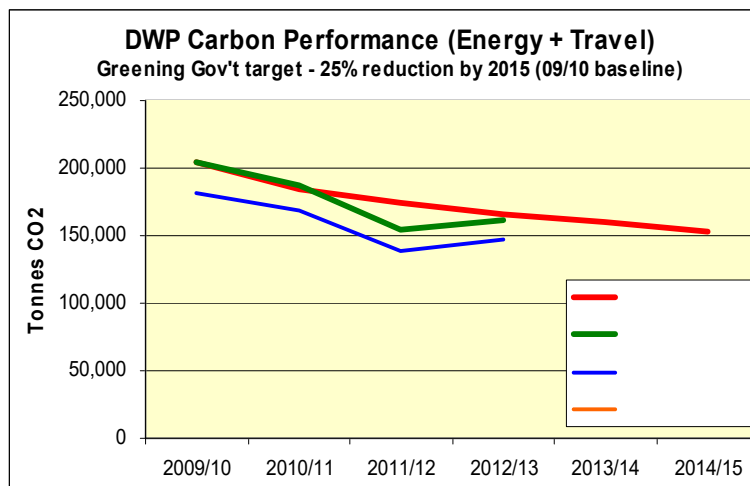


Figure 5 - Performance against planned target

Cumulatively, taking energy and travel together, we have saved 111,527tCO₂e and £81.9M cumulatively over the three years, well on track to achieve the 186,205tCO₂e and £164.4M forecasted in this CMP.

2012/13 was a difficult year for carbon reduction in DWP. A combination of winter temperatures and a cold spring (significantly increasing gas usage) and some time lost in revising our energy efficiency investment strategy in the light of current fiscal pressures meant that an upturn in energy usage and carbon emissions was experienced. However, the benefits associated with our earlier over-performance mean that we remain well on track to achieve our 2014/15 target.

In addition, the target to reduce domestic air flights by 20% by 2015 has been massively exceeded. In 2012/13, 8,435 flights were undertaken, 61% fewer than the 2009/10 baseline of 21,931 (emissions reducing to 740tCO₂e, 53% below baseline of 1,572tCO₂e).

Although SOGE (CO₂) and GGC (CO₂e) do not exactly correlate (as explained above), *Figure 6* shows that adding their results demonstrates that **in the six years since the peak 2006/07 we have reduced our emissions by a massive 40% or 102,000tCO₂e.**

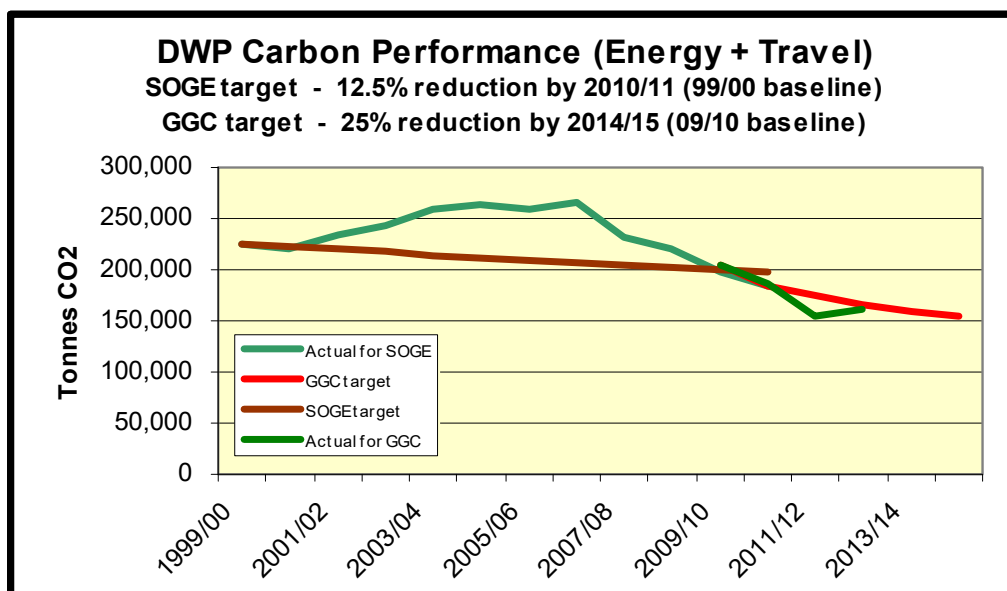


Figure 6 – Long-term performance

However, clearly there would be little sense (financially, environmentally or reputationally) in our throttling back efforts. Energy and travel savings could be utilised elsewhere in the business, and it would be environmentally irresponsible not to reduce emissions as much as reasonable possible. In addition, it would be all too easy to see good initial performance worsen if pressure was relaxed, which may affect target outturn. Therefore, plans continue to be developed to maximise reductions to 2014/15 and beyond.

