

Appendix A

Baseline Guidance & Key Information

Contents

A1	Overview of preferred baseline	3	A4	Local Policy Reviewed	16
A1.1	Baseline 1: Energy Consumption and CO2 Emissions as at 2005	3			
A1.2	Baseline 2: Energy Use by Fuel Type	3			
A1.3	Baseline 3: Energy Use and CO2 Emissions by Sector	4			
A1.4	Baseline 4: Energy Use and CO2 Emissions Per Capita	5			
A1.5	Baseline 5: Energy and CO2 Emissions Since 2005	5			
A2	Overview of baseline data	5			
A2.1	Sub national total final energy consumption 2005 – 2008	5			
A2.1.1	Sub national electricity consumption 2005 - 2009	6			
A2.1.2	Sub national gas consumption 2005 - 2009	6			
A2.1.3	Sub national transport energy consumption 2005 - 2009	6			
A2.1.4	Sub national consumption of other fuels 2005 – 2008	7			
A2.1.5	Local and Regional Carbon Dioxide Emissions Estimates for 2005-2009 for the UK	7			
A2.2	Greenhouse Gas Reporting	8			
A2.3	Greenhouse gas emissions from Local Authority own estate and tackling fuel poverty (previously NI 185)	9			
A2.4	Calculating Carbon	9			
A3	National Policy Reviewed	13			
A3.1	Carbon Reduction Commitment Energy Efficiency Scheme (CRC) League Table	14			

A1 Overview of preferred baseline

A1.1 Baseline 1: Energy Consumption and CO2 Emissions as at 2005

In order to effectively manage the reduction of CO2 emissions it is important to understand how LCR's energy use / consumption translates into CO2 emissions. In order to do this energy consumption data is needed to understand the total units of energy used each year. For the baseline, each energy source will be presented in terms of GWh of energy and then converted to the resultant CO2 emission, resulting in and CO2 equivalent figure.

The development of LCR Energy System use one main data source: Total final energy consumption 2005 - 2008 (http://www.decc.gov.uk/en/content/cms/statistics/energy_stats/regional/total_final/total_final.aspx)

A1.2 Baseline 2: Energy Use by Fuel Type

Energy by fuel type is an important baseline as it provides a comprehensive understanding of the variety and quantity of fuels needed to provide the energy across each sector. Each fuel type will have a different impact in terms of CO2 emissions and it is therefore important to understand the fuel types that form LCR's energy system.

The dataset to be used for this baseline is:

Sub national consumption of other fuels 2005 – 2008 (http://www.decc.gov.uk/en/content/cms/statistics/energy_stats/regional/other/other.aspx)

Total final energy consumption 2005 - 2008 (http://www.decc.gov.uk/en/content/cms/statistics/energy_stats/regional/total_final/total_final.aspx0)

The baseline will present fuel types for 9 categories including Electricity, Gas, Petroleum, Coal, and Manufactured Solid Fuels, Renewables & Waste, Petrol Road Transport, Diesel Road Transport, Diesel Rail.

A summary of the key fuel types are presented in Figure 1.

Fuels Type	Descriptions
Electricity	Electricity is often referred to as a secondary source of energy as it requires a primary source of energy to generate it. The mix of primary fuels that is used to generate electricity within the UK varies depending on a number of factors, including the price of the primary fuels, power station efficiency and maintenance programs.

Fuels Type	Descriptions
Gas	Gas is distributed in pressurised distribution systems. Some very large gas users receive gas from the high pressure distribution system, whilst the majority of gas consumers are fed by a low pressure system. The natural gas distribution system is more flexible than the electricity network because it is possible to store significant amounts of gas to cope with the demand peaks. Gas is also used to generate electricity.
Petroleum Products	Petroleum is a generic name for liquid hydrocarbons, including crude oil, natural gas liquids, natural gas and their products
Coal	Coal in its natural form can be classified into three grades, steam coal, coking coal and Anthracite.
Manufactured Solid Fuels	Manufactured solid fuels are made up of coke & breeze and patent fuel.
Diesel	Most of the diesel in the UK, and some petrol, now contains 5% biofuel as biofuels can be mixed with ordinary fuel and used in normal cars.
Renewable and Waste	<p>Definitions of renewable & waste energy include:</p> <ul style="list-style-type: none"> • Wind (onshore): Wind commercial and small scale • Biomass: Plant and Animal biomass, Municipal Solid Waste, Commercial & Industrial Waste, Biogas(Landfill & Sewage Gas), Co-firing of Biomass (with a fossil fuel) • Hydropower • Microgeneration: solar, heat pumps

Figure 1 Fuel Categorise for Total final energy consumptions

A1.3 Baseline 3: Energy Use and CO2 Emissions by Sector

This baseline is required in order to understand how much CO₂ is emitted per unit of energy used for each sector (domestic, industrial / commercial, transport and agriculture). This can vary depending on what type of energy is predominantly used by each sector. For instance, uses that have heating provided by gas (eg, space heating for the domestic sector) typically result in less CO₂ emissions.

The datasets to be used for this baseline is:

Local and regional CO₂ emissions estimates for 2005-2009 – Full dataset

(http://www.decc.gov.uk/en/content/cms/statistics/climate_stats/gg_emissions/uk_emissions/2009_laco2/2009_laco2.aspx)

Carbon dioxide emissions within the scope of influence of Local Authorities (previously NI 186)

(http://www.decc.gov.uk/en/content/cms/statistics/climate_stats/gg_emissions/uk_emissions/2009_laco2/2009_laco2.aspx)

A1.4 Baseline 4: Energy Use and CO2 Emissions Per Capita

Measuring energy use and CO2 emissions per capita is particularly useful when considering changes in emissions against changing population. This baseline / indicator does have limitations with variables such as demographic change, economic activity, and the change in land use and urban / rural form of an area. On this basis the baseline and future monitoring is often focused on domestic per capita figures only rather than transport and industrial which are sectors that are subject to much greater change and variation.

