



Cynulliad National
Cenedlaethol Assembly for
Cymru Wales

Carbon Reduction by Industry and Public Bodies in Wales

3rd report of the Sustainability Committee's Inquiry
into Carbon Reduction in Wales

April 2009

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Chair's Introduction

This is our third report into carbon reduction in Wales and much has changed since we published our first report earlier in the year.

The urgency of the need for action on climate change is now widely recognised and the recommendation of the UK Climate Change Committee that we need to be moving towards an 80% cut in our carbon emissions has made our inquiry and recommendations even more valid.

We also face a worrying time financially with the prospect of further months of recession ahead of us.

It is timely, therefore, that we should be focussing on the measures that industry and public bodies can take to reduce their carbon emissions in this report. At a time of financial hardship, sustainability issues are often sidelined as economic considerations take centre stage. I hope in this report that we are able to highlight the benefits to industry and public bodies of adopting a low carbon approach to the way in which they do business. We believe that, by becoming a leader in the move towards a low carbon economy, not only can Wales gain a competitive edge and boost business and employment, but that existing businesses and organisations can benefit financially both in the long and short term.

We cannot ignore the need to tackle climate change by reducing our carbon emissions at every level which is why our recommendations in this report cover all sectors of business and all public bodies in Wales.

I would like to thank all those who have given us written and oral evidence for sharing their knowledge and expertise with us and for their openness and frankness in expressing their views to us.

This report will form part of our final report which will be published in the spring of 2009. We have also published an introductory document which is designed to be read as an introduction to any of the topic reports that we produce on carbon reduction in Wales and contains our terms of reference and the policy background to carbon reduction. The introduction document can be found on our website at:

http://www.assemblywales.org/bus-home/bus-committees/bus-committees-third-assem/bus-committees-third-sc-home/inquiries/inquiries_-_carbon_reduction_household.htm

We welcome your thoughts and comments on this report, which can be sent to us at: Sustainability.comm@Wales.gsi.gov.uk or write to us at:

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We would like to publish some of your ideas and views on our website so that other people can read them.

You can also find out more about how to contribute to our written consultations on future topics on our website at:
<http://www.assemblywales.org/bus-home/bus-committees/bus-committees-third-assem/bus-committees-third-sc-home.htm>

Chapter 1 - Introduction

The contribution of industry to carbon emissions has shown a consistently decreasing trend across the UK, with a reduction of 15 million tonnes of CO₂ in the 15 years since 1990, while the commercial and public sector contribution has decreased by 5 million tonnes over the same period¹ (see Table 1). These figures are not available on a Wales-only basis.

Table 1 UK industrial and public sector carbon dioxide emissions (million tonnes of carbon dioxide)

	1990	1995	2000	2005
Non-energy industry	114	107	109	99
Commercial and public sector	51	52	48	46
Total	165	159	157	145

The public sector in the UK is responsible for 8 % of carbon dioxide emissions². 25 % of the public sector's total carbon footprint is accounted for by activities in buildings³; 56 % of the energy consumed by commercial and public buildings is used for heating, and 15 % for lighting⁴.

All new buildings funded or built on land disposed of by the Welsh Assembly Government must now meet the Ecohomes Excellent environmental standard⁵.

In July 2007, the European Commission unveiled its mid-term review of industrial policy in response to globalisation and climate change⁶, which notes that the basic principles of a sustainable industrial policy will be followed up by an Action Plan in early 2008. A policy document due to have been released in autumn 2007 "will address policies to support energy intensive industries reducing their environmental impact whilst staying competitive"⁷.

¹ DEFRA, *UK emissions of greenhouse gases*,
<http://www.defra.gov.uk/environment/statistics/globalatmos/gagccukem.htm#gatb3>

² DEFRA, *UK energy efficiency action plan 2007*,
http://ec.europa.eu/energy/demand/legislation/doc/neeap/uk_en.pdf

³ *ibid*

⁴ Pout C et al, 2002. *Carbon dioxide emissions from non-domestic buildings: 2000 and beyond*. BRE: Watford, England.

⁵ DEFRA, *UK energy efficiency action plan 2007*,
http://ec.europa.eu/energy/demand/legislation/doc/neeap/uk_en.pdf

⁶ European Commission, *Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions: Mid-term review of industrial policy – a contribution to the EU's growth and jobs strategy*,
http://ec.europa.eu/enterprise/enterprise_policy/industry/doc/mtr_in_pol_en.pdf

⁷ European Commission, *EU renews industrial policy for strong manufacturing base in response to globalisation and climate change*,

The biggest driver for reducing the carbon emissions from industry and public bodies is cost, because energy use (the biggest source of emissions) is expensive. However, public opinion and social corporate responsibility are of increasing influence, and many organisations, particularly businesses, are using environmental strategies to derive competitive advantage.