Carbon management projects

A number of projects have already been delivered or are in place to ensure that DWP meets its emissions target. These projects are a combination of measures delivered as part of energy campaigns, estate rationalisation, and technical measures identified with and by DWP's estates and ICT service partners.

We expect to continue to identify new energy saving measures over the lifetime of the plan, which will overcome any unforeseen shortfall from existing projects.

Existing and planned projects

Completed and planned projects are listed in *Figure 7*, along with achieved and projected annual savings against the 2009/10 baseline.

	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Notional target	Baseline	10%	15%	19%	22%	25%
Target	204,621	184,159	173,928	165,743	159,604	153,466
Washington Durham House data centre		7,910	9,795	9,795	9,795	9,795
Travel avoidance		2,394	3,591	4,549	5,267	5,985
Multi-function printer/scanner/copiers		2,407	3,209	3,209	3,209	3,209
Behaviour change (AWaRE & 25by15)		5,000	8,000	7,000	10,000	11,000
Estate rationalisation		2,060	6,575	8,336	14,052	15,516
Server room cooling		163	326	326	326	326
Workplace transformation IT replacement					1,133	4,531
Life-cycle plant & equipment replacement		304	532	186	300	300
Leeds Quarry House CHP		214	365	318	365	365
Leeds Quarry House site project					167	287
Leeds Quarry House lighting					17	29
Plymouth Clearbrook House site project					44	75
Birmingham Five Ways House site project					14	25
Phase 1&2 AMR & reduced operating times		230	459	459	459	459
Phase 3 gas AMR					532	682
Phase 1 water boiler PIRs		26	52	52	52	52
Phase 2 water boiler PIRs					30	55
DHWS pump timers (TBC)					TBA	TBA
Vendmiser					202	347
Voltage optimisation pilot					13	22
Voltage optimisation rollout (TBC)					TBA	TBA
Total of projects		20,708	32,904	34,230	45,977	53,060
Outcome		183,913	171,717	170,391	158,644	151,561
Shortfall or surplus against target		246	2,211	-4,648	960	1,905

Figure 7 – Summary of projects, with annual savings against 2009/10 baseline

The contribution made by each of these projects to meeting the target is illustrated at *Figure 8*.

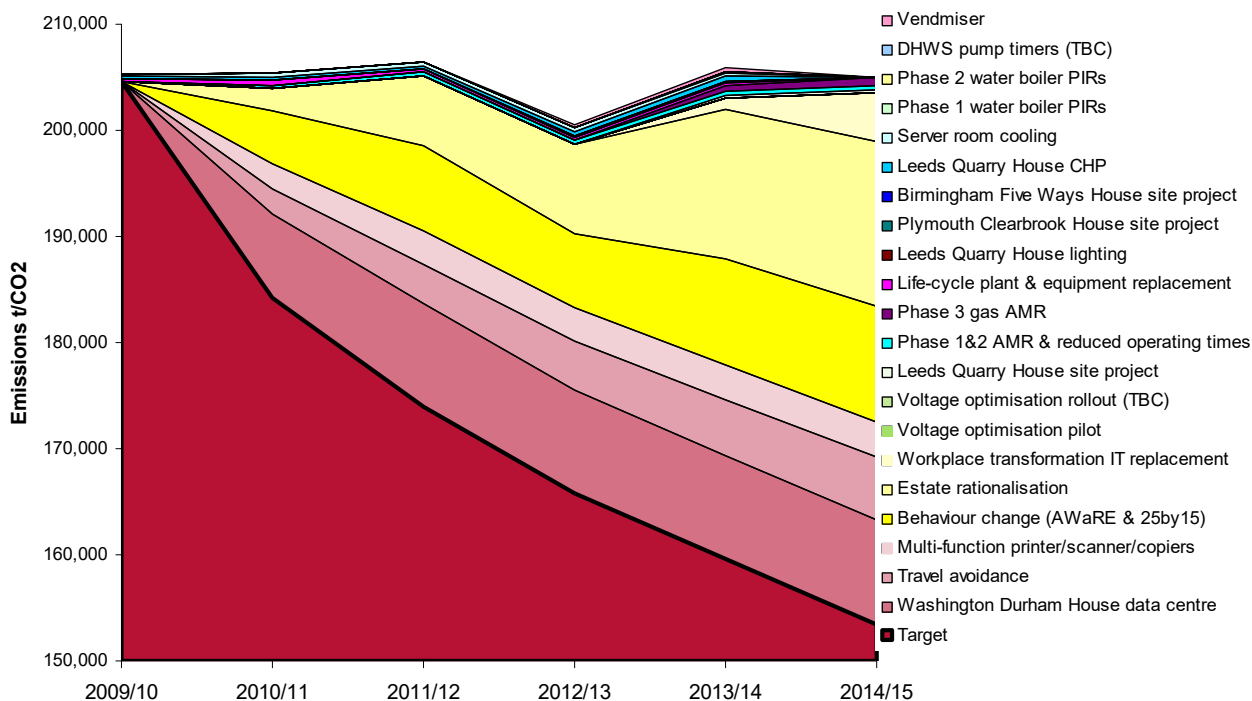


Figure 8 – How each project contributes to our carbon target

Financial aspects

Details of the financing of the Carbon Management Plan are covered in the [original CMP](#).