The dataset to be used for this baseline is:

[Local and regional CO2 emissions estimates for 2005-2009 – Full dataset.](#)

(http://www.decc.gov.uk/en/content/cms/statistics/climate_stats/gg_emissions/uk_emissions/2009_laco2/2009_laco2.aspx)

A1.5 Baseline 5: Energy and CO2 Emissions Since 2005

Baseline 5 will include changes and trends in energy consumption for LCR and Authorities. To do this established analytical toolkits produced by DECC can be used:

- Change over Time Analysis (CoTA) Viewer
- Sub National energy consumption analytical tool

In order to identify the CO2 emissions from this the GWh will need to have relevant carbon conversion factors applied¹. There is also potential to expand the analysis of energy consumptions

A2 Overview of baseline data

A2.1 Sub national total final energy consumption 2005 – 2008

Sector	Fuel
Domestic	Coal
	Manufactured fuels
	Petroleum products
	Natural gas
	Electricity

¹ 2011 Guidelines to Defra/DECC's greenhouse gas conversion factors for company reporting (AEA for DECC/Defra, October 2011)

Industrial & Commercial	Coal Petroleum products Natural gas Electricity
Industrial	Manufactured fuels
Transport	Petroleum products

Figure 2 Summary of DECC Energy Consumption Categories

A2.1.1 Sub national electricity consumption 2005 - 2009

Electricity is measured using Meter Point Administration Number (MPAN)². Domestic consumption is based on Non Half Hourly (NHH) metered data, whilst Industrial and Commercial metered data is based on NHH and Half Hourly (HH) data.

A2.1.2 Sub national gas consumption 2005 - 2009

Gas is measured using Meter Point Reference Number (MPRN), based on an Annual Quantity (AQ) method that involves two meter reading at least 6 months apart. The AQ for a MPRN represents the consumption for a gas year which is 1 October through to the 30 September of each year. There are some limitations with MPRN data with around 18% of all MPRNs identified as not having an AQ value due to no meter reading being taken.

A2.1.3 Sub national transport energy consumption 2005 - 2009

Fuel consumption by road vehicles is calculated by the methodology used to estimate total UK emissions for road transport in the NAEI / GHGI and is consistent and goes beyond internationally agreed procedures and Guidelines for reporting emission inventories. The methodology combines traffic activity data (from DfT's national traffic census) with fleet composition data (vehicle mix by engine size, vehicle size, age, engine and exhaust treatment technology, Euro emission standards, fuel type), based on licensing data from DfT and fuel consumption/emission factors.

² An MPAN can be an individual meter, or can have more than one meters associated with it, or indeed none where it is an unmetered supply. A supply receiving power from a district network operator (DNO) has an Import MPAN, and generation and microgeneration scheme feeding electricity back into the DNO network have an Export MPAN.

A2.1.4 Sub national consumption of other fuels 2005 – 2008

This data provides estimates of non-gas, non-electric and non-road transport energy consumption for 2005, 2006, 2007 and 2008 and an accompanying method statement. In order to achieve national statistic status, a range of quality criteria set out by the UK Statistics Authority have been met. In particular, key improvements to the accuracy and comparability of the data have been achieved. These include:

- Re-classification of DECC Local Authority gas, electricity and road transport fuel consumption statistics as National Statistics;
- Implementation of improved quality assurance procedures;
- Methodological improvements; and
- Reduced uncertainty in the accuracy of some of the data inputs.

Source sector and fuel combinations have been mapped however, by DECC and AEA recognise that it is not meaningful to allocate energy consumption locally or regionally for some activities. Therefore, fuel consumption from aviation, shipping and power stations are excluded from this study. In addition, for some fuel–sector combinations, no information is available for spatial mapping purposes. Fuel use from transformation activity is also excluded in this study.

A2.1.5 Local and Regional Carbon Dioxide Emissions Estimates for 2005-2009 for the UK

The dataset provides a spatial disaggregation of the CO₂ from the UK Greenhouse Gas Inventory (GHGI), part of the National Atmospheric Emissions Inventory (NAEI), on an end user basis. This means that emissions from the production and processing of fuels, including the production of electricity, are reallocated to users of these fuels to reflect total emissions for each type of fuel consumed. The disaggregation methodology is complex, and different approaches are used to make best use of the quantity and quality of suitable data that are available for each sector.

The Technical Report produced to the data used to produce the carbon emission estimates are from for key sources³:

- DECC sub-national gas and electricity consumption statistics 2005 - 2009;
- Point source emissions from large industrial installations;
- High resolution (1 km²) emissions distribution maps developed under the NAEI programme; and
- Land use, land use change and forestry (LULUCF) regional data supplied by the Centre of Ecology and Hydrology (CEH).

This dataset and the GHG inventory as a whole are subject to continuous improvement in order to increase confidence in the estimates. Efforts are concentrated each year on topics identified in both inventory and emissions mapping improvement plans with the aims of improving accuracy and reducing uncertainties.

³ Local and Regional Carbon Dioxide Emissions Estimates for 2005-2009 for the UK Technical Report - <http://www.decc.gov.uk/assets/decc/11/stats/climate-change/2753-local-and-regional-co2-emissions-estimates.pdf>

Electricity is measured using Meter Point Administration Number (MPAN) and Gas is measured using Meter Point Reference Number (MPRN)
The conversion factors used to estimate emissions from the total electricity and gas consumption estimates are set out in the methodology electricity CO₂ factors can be found on page 6 of the report, while gas factors can be found on page 9 of the guidance⁴.

