Sunderland City Council

CLIMATE CHANGE ACTION PLAN FOR SUNDERLAND:

PROGRESS REPORT

JANET JOHNSON
DEPUTY CHIEF EXCUTIVE
SUNDERLAND CITY COUNCIL
PO BOX 102
CIVIC CENTRE
SUNDERLAND
SR2 7DN

JANUARY 2010

1 SUMMARY

Sunderland's Climate Change Action Plan was adopted in November 2008, and is the framework through which Sunderland will work to reduce the city's carbon emissions. This report summarises the progress made since the Action Plan was developed and refreshes Sunderland's carbon reduction targets, in line with new UK and EU carbon reduction targets.

New targets

Sunderland is now aiming to cut carbon emissions by at least 34% by 2020 (compared to 2005), to align itself with the new UK Low Carbon Transition Plan (July 2009). This is an increase from the 26% target agreed previously.

Current carbon emissions to 2009

In 2007, Sunderland's carbon emissions were 1,864,300 tonnes CO2. This is 4.5% lower than the previous year (2006), and 5.6% below the baseline year of 2005. Of these emissions, 34% were produced by housing, 40% from employers (public and commercial) and 26% from road transport.

With initiatives known to have been implemented to from April 2008 to January 2010, an estimated 54,500 tonnes CO2 will be saved, taking total emissions in 2009 to 8% below 2005 levels. The following summarises key areas of progress, between April 2008 – January 2010:

Housing initiatives have saved 8,200 tonnes of carbon emissions
Carbon savings are expected from:

- Insulation measures were installed in 4014 homes, by the Council, Gentoo and Warmfront combined.
- 3231 new boilers were installed by Gentoo and Warmfront

Other progress includes:

- The Council has secured £3M of CERT funding, to fund energy efficiency improvements up to March 2012.

Employer actions have saved 27,300 tonnes of carbon emissions
Carbon savings are expected from:

- Nissan installed 2 more 660kW wind turbines, taking the total to 10 turbines.
- Employers continued to install carbon saving measures. For example, City Hospital Sunderland installed new CHP boilers, and the University of Sunderland installed Sunderland's first ground source heating system in their new Chester Rd campus building.
- The Council installed 1.7MW of wood burning boilers, in 6 new schools.
- Emissions saved from closure of Sunderland Glassworks in Sept 2007, will manifest in 2008 emissions data.

Other progress includes

- Low Carbon City campaign was launched in March 2009, with 20 major employers committing to cut their carbon emissions by 10% or more. This already will save 28,000 tonnes CO2 by 2020.
- The Council continued to develop plans for 250kW of wind energy to power its own buildings
- Planning approval was granted for a 9MW biomass power station at the Port of Sunderland

Transport initiatives have saved 20,800 tonnes of carbon emissions

Carbon savings are expected from:

- A 1% reduction in traffic levels from 2007 to 2008
- Introduction of 2.5% biofuels into all road fuels
- Continued expected increases in vehicle efficiency.

Other progress includes:

- Sunderland was included in the UK's first Low Carbon Economic Area, to support electric vehicle manufacturing and deployment.
- The Smarter Choices campaign was launched across Tyne and Wear, to help individuals make sustainable travel choices

Awareness and recognition

- Capitalising on its expertise in carbon management, the Council was commissioned to conduct a carbon emissions study for all 5 Tyne and Wear local authorities.
- In Feb 2009, Sunderland City Council won the national Sustainable Communities Award, for "Tackling Climate Change"

Outlook from 2010 to 2020

Future actions and opportunities identified in this progress report could cut Sunderland's carbon emissions by a further 404,000 tonnes CO2. This will reduce total emissions to 29% below 2005 levels, with future revisions to this action plan needing to identify how the further 5% reduction could be achieved, to meet the 34% target. New initiatives to support these more ambitious targets include the following:

1. Sunderland is developing a new Economic Masterplan, with a vision that Sunderland is to become "**An entrepreneurial University City at the heart of a low carbon regional economy"**

Action plans that demonstrate how Sunderland will develop a Low Carbon Economy – will be developed during 2010. These will both support low-carbon business sectors, such as electric vehicles and offshore wind, and develop Sunderland as a centre of low carbon business infrastructure, buildings and transport.