Benefits and savings

Quantified benefits

Two scenarios are used to quantify the potential financial benefits of implementing the CMP's measures - Business as Usual (BAU) and Reduced Emissions Scenario (RES).

In this refresh, the BAU scenario assumes that the annual amount of carbon emitted by the DWP over the 5 years from 2009/10 remains unchanged – this is more realistic than the assumption of increasing emissions used in the original CMP. The model takes into account the Carbon Trust's projected real-terms increases in the energy and travel markets of 3.5% and 8.4% p.a. respectively. Over the period examined, **costs in a BAU scenario would be expected to increase from £85.8M to £119.4M.**

The RES scenario assumes that the actions outlined in this CMP are carried out. Over the period examined, **carbon emissions are actually expected to decrease from 204,621tCO₂e in 2009/10 to 153,466tCO₂e by April 2015, and costs from £85.8M to £68.0M** (in effect, carbon reductions neutralising expected inflation in the energy and travel markets and then delivering additional savings).

Figure 9 shows the BAU and RES scenarios. Predicted savings are the difference between these two amounts (plus associated carbon costs). All financial values are at current market rates so can be subject to dramatic change in a volatile market – they should not be assumed to convey a guarantee of future savings.

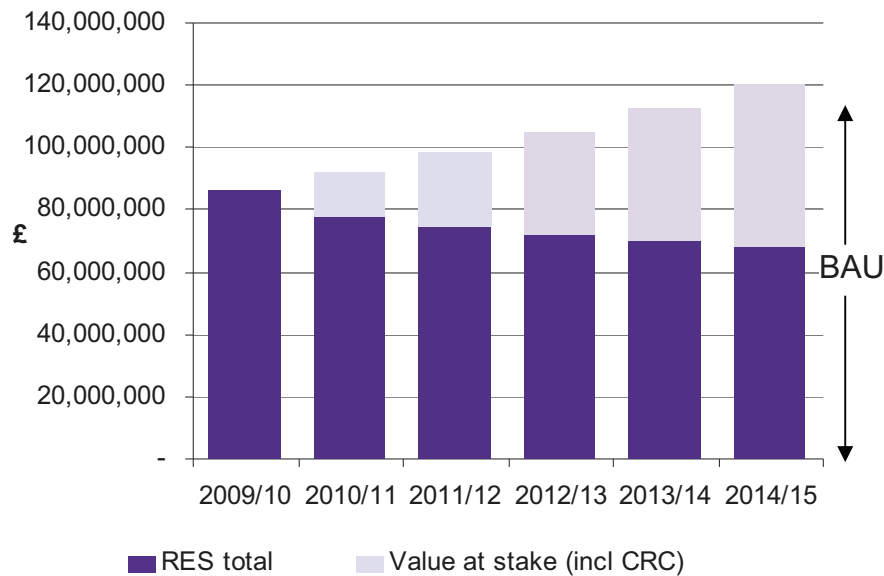


Figure 9 - DWP Financial Value at Stake to 2014/15

Over the 5-year life of the plan, our cumulative potential savings against BAU is 186,205tCO₂e and £164.4M (including CRC savings of £2.0M).

Unquantified benefits

Unquantified benefits include :

- Potential savings from not needing to purchase carbon allowances.
- Improved reputation as a department and as an employer (government delivering on its promises, and DWP continuing to play its part).
- Decreased risk from volatile energy markets (the overall risk would remain but a lower energy volume would reduce the impact of tariff increases).
- Development opportunities and additional job satisfaction for Environment Champions.
- More productive use of time (both as employee and for work-life balance) through reduced time spent travelling.

Actions to embed carbon management in the organisation

Corporate strategy

The Department's Finance Director General (who sponsors this CMP) is a member of the Executive Team, providing ownership and a conduit for reporting progress, resolving issues and agreeing improvement proposals. The Sustainability and Climate Change Team takes the lead on and co-ordinates implementation, working with stakeholders and category teams to engage with staff, key suppliers and service partners. A new governance group, Action on Sustainability Group, has been established to take individual and collective ownership of initiatives across the sustainability agenda, comprising senior representatives across DWP policy, planning, projects, corporate and business areas.