Sector	Fuel
Domestic	Domestic Electricity
	Domestic Gas
	Domestic 'Other Fuels'
Industrial & Commercial	Industry and Commercial Electricity
	Industry and Commercial Gas
	Large Industrial Installations
	Industrial and Commercial Other Fuels
Transport	Diesel Railways
	Road Transport (A roads)
	Road Transport (Motorways)
	Road Transport (Minor roads)
	Road Transport Other

Figure 3 Summary of DECC Carbon Emission Estimate Categories

A2.2 Greenhouse Gas Reporting

Greenhouse gas emissions are a major cause of climate change. There are six greenhouse gases covered by the Kyoto Protocol, the current international agreement on greenhouse gas emissions. These are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), sulphur hexafluoride, hydrofluorocarbons and perfluorocarbons. These greenhouse gases

⁴ The factors used are slightly different from the one published in the Defra Company reporting guidelines [Ref]. The main reason for this difference is that the LA CO₂ statistics are adjusted to be aligned with the National Emissions Inventory; however, the underlying sub-national energy (gas and electricity) statistics are not aligned to DUKES (Digest of UK Energy Statistics) – a statistical publication, which covers energy production and consumption for the UK), therefore some adjustment is needed. This is also the reason why the gas conversion factors are different for the 5 years of consideration. In addition, in the LA CO₂ emissions dataset the conversion factors are adjusted with an **end-user** factor – this is done to take into account the fact that the dataset is an end-user dataset (and not a by source dataset). For example emissions from a power station, in the end user inventory, are allocated to the user of the electricity produced by the power station, while in the by source inventory are allocated to the power station sector.

are measured in carbon equivalents (CO₂e) and weighted. Methane is 21 times stronger than CO₂ and accounts. Nitrous oxide is 310 times stronger than CO₂ and Chlorofluorocarbons several thousand times stronger than CO₂.

GHG emissions are categorised as Direct or Indirect emissions. **Direct** emissions are emissions from sources that are owned or controlled by the body reporting the emissions data eg, a local authority, education authority, health authority or private sector business. **Indirect** emissions are emissions that result as a consequence of activities of the reporting body, but occur at a source that is owned by another body.

The new GHG reporting process is categorised in three scoping categories.

- **Scope 1** addresses all direct GHG emissions.
- **Scope 2** addresses all indirect emissions from electricity, heat or steam.
- **Scope 3** address other indirect emissions

A2.3 Greenhouse gas emissions from Local Authority own estate and tackling fuel poverty (previously NI 185)

Following the consultation DECC replaced NI 185 with a requirement to report GHG Emissions as part of the Single List of Central Government requirements from Local Government. Although the annual GHG Emissions report is described as the successor to National Indicator (NI) 185, it the measuring of emissions differs to the NI 185 approach ie, where NI 185 reported emissions in terms of Carbon Dioxide (CO₂) alone, the new GHG requirement covers all 6 Kyoto greenhouse gases (carbon dioxide, methane, hydrofluorocarbons, nitrous oxide, perfluorocarbons and sulphur hexafluoride) and reports in Carbon Dioxide Equivalent (CO₂e).

A2.4 Calculating Carbon

There are several forms of guidance for reporting greenhouse gas emissions that are used to develop the baseline. These include:

- Guidance on how to measure and report your greenhouse gas emissions (DECC/Defra, September 2009)
- 2011 Guidelines to Defra/DECC's greenhouse gas conversion factors for company reporting (AEA for DECC/Defra, October 2011)
- Sharing information on greenhouse gas emissions from council own estate and operations: frequently asked questions (DECC, April 2011)

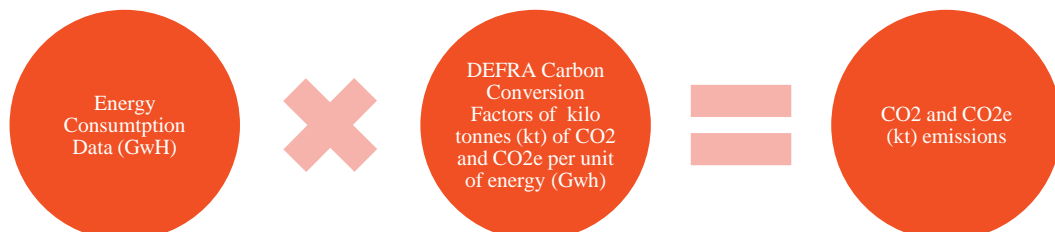


Figure 4 Basic Step of Carbon Conversion

Figure 5 provides a breakdown of carbon conversion factors used to develop Baseline A. The figures used are contained in Table 1C “Converting fuel types on an energy, Gross CV basis 9” of the 2011 Guidelines to Defra/DECC’s greenhouse gas conversion factors for company reporting (AEA for DECC/Defra, October 2011).