2. Sunderland City Council and housing partners will continue efforts to work towards insulating every possible home in Sunderland. From 2010, this will now include the first trials of solid wall insulation for private homes, which is where the greatest potential exists for making carbon savings in Sunderland's housing stock.

Sunderland is also relying on the UK Government to successfully deliver renewable energy targets for heat and electricity, along with national sustainable construction policies for homes and all other buildings.

2 INTRODUCTION

Scientific consensus is greater than ever before that global warming is happening, and that the predominant cause of this warming is the production of greenhouse gases from human activities, mainly from burning fossil fuels, deforestation and cement production

Consequently, climate change is the greatest long-term threat currently facing our planet in recent times. All ecosystems, all populations, all habitats are expected to experience changing weather patterns, at a rate greater than any experienced in the last million years. This is why tackling climate change is the headline priority within the UK Government's strategy for sustainable development.

No individual, community or country across the world will be able to avoid the effects of climate change, as past emissions already cause global temperatures rise of $2^{o}C$ by the end of this century. Communities have no choice but to adapt to this temperature rise, since this cannot be reversed.

To limit temperature rise any further, and avoid more catastrophic weather changes, it is estimated that humankind must reduce its production of greenhouse gases by 80% by 2050.

Action around the globe is taking place to reduce greenhouse gas emissions, and Sunderland's Climate Change Action Plan is the framework for Sunderland to make its contribution, by managing and reducing the City's greenhouse gas emissions over the coming decades.

Why Sunderland has a Climate Change Action Plan

Sunderland is aiming to become a clean, green city with a strong culture of sustainability, one of the five main aims within the Sunderland Strategy.

Within this aim, Sunderland has a specific commitment to reduce the city's carbon emissions. This commitment is endorsed by several national and European commitments that Sunderland is signatory to:

- The Nottingham Declaration on Climate Change – signed Sept 2001
- The EUROCITIES Declaration on Climate Change – signed Oct 2008
- The EU Covenant of Mayors – signed Jan 2009.

The **Sunderland Strategy 2008 to 2025**, which is Sunderland's sustainable community strategy, has a target to reduce the city's carbon emission by at least 26% by 2025. This target will now be revised in light of the changes outlined in this report, but the Climate Change Action Plan remains the framework that will guide how Sunderland reaches that goal.

The Action Plan will also demonstrate how Sunderland is aiming to support the **UK Climate Change Act (2008)**, and carbon reduction targets proposed in the **UK Low Carbon Transition Plan (July 2009)**. Through these instruments, the UK has established legally binding carbon emission targets of 34% by 2020, compared to 1990, the first country in the world to do so.

Carbon emissions from all local authority areas are now monitored by the UK Government, by **National Indicator 186**, and local authorities are required to report on their progress at reducing carbon emissions from their communities as a whole. For the Tyne and Wear City Region, NI186 is also an indicator within the **Tyne and Wear City Region Multi Area Agreement,** which this action plan contributes to**.**

Sunderland is also working to understand and address the impacts of climate change and weather, on the local natural and built environment. To achieve this, Sunderland has produced a **Weather and Climate Risk Management Strategy**. The main weather impacts anticipated for Sunderland are the impact of more heatwaves on the health of vulnerable residents (very young and elderly), and risks from increase flooding and coastal erosion due to increase rainfall and sea level rise.

For more information on climate change initiatives in Sunderland, please visit the Sunderland City Council website, at www.sunderland.gov.uk/climatechange.

3 CARBON Emissions, 1990 to 2007

Sunderland's carbon emission baseline has been updated in 2007 as follows:

Update of 1990 baseline information. The North East Region Climate Change Partnership commissioned AEA Technology to develop carbon trajectories for all North East local authorities, completed in Jan 2009. This estimated carbon emission in 1990, based on back-calculation using nationally available trends in energy consumption, and locally specific data (housing numbers, GVA). This more precise estimate suggests that currently, Sunderland's carbon emissions are approximately 1.5% above those of 1990, not 8% below as reported in the action plan adopted in November 2008. However, the 1990 emissions data is now just included for information only, and not as the baseline from which target setting is carried out (see next section).