There are limited opportunities for devolved legislation in the industrial sector. Currently, the Welsh Assembly Government has responsibility for policy under the following areas:

- Economic regeneration and development, including social development of communities, reclamation of derelict land and improvement of the environment.
- Promotion of business and competitiveness.

The National Assembly for Wales may seek legislative powers under these matters. However, even following a successful referendum under the *Government of Wales Act 2006*, there is an extensive list of exceptions for which legislative competence could not be gained. These exceptions are listed in Annex A.

Devolved responsibilities are wider for public bodies. In particular, the Welsh Assembly Government has policy responsibility for the powers, duties and financing of local authorities, and for the organisation and funding of the National Health Service.

The Situation in Wales

One of the factors influencing Wales' high per capita emissions is the presence of energy-intensive industry. Port Talbot Steelworks, for example, accounts for approximately 16 % of all carbon emissions in Wales⁸. Improving the carbon efficiency of the biggest emitters has a large impact on Wales' emissions. The largest carbon dioxide emitters in Wales are captured under the **EU Emissions Trading Scheme** (EUETS), and have carbon reduction targets appertaining to that scheme. A total of 61 installations in Wales are members of the EUETS, representing about 56 % of total emissions from Wales, however, only 39 Scheme members emitted carbon dioxide in 2006. Emissions in 2006 were 3 million tonnes in excess of the

<http://europa.eu/rapid/pressReleasesAction.do?reference=IP/07/1007&format=HTML&aged=0&language=EN&guiLanguage=en>

⁸ Calculated from EUETS submissions

allowance⁹, although the scheme is estimated to have saved 1.3 million tonnes of carbon dioxide per year for each of the three years of the current scheme. The details of the 39 EUETS emitters are shown in Table 2.

Table 2 Welsh emitters captured under the EUETS, with their emissions in 2005 and 2006

Installation Name	Installation Type ¹⁰	CO2 Emissions (tonnes)	
		2005	2006
Aberthaw Power Station	Electricity generation	5,264,973	7,340,340
Port Talbot Steelworks	Industry	6,132,851	6,589,194
Connahs Quay Power Station	Electricity generation	3,434,321	3,158,476
Chevron Limited - Pembroke	Industry	2,320,641	2,251,765
Total Milford Haven Refinery	Industry	1,038,345	1,234,371
Baglan Bay Power Station	Electricity generation	1,104,318	1,142,501
Uskmouth Power Plant	Electricity generation	993,930	866,925
Deeside Power Station	Electricity generation	978,825	640,379
Padeswood Works	Industry	300,016	623,006
Shotton Combined Heat and Power Station	Industry	542,497	485,252
Barry Power Station	Electricity generation	321,303	237,008
Kronospan Ltd	Industry	82,971	104,287
Celsa Manufacturing (UK) Limited	Industry	56,197	63,051
Point of Ayr Terminal	Industry	57,581	54,992
UPM-Kymmene (UK) Ltd	Industry	51,947	46,010
Airbus UK Ltd	Industry	34,189	35,154
Corus Packaging Plus UK	Industry	39,745	35,111
Pont-y-Felin Insulation	Industry	33,189	31,539
Solutia UK Limited - Newport	Industry	26,765	28,377
Warwick International Ltd - Mostyn	Industry	26,440	23,241
Corus UK Ltd	Industry	22,049	21,625
Alphasteel Limited	Industry	20,978	20,889
Novera Energy Mines Gas Generation Plant	Industry	18,828	15,160
Bridgend Boiler House (Ford)	Industry	12,620	12,040
University Hospital of Wales	Public	9,664	9,548
Visteon Swansea - Boiler House	Industry	8,014	8,074
RF Brookes - Rogerstone Park	Industry	7,319	7,912
District Energy Ltd	Industry	5,697	6,183
Solutia Generating Plant - District Energy Ltd	Industry	5,666	5,597
Corus Colors	Industry	7,189	5,459
Morrison Hospital	Public	5,641	5,386
RAF St Athan	Public	7,542	5,367
Dennis Ruabon Tiles Ltd	Industry	3,320	3,002
Bro Morgannwg NHS Trust - PoW Hospital	Public	2,945	2,889
South Cornelly Power Station	Electricity generation	2,262	2,790

⁹ Environment Agency Wales, *Response to an information request*.