A Utilities Management Group is in place to take ownership of the energy agenda and ensure progress is made.

The joint DWP and Telereal Trillium AWaRE (Avoid Waste and Reduce Energy) campaign has helped to engage our people over the last few years. In September 2013 this is being refreshed as a 25by15 (25% by 2015) campaign to ensure that the final steps are taken to achieve our targets.

The Spending Wisely team manage DWP's financial cost-efficiency campaign, challenge duplicate and unnecessary equipment and encourage staff participation and involvement in initiatives. To assist in motivating and rewarding staff across DWP to play their part, sustainability is included within pan-government staff competencies.

DWP's sustainability and Greening Government (including carbon) objectives are integrated within its [Business Plan](#).

The strategy is to use a mix of good housekeeping (by DWP staff and suppliers), investment in new technology and estate rationalisation to ensure that the target is met.

Communication and training – carbon reduction is everyone's responsibility



The DWP Communications Team is actively engaged in providing information, tips and hints, guidance and reports to DWP staff. The primary means of doing this is via corporate and business intranets. In all cases, communications are co-ordinated by the SCC Team to ensure alignment with sustainability policies, targets and plans, including this one

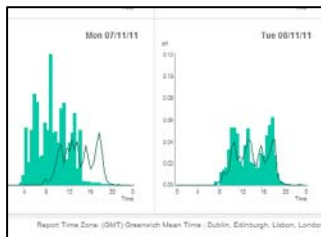
Over 900 local Environment Champions are in place (covering almost all of the Department's operational buildings). Supported by their managers and the Spending Wisely team, champions raise awareness, co-ordinate activity and encourage their colleagues to play their part. They also liaise with DWP's estate partner (Telereal Trillium)'s local Facilities Managers who have responsibility for energy efficiency and to identify technical and good-housekeeping improvement measures across their area. One to one coaching is delivered to all newly appointed Champions by the Spending Wisely team, who are looking to adopt Champions in Head Office, Child Maintenance Group and Debt Management areas.

Posters and other information are provided to engage staff across the DWP businesses. Where appropriate, carbon reduction messages are communicated on the main DWP intranet homepage, and an email network and discussion group has been established for Environment Champions. An e-learning package is about to be launched to all staff to inform and challenge, and consideration is being given to site level energy targets.

Staff surveys have been used in the past to monitor awareness and develop focused plans to address issues raised. These have demonstrated increasing (but inconsistent) awareness amongst DWP staff, and more pro-environmental attitudes than the UK average. These will continue to be undertaken as and when appropriate.

Specific communications are undertaken to take advantage of the momentum created by climate change and energy focused national and international events (for instance Climate Week), ensuring that staff understand their role before, during and after the event. This provides a UK-wide focus to generate additional interest.

Monitoring and reporting



Performance is recorded, monitored and reported by Telereal Trillium's service partner Teamwork Energy Bureau Services, identifying potential issues for resolution by Facilities Managers. Reports are used by local Environment Champions and the Spending Wisely team to review energy use, and share good ideas and issues across the estate.

Data on 95% of electricity consumption and 65% of gas consumption is now collected on a half-hourly basis via Automatic (or 'Smart') Meters. Reports for all buildings (site by site) are made available to relevant staff showing latest data with comparison to previous periods, enabling the identification of potential waste and incentivising improvement by demonstrating the results of their actions.

Travel data is collected from rail, air, hire car and fleet suppliers, and through staff expenses from the DWP Resource Management system for off-contract spend. This is provided to businesses quarterly.

Closing comments

Climate change is the greatest environmental challenge facing the world today. We are acting now to reduce the risk by contributing less to the causes, as part of our broader strategy to both mitigate climate change and adapt to its increasingly inevitable impacts on our core business.

This will ensure that we not only meet our carbon targets and reduce costs, but that we contribute towards reducing UK emissions and the greater aim of reducing global emissions and slowing climate change. This means delivering services in the way our customers expect and need, but with energy efficiency and low-carbon technology as standard, and careful energy and travel management. Our staff will be fully engaged in helping the Department meet this challenge and our policy development will reflect the changing natural environment and the resulting change in demands from our customers.

The successes outlined in this document, together with plans for future improvement, resulted in DWP being awarded the Carbon Trust Standard in 2009 (one of the, if not the, largest public sector organisations to receive it) and being re-accredited in 2011 and 2013. This ranks the Department alongside many other well known public and private sector 'Standard Bearers'. This CMP supports DWP's continuing accreditation to the Standard.



Richard Fountain

*Head of Sustainability and Climate Change
Department for Work and Pensions
richard.fountain@dwpgsi.gov.uk*