Establishing 2005 as baseline year. Because of uncertainties in 1990 emissions estimates, and emission estimates prior to 2005, guidance for UK national indicator NI186 recommends that 2005 is used as the baseline year for carbon emissions target setting. Sunderland will retain its data for years prior to 2005, as indicative estimates of past progress, but not base targets on these data.

Publication of 2007 carbon emission data. DEFRA released local authority area carbon emission data for 2007 in October 2009, and also revised carbon emission data for 2005 and 2006.

Removal of greenhouse gas emissions from waste. The original Climate Change Action Plan reported methane emissions arising from domestic waste disposal. The UK Climate Change Act, the Low Carbon Transition Plan and NI186, to which this action plan is aligned, do not include methane emissions. Rather, methane emissions are controlled through national and local waste management strategies, and instruments such as the Landfill Allocation Taxation Scheme (LATS). Therefore, methane emissions (approximately 200,000 tonnes of CO2 equivalents per year) have been removed from the scope of Sunderland's Climate Change Action Plan, to avoid duplication with local waste management strategies, and double counting of carbon savings.

Overall emissions

In 2007, Sunderland's carbon emissions are now 4.5% lower than those recorded in 2006, and 5.6% below the new baseline year of 2005.

Carbon emissions dropped by 86,000 tonnes from 2006 to 2007, with the bulk of reduction within the housing and employment sector. Of this drop, about 20,000 tonnes of carbon savings can be accounted for. The reason for the remainder is unknown, but could be attributed to changes in behaviour in the home, or at work, and also changes in manufacturing intensities within the employment sector.

TOTALS (tonnes CO_2)	**1990**	**2001**	**2005 Baseline year**	**2006**	**2007**	**Total change from 2005 (and %)**
CARBON EMISSIONS[1]						
Housing	705,064	674,904	671,860	664,720	635,910	-35,950 (-5.4%)
Employers	776,881	784,134	814,710	807,240	746,800	-67,910 (-13.7%)
Road transport	443,647	483,286	487,620	478,020	481,590	+-6,030 (-1.2%)
Total Emissions	1,925,592	1,942,334	1,974,190	1,949,980	1,864,300	-109,890 (-5.6%)
Population in Sunderland[2]	296,000	284,600	281,000	280,600	280,300	-700 (-0.2%)
NI186 – per capita carbon emissions (tonnes CO_2)[3]	6.5	6.8	7.0	6.9	6.7	-0.3 (-5.3%)

[1]Source: 2005-2007 data from DEFRA NI186 statistics, data from 2004 and before from BERR and DfT, and normalised to DEFRA data (details in Climate Change Action Plan, Nov 2008)

[2]Source: Sunderland Mid Year Population estimates, Office of National Statistics

[3]Source: 2005-2007 data from DEFRA NI186 statistics, data from 2004 and before estimated from carbon emissions and mid year population estimates

Housing.

Gas emissions from housing dropped by 25,000 tonnes. As there was no significant change in average annual temperatures, between 2006 and 2007, weather variation cannot explain this drop. However much progress has been made on improving insulation in homes through both the Council supported scheme and the national fuel poverty warm front programme whilst the latter has funded a significant programme of boiler replacements.

Significant energy efficiency work was completed by Gentoo in 2006/7, amounting to 13,000 properties being insulated, accounting for some 3,300 tonnes of carbon emissions saved.

Electricity emissions from housing dropped by 5,000 tonnes. An explanation for this is not available, but could be attributed again to improve energy efficiency behaviour in the home.

Employers

Gas emissions from employers dropped by 24,000 tonnes, whereas electricity emissions dropped by 36,000 tonnes.

Part of the reduction could be attributed to the closure of the Sunderland Glassworks (Arc International), which could account for 8000 tonnes saved. Also, by 2007, the first