¹⁰ Type assessed by MRS

Celsa Manufacturing (UK) Ltd - New Melt Shop ¹¹	Industry		2,775
Dynevor Arms LNG Storage Facility	Industry	2,552	2,512
Magnox Electric Ltd - Wylfa	Electricity generation	909	640
Cardiff IDC	Industry	57	264
Total		22,984,297	25,129,091

The total carbon dioxide emissions by sector for Welsh installations captured by the EUETS are:

Electricity generation	– 13,389,059 tonnes
Industry	– 11,716,842 tonnes
Public	– 23,190 tonnes

For the EUETS establishments, more than half of the industrial output of carbon dioxide is accounted for by Port Talbot Steelworks, and more than half of the output of carbon dioxide from electricity generation is accounted for by Aberthaw power station. Together, these two installations account for approximately 33 % of Welsh emissions.

It is worth noting that although most public bodies fall below the EUETS limits, local authorities and health trusts are large emitters relative to domestic consumers: the public sector in the UK is responsible for 8 % of carbon dioxide emissions¹².

The Carbon Reduction Commitment (CRC) is a scheme proposed in the 2007 Energy White Paper¹³. It is intended to deliver carbon savings of 1.2MtC¹⁴ per year by 2020 from large commercial and public sector organisations (such as supermarkets, hotel chains, and government departments), focusing on organisations for which energy efficiency benefits would outweigh administrative costs. The UK Government launched a 15-week consultation on its proposals in June 2007. The response to the consultation, and the analysis of responses, is due in early 2008¹⁵. The main features of the CRC are:

¹¹ Joined Scheme in 2006 as a 'New Entrant'

¹² DEFRA, *UK energy efficiency action plan 2007*, http://ec.europa.eu/energy/demand/legislation/doc/neeap/uk_en.pdf

¹³ DTI, *Meeting the energy challenge: A White Paper on energy*, May 2007, <http://www.dti.gov.uk/files/file39387.pdf>

¹⁴ MtC = Megatonnes of carbon equivalent = 1,000,000 tonnes of carbon equivalent. 1 tonne of carbon equivalent equates to 3.66 tonnes of carbon dioxide

¹⁵ DEFRA, *Action in the UK: Carbon Reduction Commitment*, <http://www.defra.gov.uk/Environment/climatechange/uk/business/crc/index.htm>

- A reliance on self-certification of emissions, backed up by third-party verification
- Allowances issued via auction, following an introductory phase of fixed price allowances
- Auction revenue will be recycled to participants by means of an annual payment proportional to the average annual emissions since the scheme's inception, with a bonus/penalty according to the organisation's position in a CRC league table.

Improving Carbon Efficiency

One of the most important precepts in reducing carbon emissions is that reduction of energy demand is the first step in the carbon efficiency hierarchy. This is because the energy losses that happen as a result of the production, generation and transmission of energy mean that for every unit of energy not used by the consumer, as much as two to three units of energy are saved at the production stage¹⁶. Despite its crucial role in reducing carbon emissions, reducing energy demand tends to receive less attention than some of the alternatives:

“You can easily imagine people wanting to show off their micro-wind turbines to their friends and neighbours... but it's a lot harder to conceive of anyone wanting to show off their cavity wall or loft insulation”¹⁷.

Many of the demand reduction means for industry and public bodies are the same as those in other sectors, and are either related to physical modifications (draught-proofing, insulation, energy-efficient light bulbs etc), or behavioural change (switching appliances off when not in use, wearing slightly warmer clothing instead of using more fossil fuel heating etc).

The main currently used means of reducing the carbon emissions from industry and public bodies are the following:

- **Improving the environmental efficiency of working** – through the promotion of tele- and video-conferencing and more flexible working patterns, and by encouraging home-working.

¹⁶ Kevin Anderson, Research Director: Tyndall Centre for Climate Change Research, *Drinking in the last chance saloon: The challenge of climate change and 'sustainable' energy*, http://www.naseg.co.uk/presentations/Nov2007/TCCCRKA_Nov_2007.ppt

¹⁷ Professor Paul Ekins, Head of Environment Group, Policy Studies Institute, *A hundred thousand points of light: The local energy revolution*. In: Green Futures Special Supplement in association with the Ashden Awards for Sustainable Energy and Defra. http://www.ashdentrust.org.uk/PDFs/green_futures.pdf

- Encouraging the **implementation of Environmental Management Systems** – such systems are usually based on continuous environmental improvement, and can lead to substantial carbon and cost savings. Green Dragon is a Wales-based scheme that is supported by the Welsh Assembly Government, Environment Agency Wales, and Welsh local authorities. A total of 769 organisations in Wales are currently certified¹⁸. The Welsh Assembly Government has a role in encouraging the uptake of energy efficiency and carbon reduction schemes.