Fuel Type	DECC Fuel Type	Units	Scope 1		Scope 3		All Scopes	
			CO2	CH4	N2O	Total Direct GHG	Total Indirect GHG	Grand Total GHG
			kt CO2 per unit	kt CO2e per unit	kt CO2 per unit	kt COe2 per unit	kg CO2e per unit	kg CO2e per unit
Aviation Spirit		GWh	0.23735	0.00244	0.00235	0.24214	0.04278	0.28492
Aviation Turbine Fuel 1		GWh	0.24542	0.00012	0.00242	0.24795	0.04564	0.29359
Biofuels		GWh	Annex 9					
Burning Oil1		GWh	0.24562	0.00052	0.00067	0.24681	0.04564	0.29245
CNG 2		GWh	0.18322	0.00027	0.00011	0.1836	0.02704	0.21064
Coal (industrial)3	Coal	GWh	0.32637	0.00019	0.00596	0.33253	0.05265	0.38518
Coal (electricity generation)4	Electricity	GWh	0.32232	0.00006	0.0028	0.32518	0.05318	0.37836
Coal (domestic)5	Coal	GWh	0.29582	0.03892	0.00446	0.3392	0.05318	0.39238
Coking Coal	Solid Manufactured Fuels	GWh	0.32636	0.00335	0.00781	0.33752	0.05318	0.3907
Diesel (retail station biofuel blend)11		GWh	0.2416	0.0001	0.0017	0.2434	0.0504	0.2938
Diesel (100% mineral diesel)11		GWh	0.24989	0.00012	0.00173	0.25174	0.04798	0.29972
Electricity	Electricity	GWh	0.48152	0.00027	0.00283	0.48462	0.06906	0.59368
Fuel Oil 6	Petroleum Products	GWh	0.26613	0.00023	0.00108	0.26744	0.04516	0.3126
Gas Oil 7	Petroleum Products	GWh	0.25191	0.00027	0.02639	0.27857	0.04516	0.32655
LNG 8	Petroleum Products	GWh	0.18322	0.00027	0.00011	0.1836	0.06473	0.24833
LPG	Petroleum Products	GWh	0.21419	0.00015	0.00033	0.21467	0.02689	0.24156
		Therms	6.2773	0.0044	0.0098	6.2915	0.78801	7.07951
Lubricants		GWh	0.2627	0.00016	0.0007	0.26356	0.032	0.29556
Naphtha		GWh	0.23717	0.00021	0.00061	0.23798	0.03346	0.27144

Fuel Type	DECC Fuel Type	Units	Scope 1		Scope 3		All Scopes	
			CO2	CH4	N2O	Total Direct GHG	Total Indirect GHG	Grand Total GHG
			kt CO2 per unit	kt CO2e per unit	kt CO2 per unit	kt COe2 per unit	kg CO2e per unit	kg CO2e per unit
Natural Gas	Gas	GWh	0.18322	0.00027	0.00011	0.1836	0.01795	0.20155
		GWh	5.3697	0.0079	0.0033	5.3808	0.52593	5.9067
Other Petroleum Gas		GWh	0.1863	0.00024	0.00493	0.19146	0.02269	0.21415
Petrol (retail station biofuel blend)12		GWh	0.2351	0.0003	0.0007	0.2361	0.0443	0.2804
Petrol (100% mineral petrol)12		GWh	0.23963	0.00035	0.00068	0.24066	0.04279	0.28345
Petroleum Coke		GWh	0.31106	0.00023	0.00708	0.31837	0.03789	0.35626
Refinery Miscellaneous		GWh	0.24512	0.00023	0.00067	0.24602	0.02986	0.27588
		Therms	7.1839	0.0066	0.0196	7.2102	0.87502	8.0852
Wood		GWh	NA	NA	NA	NA	0.03895	0.04

Figure 5 Table 1C Converting fuel types on an energy, Gross CV basis 9, 2011 Guidelines to Defra/DECC's greenhouse gas conversion factors for company reporting (AEA for DECC/Defra, October 2011).

A3 National Policy Reviewed

Driver	Description
EU ETS	<p>The EU ETS is cost-effective and operates by the allocation and trading of greenhouse gas emissions allowances throughout the EU - one allowance represents one tonne of carbon dioxide equivalent. An overall limit, or 'cap', is set by Member State's Governments on the total amount of emissions allowed from all the installations covered by the scheme. The allowances are then distributed to the installations in the scheme.</p> <p>At the end of each year, operators are required to ensure they have enough allowances to cover their installation's emissions. They have the flexibility to buy additional allowances (on top of their free allocation), or to sell any surplus allowances generated from reducing their emissions.</p>
Climate Change Agreements	<p>Climate Change Agreements (CCAs) set the terms under which eligible companies may claim the levy reduction. Energy. Intensive industries can obtain a 65% discount from the Climate Change Levy, provided they meet challenging targets for improving their energy efficiency or reducing their carbon emissions.</p>
Carbon Emissions Reduction Target (CERT)	<p>The Carbon Emissions Reduction Target (CERT) requires all domestic energy suppliers with a customer base in excess of 50,000 customers to make savings in the amount of CO₂ emitted by householders. Suppliers meet this target by promoting the uptake of low carbon energy solutions to household energy consumers, thereby assisting them to reduce the carbon footprint of their homes.</p>
Community Energy Savings Programme (CESP)	<p>CESP targets households across Great Britain, in areas of low income, to improve energy efficiency standards, and reduce fuel bills. There are 4,500 areas eligible for CESP. CESP is funded by an obligation on energy suppliers and electricity generators. It is expected to deliver up to £350m of efficiency measures. A list of eligible areas is contained in the "Communities: areas of low income" document.</p>
Carbon Reduction Commitment Energy Efficiency Scheme (CRC)	<p>The CRC is a mandatory scheme aimed at improving energy efficiency and cutting emissions in large public and private sector organisations. These organisations are responsible for around 10% of the UK's emissions.</p> <p>The scheme features a range of reputational, behavioural and financial drivers, which aim to encourage organisations to develop energy management strategies that promote a better understanding of energy usage.</p>
Green Deal	<p>The new innovative Green Deal financial mechanism eliminates the need to pay upfront for energy efficiency measures and instead provides reassurances that the cost of the measures should be covered by savings on the electricity bill.</p> <p>The Energy Act 2011 includes provisions for the new 'Green Deal', which intends to reduce carbon emissions cost effectively by revolutionising the energy efficiency of British properties.</p>

Driver	Description
	A new Energy Company Obligation will integrate with the Green Deal, allowing supplier subsidy and Green Deal Finance to come together into one seamless offer to the consumer.