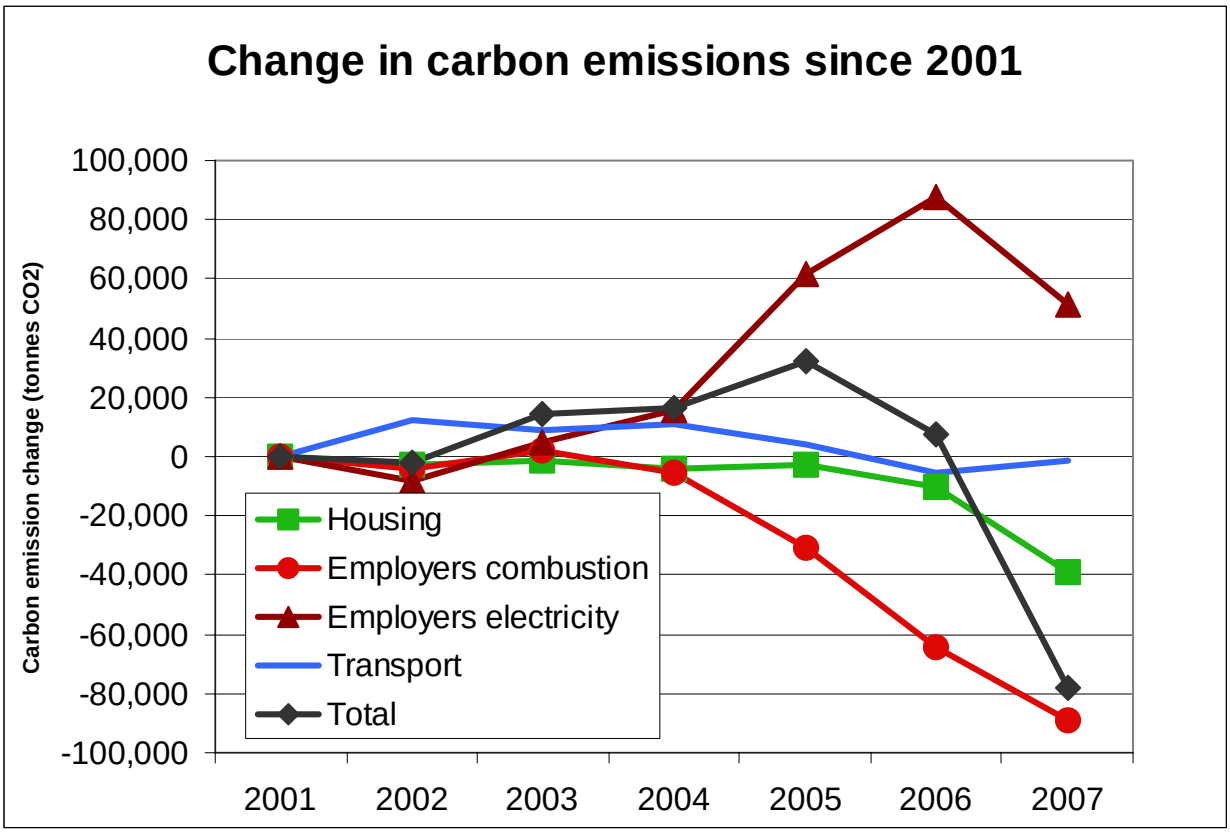
six wind turbines at Nissan were operational, accounting for another 8000 tonnes carbon emissions saved.

No explanation exists for the remaining drop of 42,000 tonnes, and this could be attributable to increasing production efficiency, or shift from energy intensive manufacturing to more service based industries. Either way, this drop has happened against a continual increase in GVA.

Transport

Traffic on Sunderland's roads increased by 1% from 2006 to 2007 (as recorded by Dept for Transport publication "Estimated traffic flows for all motor vehicles by local authority: Great Britain, Countries and Regional totals: 1993 – 2008", published 25 June 2009). Transport emissions also increasing by approx 1%, suggesting nationally at least, that there was little improvement in vehicle efficiency in 2007.

Figure 1. Change in Sunderland's Greenhouse Gas emissions from 2001to 2007.



4 CARBON emissions, 2008 to 2020.

Review of targets.

The baselines and targets of this Action Plan have been reviewed and revised, in light of the following developments occurring since the Action Plan was first published.

- The baseline year against which future carbon emissions will be monitored is now 2005.
- Sunderland, along with all other North East Local Authorities, has signed the EU Covenant of Mayors, which requires local authorities to make a 20% cut in carbon emissions by 2020.
- The UK Government has increased the country's carbon reduction target, from 26 – 32%, to 34%. This is set out in the UK's new Low Carbon Transition Plan, published in July 2009 to replace the previous Climate Change Programme.