- Changing the **energy source** for space and water heating to more carbon-efficient sources. This can be achieved by:
 - Changing to the use of **combined heat and power**, which local authorities such as Woking have taken great strides to develop. Under the Climate Change Act 2008, Welsh Ministers are required to produce a climate change measures report, which local authorities will have a duty to 'have regard to'. Such a report may be a means of encouraging the development of combined heat and power by Welsh local authorities.
 - Improving the penetration of the **gas network** throughout Wales. Gas is a more carbon-efficient way to heat space and water than solid fuel or electricity. Since the gas network is maintained by private companies, a business case may need to be established for further extension of the network.
 - Improving the supply infrastructure and increasing consumption of **biomass for heating**. The Welsh Assembly Government has a role through marketing and grant aid for biomass, and one of the means it currently uses to achieve this is through Woodfuel Wales (www.woodfuelwales.org.uk).

- Increasing the use of **renewable energy** in new developments. The minimum level (currently nil throughout Wales) is determined by:
 - The UK Government under Building Regulations for new build and refurbishment. Negotiations are under way to devolve Building Regulations to Wales.
 - Welsh Ministers under planning policy.
 - Local authorities through local development plans. Local authorities can stipulate a minimum level of renewable energy to

¹⁸ As of 27 November 2008

be provided in all new developments (subject to certain conditions), as the London Borough of Merton has done.

The UK Government also operates the Low Carbon Buildings Programme that arranges grants for the installation of renewable energy. The streams for businesses and SMEs have now closed. The stream for the public sector is still available for funding of up to £1 million per organisation¹⁹.

- The public sector (in particular the Welsh Assembly Government and local authorities) has a role in stimulating the market for environmentally beneficial products through its **procurement** activities.

¹⁹ DBERR, *Low carbon buildings programme Phase 2*, <http://www.lowcarbonbuildingsphase2.org.uk/>

Chapter 2 – Key issues and recommendations

“We will aim to achieve annual carbon reduction-equivalent emissions reductions of 3 % per year by 2011 in areas of devolved competence. We will set out specific sectoral targets in relation to residential, public and transport areas.”

One Wales - A progressive agenda for the government of Wales – Labour and Plaid Cymru Groups in the National Assembly – June 2007.

2.1 We are very pleased to see this commitment to carbon reduction in the One Wales document and fully support the coalition government in their efforts to achieve it.

2.2 We are concerned, however, about the ability of the private sector to deliver a meaningful contribution to the target and about the role that the public sector will be expected to play in helping the targets to be achieved.

2.3 In this chapter, we outline eight ‘headline’ recommendations and illustrate the impact we think they could make on achieving the 3 % target in Wales. Unlike previous reports, we have not assigned an actual carbon saving figure to each of the recommendations because we consider that, without these recommendations, there is serious doubt about whether the 3 % savings could realistically be achieved. Our headline recommendations are, therefore, of a fundamental and strategic nature.

The industry and the private sector

2.4 Carbon emissions from the private sector is an area that the Welsh Assembly Government does not have a great deal of direct influence over. The largest producers of CO₂ emissions in Wales are covered by stringent air quality and EU regulated emissions targets, whilst some smaller businesses will fall under the proposed Carbon Reduction Commitment. There are, however, businesses of various sizes, which could lower their carbon emissions but do not fall under any regulation.

2.5 We were concerned to hear from the Deputy First Minister and Minister for the Economy and Transport that, although the Welsh Assembly Government was planning to set carbon emissions targets for the private sector as part of the One Wales targets, there will be no regulations put in place to achieve those targets.

2.6 We consider that the current approach of voluntary action and ‘encouragement’ by the Welsh Assembly Government has not worked. Carbon reductions achieved by industry in Wales have been largely driven by the wish of private companies, often with their head offices outside Wales, to reduce their carbon emissions and comply with EU or UK legislation. We consider that it will be virtually impossible for industry within Wales to reduce its carbon emissions to a sufficient level without some form of regulatory mechanism being in place. We therefore recommend:

Headline Recommendation 1: The Welsh Assembly Government sets targets for carbon reduction in the industrial and business sector in Wales as part of its implementation of the One Wales carbon reduction commitment. Following a five year period of voluntary action by the industrial and business sector in Wales to meet the targets imposed on them, the Welsh Assembly Government implements regulations that require the targets to be met.