A3.1 Carbon Reduction Commitment Energy Efficiency Scheme (CRC) League Table

Rank	Number	Organisation Name	Weighted Score	Emissions (Tonnes of CO2)	Early Action Metric (%)	Absolute Metric (%)	Growth Metric (%)
1	CRC6582231	National Museums Liverpool	2092.5	9207	100	0	0
109	CRC5001401	LIVERPOOL CITY COUNCIL	1994.5	59071	84.5	0	0
133	CRC3885766	Merseytravel	1971	8994	80.88	0	0
244	CRC5157040	Merseyside Police	1860	11552	68.47	0	0
258	CRC4971472	Liverpool John Moores University	1845.5	12601	65.5	0	0
275	CRC0522585	PEEL AIRPORTS LIMITED	1827.5	14780	62.5	0	0
347	CRC4523601	PEEL HOLDINGS (MANAGEMENT) LIMITED	1756.5	18469	53	0	0
381	CRC2022377	ARENA AND CONVENTION CENTRE LIVERPOOL LIMITED	1676.5	3390	50	0	0
381	CRC6547297	The University of Liverpool	1676.5	36742	50	0	0
597	CRC3097073	Mersey Care NHS Trust	1507	10627	41.22	0	0
598	CRC0613607	ARUP GROUP LIMITED	1505.5	6817	41	0	0

Rank	Number	Organisation Name	Weighted Score	Emissions (Tonnes of CO2)	Early Action Metric (%)	Absolute Metric (%)	Growth Metric (%)
647	CRC8385211	PEEL HOLDINGS (PORTS) LIMITED	1457	80566	36.88	0	0
782	CRC2851041	CAMMELL LAIRD SHIPREPAIRERS & SHIPBUILDERS LIMITED	1276.5	5321	25	0	0
907	CRC4489131	Wirral University Teaching Hospital NHS Foundation Trust	1197	19481	23.17	0	0
1003	CRC5243956	Knowsley Metropolitan Borough Council	1098	25057	14	0	0
1010	CRC4781854	STOBART HOLDINGS LIMITED	1091.5	6605	13.5	0	0
1033	CRC9096095	Warrington and Halton Hospitals NHS Foundation Trust	1070.5	11546	11	0	0
1064	CRC4744257	St Helens Council	1035	19414	9	0	0
1170	CRC1453573	Liverpool Victoria Friendly Society Limited	931	6671	4.5	0	0
1301	CRC8295444	INEOS LIMITED	402	37896	0	0	0
1301	CRC0395731	St Helens and Knowsley Hospitals NHS Trust	402	15574	0	0	0
1301	CRC3049267	Wirral Council	402	40380	0	0	0

A4 Local Policy Reviewed

Title	Description
<p>Halton Carbon Management Plan</p> <p>2006 – 2013</p> <p>33% Carbon Reduction</p>	<p>This strategy is the main outcome of the Council’s involvement in the first year of the programme in partnership with the Carbon Trust. The strategy aims reduce carbon by 20% on the 2006/7 baseline year by March 2013 by:</p> <ul style="list-style-type: none"> • Delivering long term cost savings from managing carbon emissions • Examining ways to embed and involve staff in the implementation of Carbon Management actions and initiatives • Improving the energy efficiency of Council buildings and schools • Integrating carbon reduction into future building design • Investigating possible options for reducing carbon emissions from staff and business travel • Reducing the total number of miles travelled • Reducing emission from journeys travelled • Reducing emission from the vehicle fleet • Exploring opportunities for prompting sustainability through procurement • Reducing emissions from Street Lighting without compromising community safety
<p>Halton Affordable Warmth Strategy</p> <p>2011 – 2016</p> <p>Baseline 2006/2007</p> <p>20% Carbon Reduction by 2013 (Interim Target)</p> <p>35% carbon Reduction by 2016 (Aspirational Target)</p>	<p>National Energy Action (NEA), Energy Projects Plus and local partners, including the voluntary sector, some Registered Social Landlords and the PCT, have prepared the strategy. The key aims of the Affordable Warmth Strategy are to:</p> <ul style="list-style-type: none"> • Raise awareness and understanding of fuel poverty; • Establish effective referral systems amongst agencies; • Improve the housing stock so it is affordably warm; • Maximise incomes and improve access to affordable fuel; and • Ensure coordination and monitoring of the strategy. <p>Each aim has a corresponding list of associated actions contained in the Action Plan.</p>
<p>Halton GHG Report</p> <p>2010 - 2011</p>	<p>The GHG report provides details of the emissions from local authority’s own estate and operations (former NI 185). This is a statutory requirement of the government and is included in the ‘Single Data List’ which sets out the information that local authorities should submit to Government each year. The aim of Carbon management Plans include:</p>

Title	Description
	<p>Reducing the costs of energy, water and fuel use, in addition to waste generation</p> <ul style="list-style-type: none"> • Demonstrating leadership to partners and local community • Protecting the environment and limiting impacts on climate change • Complying with legislation such as the Carbon Reduction Commitment Energy Efficiency Scheme. <p>The GHG reports include data on Scope 1, 2 and 3 reporting.</p>
<p>Knowsley Carbon Management Plan 2011 – 2016</p>	<p>The Knowsley Carbon Management Plan (CMP) summarises the results of the work undertaken as part of the Carbon Trust's Carbon Management Programme during 2010/11 and sets out the action that we will take over the next five years to reduce carbon emissions. The document highlights the sources of Knowsley Council's carbon emissions, sets out baseline figures for 2009/10, establishes a target to reduce emissions from this baseline and sets out a timetable of actions to achieve the desired reductions over a five year period. It also details the key internal management arrangements and reporting mechanisms that will be used to maintain the programme's presence and influence within the Council's corporate structure.</p>
<p>Knowsley Climate Change Action Plan</p>	<p>The action plan sets a vision for 2023 that will place Knowsley as 'the borough of choice for low carbon inward investment, working, visiting and living'. Objectives include:</p> <ul style="list-style-type: none"> • Carbon reduction from efficiency in energy use, waste and water in domestic, commercial and industrial properties. • Increase the amount of renewable energy generated in Knowsley. • To reduce carbon emissions from transport in Knowsley • To reduce carbon emissions from the Council's own estates and services. • To nurture low carbon supply chains in Knowsley
<p>Knowsley Affordable Warmth Strategy 2010</p>	<p>The strategy was developed in 2010 to tackle fuel poverty in Knowsley.</p> <ul style="list-style-type: none"> • Raise awareness amongst key decision makers, organisations and the general public about the need for affordable warmth. • To increase collaboration of organisations towards the formation and development of partnerships to achieve affordable warmth. • To provide access to clear, appropriate and impartial information and advice related to fuel poverty. • To influence national, regional and local policies, regulation and legislation to achieve affordable warmth. • To improve the energy efficiency of housing to contribute to affordable warmth. <p>Schemes identified in the strategy include:</p> <p>Hospital discharge scheme: This scheme fast tracks assistance for all Knowsley residents who are elderly and/or vulnerable and unable to be discharged from hospital to their home, or are at risk of being readmitted to hospital due to home conditions, to receive fast track assistance.</p>