As a result of these developments, the targets within Sunderland's Climate Change Action Plan have been revised as follows:

- **To cut carbon emissions by 34% by 2020, and 80% by 2050, compared to 2005 levels.**

In absolute terms, this will require a drop in carbon emissions of 670,000 tonnes by 2020, and 1,580,000 tonnes by 2050.

Progress against actions

The key actions agreed in the Climate Change Action Plan are presented in the table below, along with details of progress since April 2008, and a revised estimate of expected future carbon savings. Also included are new actions added in this revision.

		Carbon saving (tonnes CO_2)		
Housing actions	**Progress details**	2008-2009	2010-2011	2012-2020
Business as usual change	• Although housing market has slowed down, it is assumed that backlog will recover, and so not change overall position regards new housing numbers (to be reviewed annually)	-2,000	-1,900	+35,350
H1. Insulating 57,250 homes and fitting renewable systems to 6,500 homes	• In 2008/9, a total of 4,014 homes were insulated by the Council, Warmfront and Gentoo. • The Council have signed agreements with npower for £3M of CERT funded energy efficiency work in private households over the next 30 months. • Discussions are ongoing to secure another £4M of CESP funding, which should deliver energy efficiency measures in deprived	-2,250 -200	-4,480 -2,640	

	areas in Sunderland. • The Council and partners must commit to insulating all lofts and cavities by 2020. • The Council and partners must commit to insulation all solid wall properties by 2020. • Private household installations of 6,500 renewable energy systems		-1,680	-18,500 -46,600 -1,260
H2. 83,000 condensing Boiler replacements	• Gentoo replaced 2785 boilers in 2007/8 and 2008/9 • Warmfront scheme installed 2996 new efficient boilers in 2007/8 and 2008/9 • Continue to assume approx. 5000 boiler replacement will occur each year to 2020.	-2,020 -1,770	-3,790	-17,080
H3. Gentoo's Reality Retrofit Programme	• Research to identify the most effective carbon saving measures and behaviours in 100 Gentoo properties will be completed by April 2010 • The intention is to bid for national funding to enable these measures to then be implemented in all 37,000 Gentoo properties over the coming decade.			-19,450
H4/5. 14,600 homes built to Code for Sustainable Homes Level 3 or higher	• Housing market failure has greatly reduced the number of housing completions expected to 2011, and ability to encourage Code Level 3 attainment. But this delay should increase the number of new homes reaching highed code levels. • Gentoo are still committed to develop Code Level 6 homes at the Racecourse development, due for completion Dec 2009. • Kickstart programme will see completion of 500 Gentoo homes, to at least Code Level 3 by March 2011		-200	-17,400
H6. District Heating/Power to 4,000 homes	• Heat mapping work completed for Sunderland City Centre, to inform possible district heating schemes. Aiming to commission more detailed feasibility work in 2009/10. Estimates of carbon savings from CHP/district heating schemes have been revised downwards. • Gentoo have begun investigating potential for CHP schemes within their multi storey housing, and aim to commission feasibility studies, to be used to attract funding to deliver schemes. Early estimates of possible carbon savings have been added.			-1,600 -3,600
New. H7 Energy Efficient Products policy	• EU initiatives around phasing out tungsten lightbulbs, and new standby settings for appliances will come into effect gradually from 2009			-12,400
New. H8 National renewable energy targets for grid electricity	• New government targets within the UK Renewable Energy Strategy aim to see 30% of electricity generated from green sources, which could reduce carbon intensity from 0.53 – 0.38 kg CO2 / kWh.			-67,800
Subtotal		-8,240	-14,690	-170,300