We estimate that, if the current downward trend is followed until 2011 and a 3 % target is achieved by voluntary agreement and then regulation, a carbon saving, (over and above the current downward trend) of 2,650,000 tonnes is achievable; 80 % of the reduction accruing in the business sector and 20 % in the industrial sector²⁰.

2.7 We received evidence from many contributors that Wales has a great potential to be a leader in the development and manufacture of carbon reduction technology.

2.8 We welcome the Minister's intention to launch a Strategy for Green Jobs in November 2008. We consider, however, that the strategy needs to be based on an evaluation of the potential for green jobs in Wales. We therefore recommend:

Headline Recommendation 2: The Welsh Assembly Government should carry out an assessment of the employment opportunities that could be created in Wales through reducing carbon emissions, which should include an evaluation of the skills needed within the workforce. The assessment and evaluation should inform the Welsh Assembly Government's Green Jobs Strategy.

2.9 We are concerned that the Welsh Assembly Government's strategic framework for economic development – Wales a Vibrant Economy (WAVE) – fails to take into account any climate change or sustainability issues and focuses almost entirely on a 'business as usual' model for the Welsh economy. We therefore recommend:

Headline Recommendation 3: The Welsh Assembly Government to revise/replace current economic strategies to give carbon reduction a high profile and be explicit about how it can act as one of the key principles to sustainable economic growth.

2.10 The up front costs of implementing carbon reduction measures can be high, especially for those companies who have no requirement to reduce their carbon emissions through compulsory trading schemes. We received calls from many of our witnesses for some form of incentivisation for small and medium sized enterprises (SMEs) in particular to introduce carbon reduction schemes. We therefore recommend:

²⁰ Many of the large carbon emitting industrial processes will be covered by the EUETS and CCR so are not included in the Welsh Government's sphere of devolved competence.

Headline Recommendation 4: The Welsh Assembly Government to introduce a sliding scale rebate on Business Rates to businesses not covered by any carbon trading scheme who achieve agreed levels of carbon reduction or agreed levels of accreditation in schemes such as The Green Dragon Environmental Standard.

We estimate that, if 20% of businesses exceed the 3% target by 1%, 15% exceed it by 2% and 10% exceed it by 3%, the annual savings, over and above those achieved by HR1 could be approximately 52,000 tonnes.

The public sector

2.11 The public sector in Wales is an area in which the Welsh Assembly Government is able to exert a great deal of influence and therefore one in which it will be able to ensure that carbon reduction targets are met.

2.12 We were surprised that evidence from several public bodies considered that they would be able to achieve more than the proposed 3% year on year reduction in their carbon emissions.

2.13 We consider that a higher target for public bodies would offset those sectors where the achievement of the 3% target would prove more challenging and show strong leadership to both the private and public sector on carbon reduction. We therefore recommend:

Headline Recommendation 5: The Welsh Assembly Government sets targets for carbon reduction across the whole of the Public Sector in Wales as part of its implementation of the One Wales carbon reduction commitment. The Welsh Assembly Government should consider setting those targets in excess of 3% for the public sector in Wales.

We have found it difficult to estimate accurately the potential savings from the public sector due to the fluctuating pattern in emissions over the past 5 years (for more detail see the calculations at Annex D). Based on a saving of 4% and 5% on the 2007-2008 figures, we estimate that annual savings of 256,000 tonnes and 307,000 tonnes respectively could be achieved²¹.

Headline Recommendation 6 : The Welsh Assembly Government should work closely with the WLGA and other public sector bodies to produce guidelines for local authorities and public bodies on the baselining, collection and reporting of carbon reduction information to ensure a consistent and understandable approach.

2.14 The issues associated with the start up costs of many carbon reduction schemes were again highlighted in much of the evidence. Public bodies are

²¹ Public Bodies emit very little direct carbon. These calculations are based on their energy consumption and refer to savings that would accrue from the reduced energy generation needed. The figures also include transport emissions from public bodies' fleets. These figures are also included in the carbon reduction figures in the transport report.

currently having to rely heavily on their existing capital budgets to fund any carbon reduction measures. There was general acceptance that the savings achieved by the schemes would offset much of the initial cost but that these savings could be realised over an extended period after the initial installation costs had been incurred.