Title	Description
	<p>Hard to treat properties: Knowsley are to investigate and perhaps pilot a scheme to look at how to tackle Hard to Heat homes, to determine the most cost effective methods of insulating these properties.</p> <p>Other schemes include:</p> <ul style="list-style-type: none"> • The Knowsley thermal insulation Schemes • The Knowsley Heatstreets Scheme • The Knowsley Warmstreets Scheme • The Warm Front Scheme • The Health Through Warmth Scheme (HTW) • Home Energy Loan Programme - HELP Loan • Community Energy Saving Programme (CESP) • Private landlords Forum
<p>Knowsley GHG Report</p> <p>2010 – 2011</p> <p>Baseline 2009/2010</p> <p>22% Carbon Reduction by 2016 (Interim Target)</p> <p>41% carbon Reduction by 2016 (Aspirational Target)</p>	<p>GHG report provides details of the emissions from local authority's own estate and operations (former NI 185). This is a statutory requirement of the government and is included in the 'Single Data List' which sets out the information that local authorities should submit to Government each year. The aim of Carbon management Plans include:</p> <p>Reducing the costs of energy, water and fuel use, in addition to waste generation</p> <ul style="list-style-type: none"> • Demonstrating leadership to partners and local community • Protecting the environment and limiting impacts on climate change • Complying with legislation such as the Carbon Reduction Commitment Energy Efficiency Scheme. <p>The GHG report draws heavily on information collected for Knowsley's Carbon Management Plan and CRC returns; the data on reported emissions is not currently directly comparable, as different carbon emission factors have been used. The Carbon Management Plan data will be reviewed to bring it into line with the updated figures quoted in this report. However, the CRC figures will remain different. This is because the carbon emission factors that are mandatory for use in the CRC are fixed. The emission factors specified for this report are updated by DECC each year.</p> <p>The GHG reports includes data on Scope 1, 2 and 3 reporting.</p>

Title	Description
<p>Liverpool Liverpool Healthy Homes Programme</p>	<p>The Healthy Homes Programme (HHP) is run jointly by Liverpool City Council and the NHS Liverpool Primary Care Trust (PCT). It aims to prevent ill health and injury resulting from poor quality housing conditions.</p> <p>Advice is given on:</p> <ul style="list-style-type: none"> • Health proofing homes (from excess cold, damp and mould). • How to access services provided by various support agencies such as Age Concern or the Benefit Maximisation Service. • Fuel poverty and keeping homes warm enough through the winter. • Maximising income
<p>Liverpool Carbon Reduction Plan (Domestic)</p> <p>Baseline of 2008/2009</p> <p>35% carbon reduction target by 204</p>	<p>The plan helps deliver the Liverpool Climate Change Strategy 2009 Vision which aims to reduce greenhouse gas emissions by 80% by 2050 and Liverpool City Council's Carbon Management Plan which sets a 34% (on an 2008/2009 baseline) carbon reduction in the Council's emissions by 2013/14.</p> <p>The plan sets out how the housing sector and its activities contribute to Liverpool's carbon emissions. The report provides baseline information and trend analysis for the domestic sector in terms of energy consumption (gas & electricity) and carbon emissions. The plan identified that housing will need to make a 365 kt of CO2 saving between 2006 and 2024 in order to meet a 35% carbon reduction target.</p>
<p>Liverpool Climate Change Adaptation Action Plan 2011</p>	<p>This Adaptation Action Plan sets out the detailed actions the affect the Council's business units and services are likely to be most affected by climate change. These priorities and actions will be monitored and reviewed as part of the normal risk management and business planning processes. As such, this remains a working document and is intended for publication and use by the City Council's staff, partners and stakeholders. Phase 3 of the action plan was completed in March 2011 and priorities include the need to improve energy efficiency.</p>
<p>Liverpool Sustainable Development Plan</p> <p>2006 - 2009</p> <p>2006 baseline</p>	<p>The plan was originally adopted in 2001 and a first monitor carried out in 2004 and guides the Council's performance framework, corporate strategies and individual service plans.</p> <p>The concentrates on the elements that the city council is directly responsible for delivering, but also covers areas where the council would work with partners.</p>
	<p>GHG report provides details of the emissions from local authority's own estate and operations (former NI 185). This is a statutory requirement of the government and is included in the 'Single Data List' which sets out the information that local authorities should submit</p>