		Carbon saving (tonnes CO_2)		
Employer actions	**Progress details**	2008-2009	2010 - 2011	2012 - 2020
Business as usual changes	• Emissions growth from new employment developments has been revised, to better reflect expected uses. • The closure of Sunderland glassworks in Sept 2007 is still expected to temporarily reduce emissions in 2008 datasets.	-23,300	+27,750	+109,600
Sunderland City Council's Carbon Plan	• Sunderland City Council have reduced weather corrected carbon emissions by 4% in 2 years. A temporary increase occurred in 2008/9, due to new leisure facilities, and a very cold winter • The Council is on target to meet its 10% target by 2012 • The Council has also increased its carbon reduction target to 30% reduction by 2020.	-1,500	-2,100	-10,300
All employers committing to cut carbon emissions by 20% over 10 years	• Sunderland launched its Low Carbon City campaign in March 2009. 20 organisations have now committed to cutting their carbon emissions by at least 10%. These 20 organisations account for 15% of the emissions from Sunderland's employers • Remaining commitments still to be found to meet the 20% target			-8,925 -112,600
Supporting wind and other renewable energy development	• Two more wind turbines were installed at Nissan in 2008/9, taking the total number to 10 turbines with 6.6MW capacity in total. • EOn plan to complete the upgrading of the 8.2MW Great Eppleton wind farm by Feb 2010. • Sunderland City Council has committed to developing 250kW of wind energy, at 3 council locations by 2012 • In 2009, planning permission was granted for a 9MW biomass power station at the Port of Sunderland.	-2,360 All other carbon savings included above or count to UK green energy targets		
10% renewable energy in new development	• In 2009, 1.6MW of wood boilers were installed in 4 secondary schools by Sunderland City Council • Sunderland University's Cityscape building was completed with ground source heating. • From Sep – Nov 2009, the next round of consultation was held on the Local Development Framework policies, which includes policies to require renewable energy ans sustainable construction	Included above Included above		-1,800
District Heating/Power in regeneration schemes	See similar section in Housing, for progress update.			-4,260
New – Implementing Code for Sustainable Buildings	• Government consultations indicate that a new Code for Sustainable Buildings is proposed from April 2010, which would be enforced through building regulations • Like the code for sustainable homes, stepwise increases in carbon reduction			-12,600

	targets aim to achieve zero carbon non-domestic buildings by 2019			
New. E National renewable energy targets for grid electricity	• New government targets within the UK Renewable Energy Strategy aim to see 30% of electricity generated from green sources, which could reduce carbon intensity from 0.53 – 0.38 kg CO2 / kWh.			-140,750
Subtotal		-27,150	+25,650	-181,600

		Carbon saving (tonnes CO_2)		
Transport actions	**Progress details**	2008-2009	2010 - 2011	2012 - 2020
Business as usual growth	• In 2008, road traffic on Sunderland roads actually dropped by 1%, due to increasing fuel prices, a trend seen across the country. Transport emissions should decrease temporarily as a result.	+540	+11,000	+45,600
Tyne and Wear Local Transport Plan	• A new Local Transport Plan will be developed for 2012. Emissions reduction arising from this new plan, will be incorporated when known. • Some future measures are already known – e.g. plans to improve public transport ticketing, and introduction of a cash-free "Oyster" travel card, by 2015.			
Vehicle efficiency increasing 15%	• Efficiency is still assumed to be increasing by 1% per year. • In support of this, the UK Low Carbon Transition Plan is aiming that all new cars have 40% fewer carbon emissions	-9,500	-9,350	-42,150
10% biofuels in all road fuels	• In 2008/9, it became the norm that diesel sold at the pump contained 5% biodiesel. • UK policy is still aiming to provide 10% of road fuels from renewable sources by 2020.	-7,000	-2,200	-12,000
Smarter Choices	• Tyne and Wear local authorities launched in 2008/9 the Smarter Choices campaign, to encourage sustainable transport habits. • The project is aiming for the messages to be seen by 10% of the population • It is assumed that if Smarter Choices is as effective as has been seen elsewhere, car transport could reduce by 10%. • In 2008/9, 11 travel plans are now in place for major employers and employment sites in Sunderland.	-4,800	-10,000	-39,000
New. Electric Vehicles	• In July 2009, Sunderland was included in the UK's first Low Carbon Ecomonic Area, for ultra low carbon vehicles. • By 2011, 36 electric vehicles will be in use, and the region will install 750 vehicle charging points. • Current national projections suggest electric vehicles could make up 2.5% of all road vehicles by 2020			-4,300
Subtotal		-20,800	-10,500	-51,930

In addition to these actions to directly reduce carbon emissions, Sunderland has continued its work to increase understanding of climate change and develop a leading role for other city and regional partners to follow:

- **Tyne and Wear Carbon Emissions trajectories**. In 2009, Sunderland City Council was commissioned by the Tyne and Wear City Region to conduct a carbon emissions studies, to inform target setting for carbon emissions (measured through NI186) for Tyne and Wear City Region. This study used carbon modelling approaches developed by Sunderland City Council's Sustainability Team.