Title	Description
<p>Liverpool GHG Report</p> <p>2010 – 2011</p> <p>35% Carbon Reduction by 2024</p>	<p>to Government each year. The aim of Carbon management Plans include:</p> <p>Reducing the costs of energy, water and fuel use, in addition to waste generation</p> <ul style="list-style-type: none"> • Demonstrating leadership to partners and local community • Protecting the environment and limiting impacts on climate change • Complying with legislation such as the Carbon Reduction Commitment Energy Efficiency Scheme.
<p>Sefton</p> <p>Sefton Carbon Management Plan 2011 - 2016</p> <p>Baseline 2009/2010</p> <p>25% Carbon Reduction by 2016</p>	<p>The Carbon Management Plan is the culmination of a 12 month programme of work between Council officers, elected Members, the Carbon Trust and advice provided from many local and national experts. The development programme establishes a comprehensive process for managing greenhouse gases emissions produced from the Council's operations, with the main aim being to identify and implement cost effective measures to reduce emissions.</p>
<p>Sefton Climate Change Action Plan</p>	<p>Not available on web. Sefton Council is due to release a Climate Adaptation plan in Spring 2011. This will be the product of a series of themed workshops and meetings that were designed to:</p> <ul style="list-style-type: none"> • explore Sefton's resilience to climate change now, • establish what we could do to adapt (if necessary), • begin the process of adaptation (if appropriate)
<p>Sefton Affordable Warmth Strategy</p> <p>2007</p>	<p>The strategy is focused on reducing fuel poverty. The strategy contain several key programmes to achieve this including:</p> <p>Warm Front Grants such as Warmfront which is the main Government scheme that helps those on certain benefits get help with insulation and heating.</p> <p>SEARCH – (Sefton Energy Action Reaching Cold Homes) provides small grants for loft and cavity wall insulation and home visiting support where a member of the household suffers from a cold related/respiratory illness.</p> <p>Home Energy Loans Project (HELP) – provides interest free loans up to £1000 to home owners for boilers, insulation and solar water heating (subject to acceptance)</p>

Title	Description
	<p>Health Through Warmth – npower's 'Health Through Warmth' is a practical scheme that aims to help vulnerable people whose health is adversely affected by cold, damp living conditions by facilitating the appropriate installation measure by training key community workers who can then identify the links between housing and health and refer people at risk..</p> <p>Carbon Emissions Reduction Trading (CERT) is offered by Utility Companies to provide insulation measures at a reduced cost.</p>
<p>Sefton GHG Report 2010 – 2011 Baseline 2009/2010 25% Carbon Reduction by 2016</p>	<p>GHG report provides details of the emissions from local authority's own estate and operations (former NI 185). This is a statutory requirement of the government and is included in the 'Single Data List' which sets out the information that local authorities should submit to Government each year. The aim of Carbon management Plans include:</p> <p>Reducing the costs of energy, water and fuel use, in addition to waste generation</p> <ul style="list-style-type: none"> • Demonstrating leadership to partners and local community • Protecting the environment and limiting impacts on climate change • Complying with legislation such as the Carbon Reduction Commitment Energy Efficiency Scheme. <p>The GHG report includes data on Scope 1 and 2 reporting.</p>
<p>St Helens St Helens Carbon Reduction Strategy 25% Carbon Reduction by 2020</p>	<p>This action plan is focused reducing the effects of climate change, saving resources and encouraging renewable energy. The plan primarily deals with the Council's Buildings and there are two key priorities that drive the Carbon Reduction Strategy:</p> <ul style="list-style-type: none"> • Promoting and delivering energy efficienc. • Improving value for money and maximising the effectiveness and use of current Council assets and resources
<p>St Helens Climate Change Action Plan 2009 - 2012</p>	<p>The action plan draws together policy commitments from a wide range of St Helens plans and strategies including the St Helens Sustainable Community Strategy, Local Development Framework, St Helens Corporate Plan, Mid Mersey Growth Point, Local Transport Plan. Action are categorised in themes including Home, Business, Transport, Public and Third Sector.</p>
<p>St Helens Fuel Poverty Strategy 2006 - 2009</p>	<p>The St. Helens Fuel Poverty Strategy 'The Roadmap to Affordable Warmth', builds upon the foundations laid down by the Government in The UK Fuel Poverty Strategy launched in November 2001 and the regional Merseyside Affordable Warmth Strategy first published in September 2002. The strategy has five key aims:</p>

Title	Description
	<ul style="list-style-type: none"> • To provide information, education & advice on Affordable Warmth; • To work together to achieve Affordable Warmth; • To reduce fuel poverty by maximising income; • To improve health and wellbeing through Affordable Warmth; and • To improve energy efficiency to achieve Affordable Warmth.
<p>St Helens GHG Report</p> <p>2010 – 2011</p> <p>3% Carbon Reduction per a year</p>	<p>GHG report provides details of the emissions from local authority's own estate and operations (former NI 185). This is a statutory requirement of the government and is included in the 'Single Data List' which sets out the information that local authorities should submit to Government each year. The aim of Carbon management Plans include:</p> <p>Reducing the costs of energy, water and fuel use, in addition to waste generation</p> <ul style="list-style-type: none"> • Demonstrating leadership to partners and local community • Protecting the environment and limiting impacts on climate change • Complying with legislation such as the Carbon Reduction Commitment Energy Efficiency Scheme. <p>The GHG report includes data on Scope 1 and 2 reporting.</p>
<p>Wirral</p> <p>Wirral Affordable Warmth Implementation Plan</p> <p>2011 - 2014</p>	<p>The implementation plan is focused on reducing fuel poverty and runs in parallel three year Strategic Housing Plan. The plan is based on assessment of the National Energy Action fuel poverty toolkit. The action plan has been developed to:</p> <ul style="list-style-type: none"> • Raise awareness of fuel poverty and its solutions • Improve the energy efficiency of housing • Improve health and well being through affordable warmth • Maximise income and minimise energy costs for all residents • Improve partnership work and ensure effective referral systems between agencies
<p>Wirral GHG Report</p> <p>2010 - 2011</p>	<p>GHG report provides details of the emissions from local authority's own estate and operations (former NI 185). This is a statutory requirement of the government and is included in the 'Single Data List' which sets out the information that local authorities should submit to Government each year. The aim of Carbon management Plans include:</p> <p>Reducing the costs of energy, water and fuel use, in addition to waste generation</p>

Title	Description
	<ul style="list-style-type: none"> • Demonstrating leadership to partners and local community • Protecting the environment and limiting impacts on climate change • Complying with legislation such as the Carbon Reduction Commitment Energy Efficiency Scheme.
<p>Wirral Carbon Reduction Plan</p> <p>Carbon Reduction Plan</p> <p>2010 – 2025</p> <p>Target is 60% by 2025</p>	<p>The Wirral-wide- Carbon Reduction Programme provides a programme of Wirral’s CO2 reduction activity across a number of organisations that are reducing carbon emissions from their assets and operations. This includes (but not limited to) Wirral Council (departments include Technical Services, Corporate Services, Office Depots), NHS Wirral, CWP NHS Trust, Wirral Council Local Strategic Partnership, Fire & Rescue Service, Merseytravel, Merseyside Police, Wirral Environmental Partnership, Transition Towns West Kirby, Merseyside Environment Network, Energy Saving Trust, Groundwork Merseyside, Cheshire & Wirral Partnership NHS, United Utilities, Stagecoach and Arriva.</p>
<p>CRed Wirral</p>	<p>CRed Wirral offers an online tool where people can choose from a range of carbon reducing pledges to their lifestyle. After a pledge has been made they can track their progress via unique 'My Pledges' view. Users can see the impact of their pledges in kilograms/tonnes of CO2 saved (and the impact of pledges made by all users in the CRed Wirral community). CRed Wirral also gives access to news, events and links for further information and support.</p>
<p>Merseyside Waste DPD</p>	<p>The Waste DPD will facilitate the development of a network of modern waste management facilities across Merseyside and Halton, which will enable sustainable waste management. The plan identifies improved waste management as a key driver to climate change adaptation and mitigation by reusing, recycling and using waste as a fuel for energy generation. Waste cuts across domestic, industrial & commercial, transport and agriculture sectors. The use of new sustainable technologies could have a significant on the energy demand and supply. Key policies relating to the reduction of carbon include:</p> <ul style="list-style-type: none"> • Policy WM6 seeks to reduce the distance travelled to access HWRCs. • Policy WM9 –Sustainable waste management design and layout for new developments • Policy WM11 Sustainable Waste Transport • Policy WM12 -Criteria for Waste Management Development
<p>Merseyside LTP3</p>	<p>The third LTP aims to reduce carbon emissions by addressing the three elements of transport transformation, which are; vehicles, fuels and mobility. The LTP has modelled three scenarios which demonstrate that the implementation of the LTP will reduce CO2 emissions in the long term. The model missions of CO2 initially increase in both the do minimum and final strategy scenarios due to the significant forecast increases in traffic growth predicted during the growth period. By 2024 this increase is then addressed through advances in</p>

Title	Description
<p>Baseline 2008</p> <p>0% carbon increase on 2008 levels by 2024</p>	<p>cleaner vehicle technology. This results in CO₂ falling back to 2008 (identified as 1,500 kt CO₂) rates in 2024. It should be noted that the LTP views the modelling, particularly in relation to CO₂, to be conservative and that greater reductions in CO₂ emissions are expected by 2024. The LTP identifies key actions to reduce CO₂ emissions. These include:</p> <ul style="list-style-type: none"> • Prioritising maintenance programmes • Expanding the range of public transport services • Beginning to implement the next generation of technology • Working with the Freight Quality Partnership (FQP) and other parties to develop and enhance the freight and logistics network • Implementing the Active Travel Strategy • Implementing the Low Emissions Strategy • Increasing promotion of sustainable travel and behaviour change • Preparing a complementary strategy that seeks to reduce reliance on oil • Collaborating and co-operating
<p>Merseyside Atmospheric Emissions Inventory (MAEI)</p>	<p>The MAEI provides gridded estimates of air pollutants and greenhouse gases including CO₂. The inventory also includes transport, industrial & commercial, domestic and agriculture. To date the inventory has been primarily developed for the transport sector and used for the reporting of emissions of key air pollutants and greenhouse gases across five Merseyside local authorities (ie, Liverpool, Knowsley, Sefton, St Helens and Wirral).</p> <p>An independent review in 2011 by consultants Aether. The review was shaped by the five elements that should shape any inventory: transparency, consistency, comparability, completeness and accuracy. The review found the MAEI to be of high quality; however it identified some areas of improvement across the completeness, accuracy and consistency elements of the inventory. The review also identified that the reporting format of the inventory should be improved to allow for easy comparison with other inventories.</p>
<p>Low Carbon Economy Action Plan</p>	<p>The action plan sets out priorities and actions to create 12,000 new jobs in the low carbon sector by 2015. This represents significant increase on the existing 8,500 already estimated to be employed across hundreds of businesses in low carbon sub sectors. The action plan is based on four key growth areas: energy, networks, transport and buildings. LCR's transition to a low carbon economy will provide significant opportunities for the Energy and Environmental Technologies and Services (ETTS) sector to develop with wider benefits to the consulting, engineering, construction, manufacturing, financial and legal sectors.</p>
<p>REECH Programme</p>	<p>The REECH project, which aims to drive up demand for low carbon energy technologies, build capacity in local supply chains and target those areas most affected by deprivation. REECH will help drive up demand for installing low carbon technologies in the domestic market</p>

Title	Description
	by working with Registered Social Landlords (RSLs) across the area. RSLs will offer combined purchasing power to help build capacity in local supply chains'. The REECH programme will be measured in terms of GVA,