- **Tackling Climate Change Award**. In Feb 2009, Sunderland City Council's efforts in managing both the Council's and the city's carbon emissions were recongnised by winning the national Sustainable Communities Award for "Tackling Climate Change". The judges commended Sunderland for its achievement of real carbon reductions, strategic carbon planning and involvement of city partners and residents in carbon reduction awareness and initiatives.

New actions and commitments

To meet these more challenging targets, some new national policies and initiatives will be established which should support Sunderland in reaching these targets. These are included in the tables above, but explained in more detail here:

- **EU Electrical Products Policy**. New EU policy will gradually come into force by 2012, to reduce the electricity consumed by appliances in "standby" mode, and to phase out ineffiecient tungsten filament lightbulbs. It is estimated that this should realise, on average, a 6% reduction in electricity used by every home in the UK.

- **UK Renewable Energy Strategy**. This revised strategy, published in July 2009, forms part of the UK's Low Carbon Transition Plan. It includes targets to increase the amount of electricity generated from renewable or low carbon sources, up to 30%, which will be achieved through massive investment in offshore wind turbines (installing up to 8,000 turbines by 2020), and developing a nuclear power strategy that will replace nuclear power stations due for closure in the next 2 decades.

- **Sustainable Code for Buildings**. To mirror the greening up of new homes, through the Code for Sustainable Homes, a similar tightening of building regulations for new, non-domestic developments is proposed by the UK Governement. However, decisions have yet to be made about when this might commence, with the proposed 2010 start date not yet confirmed.

However, these national measures won't be sufficient alone. Sunderland also has adopted new actions and ambitions, to meet these new carbon reduction targets.

- **Creating a Low Carbon Economy**. Sunderland is developing a new Economic Masterplan, which will define which key industries and skills Sunderland needs to develop, that will be critical to ensuring the economic growth of the city. This emerging economic masterplan has the central vision that Sunderland will become:

  An entrepreneurial University City at the heart of a low carbon regional economy'

  Within its five aims, its second aim is to make Sunderland "…a national hub of the low carbon economy". It proposes this could be achieved by

  a. Developing the Electric Vehicles sector
  b. Developing other low-carbon sectors, e.g. offshore wind and software
  c. Create Low Carbon business infrastructure
  d. Be a low carbon demonstrator for low carbon buildings and transport

  Separate action plans will be developed to take forward each of these aims. Aims 2a and 2b will allow Sunderland to support the UK move towards a low carbon economy. Within aims 2c and 2d, direct carbon emissions reduction will be achieved, and specific proposals will be developed to outline how this will happen, but the focus will be around combined heat and power opportunities for the city centre area, how to integrate more renewable energy infrastructure into Sunderland, and supporting the local use of electric vehicles, through charging point networks and uptake of electric vehicles by city partners.

- **Insulating all homes by 2020**. The Climate Change Action Plan already assumes that the Council and housing partners will work together to help the insulation of all 70,000 uninsulated lofts and cavities in Sunderland homes. However, this ambition should also work toward insulating all solid wall properties as well. This is far more challenging, and, at ca. £5,000 per property, requires much greater investment. Sunderland's home energy efficiency programme to 2012 includes funding to insulate a few hundred solid wall properties. It is hoped that this will develop awareness, understanding and skills needed to insulate solid wall homes, from which much larger programmes can be developed beyond 2012, to try to insulate the remaining 23,000 solid wall properties in Sunderland. Applications will also be made to the government's Low Carbon Communities Challenge Fund, to further support solid wall insulation within Sunderland's major housing regeneration areas.

- **Creating Low Carbon Communities**. Opportunities will be explored to develop domestic sector focused 'low carbon communities' including "hard to treat" property improvements, renewable energy supply, district heating and local energy networks linked to commercial or industry opportunities.

Outlook to 2020

The revised action plan shows that currently, Sunderland could achieve the following emissions reductions:

- With initiatives known to have been implemented to from April 2008 to Jan 2010, and those expected until end of 2011, an estimated 55,000 tonnes CO2 will be saved, taking total emissions to 8% below 2005 levels.
- If all actions and ambitions are achieved between 2012 – 2020, there is the opportunity to save 404,000 tonnes CO2, taking total emissions to 29% below 2005 levels.

This would meet our commitment within the EU Covenant of Mayors, but require us to reduce emissions by a further 5% to meet UK carbon reduction targets. This shortfall needs to be addressed in future revision to this action plan.

On a per capita basis (as required by National Indicator 186), sub-national population statistics and projections indicate that the population of Sunderland will have fallen slightly, from 281,000 in 2005 to 278,000 in 2020. Because of this, the reduction in carbon emissions per capita will be slightly smaller, a 28% drop from 2005 – 2020.

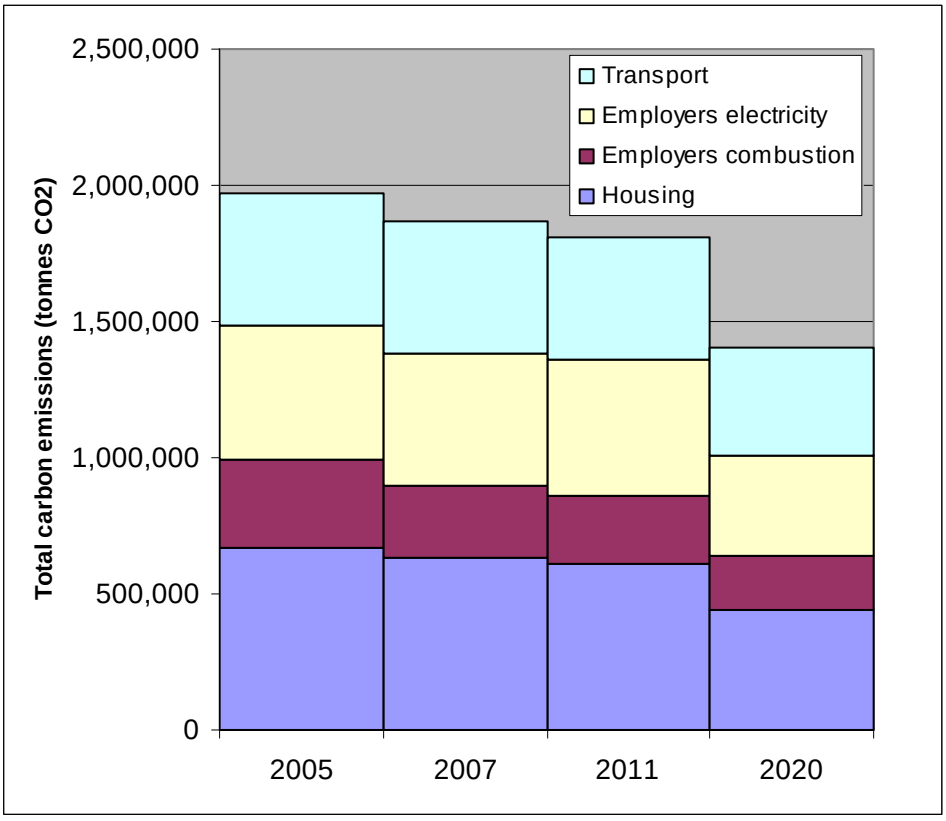


Figure 2. Past, present and future carbon emission estimate for Sunderland, showing impact of delivering all known carbon saving opportunities.

5. OTHER INFORMATION

The Climate Change Action Plan is adopted by Sunderland City Council and the Sunderland Partnership. The following roles are in place to manage the Action Plan:

- Sunderland City Council's Sustainability Team will take responsibility for managing and reporting on the Action Plan. This includes preparing annual progress report, and revising the action plan every 5 years.
- Various partnerships and groups have responsibility for reporting progress in each sector to the Sustainability Team
- Action Plan progress is reported annually, to the City Council and Sunderland Partnership, for reporting to:
    - Sunderland Strategy, against targets to reduce carbon emissions
    - Tyne and Wear City Region Multi Area Agreement, against progress on NI186
    - Central Government, against progress on NI186

If you have any comments regarding this report, Sunderland's Climate Change Action Plan or carbon emission reduction in general, please contact:

Contact Details:
Sustainability Team
Planning Policy Section
Office of the Chief Executive
City of Sunderland
Civic Centre, PO Box 100
Burdon Road,
Sunderland
SR2 7DN
Tel. (0191) 561 1585
Fax. (0191) 553 1224