2.15 We believe that, in order for public bodies to fulfil their leadership role on carbon reduction and achieve a higher level of reduction than other sectors, some form of financial assistance is required to offset initial set up costs for carbon reduction schemes. We therefore recommend:

Headline Recommendation 7: The Welsh Assembly Government should consider making money available to appropriate public bodies to ‘kick start’ capital programmes for achieving carbon reduction. The Welsh Assembly Government should agree a programme of offsetting the capital funding through subsequent savings in energy bills (having regard to substantial changes in fuel prices) at the time of providing the funding.

We estimate that, if the same level of take up of the scheme was achieved as that of a similar scheme in Scotland, the annual savings, over and above those achieved by HR5 could be around 2,600 tonnes..

2.16 An emerging theme throughout our inquiry into carbon reduction in Wales has been that of the need for a coherent and consistent approach to carbon reduction across all departments of central and local government.

2.17 We received evidence that this is not happening in many local authorities and that often the development of policies and programmes does not take carbon reduction issues into account. We therefore recommend:

Headline Recommendation 8: The Welsh Assembly Government reviews and amends where necessary all the targets set for public bodies in Wales to ensure that they are consistent with carbon reduction targets.

Chapter 3 - Carbon reduction by industry

3.1 Wales has the 12th highest carbon emissions per capita in the world. Much of the carbon produced by industry in Wales comes from the power generation industry which will be discussed in our next report.

3.2 There are, however, many large industrial emitters (see Table 1 for details). Whilst the largest industrial emitters are covered by the European Union Emissions Trading Scheme (EUETS) which regulates the amount of carbon they can emit, there are many other businesses in Wales who are not covered by the scheme and it is these that we will concentrate on in this section of the report.

3.3 We were concerned that at our meeting on 18 June this year, the Deputy First Minister and Minister for Economy and Transport seemed unsure about whether or not industry (except heavy industry) and business would be included under the areas considered to have devolved competence in Wales. We welcome the confirmation from the Minister for Environment, Sustainability and Housing on 1 July that business (excluding industries covered by the EU Emissions Trading Scheme) will be included in as a sector in the One Wales carbon reduction commitment.

3.4 We are very concerned, however, that the Green Jobs Strategy consultation which was published in November 2008 contained no reference to the 3% target reduction in the main body of the text and that the only reference to it in one of the annexes stated that:

“The targets set by Government, particularly the Welsh Assembly Government’s 3% year on year target for carbon reduction, will have an indirect impact on business through our procurement processes – acting as a stimulus to business to improve their own energy efficiency, to realise the competitiveness benefits that will result, and to seize the new “Green Jobs” opportunities. Assisting companies to deliver Green Jobs, as well as incorporating the concept of Green Jobs into our own organisation will contribute to the wider vision we have for Wales.”²²

3.5 We strongly urge the Welsh Assembly Government to reconsider this reference to an indirect impact on businesses and to implement our first headline recommendation.

Business competitiveness in Wales

3.6 The CBI emphasised that economic competitiveness must underpin climate change policy and expressed concern that, if companies in Wales were to be asked to go further in cutting their carbon emissions than companies based in other domestic or international areas, their ability to compete with them would be compromised.

²² Green Jobs for Wales - A Consultation – Welsh Assembly Government, November 2008

3.7 This was not identified as an issue, however, by some of our other contributors. UPM Kymene considered the work they had undertaken to reduce their carbon emissions had considerable benefits to their business in terms of cost reduction and readiness for compliance with targets and regulations which would also apply to their competitors in the future.

3.8 The Carbon Trust and the Royal Society of Chartered Surveyors (RICS) also supported this view, seeing the challenge of carbon reduction as an opportunity rather than a threat to business competitiveness.

3.9 We agree that the importance of the ability of businesses in Wales to compete in both domestic and international markets cannot be overstated. In the current economic climate, the competitiveness of Welsh business is even more important.

3.10 We disagree, however, that businesses in Wales would be disadvantaged by the setting of targets which do not currently apply in other countries.

3.11 Our headline recommendation 1 calls for the setting of targets and for regulations to ensure those targets are met. We consider that businesses in Wales, with the appropriate support (see headline recommendation 4) will be able to make a valuable contribution to carbon reduction. Equally importantly, we believe that they could have a considerable competitive advantage by being 'ahead of the game' when, inevitably, more stringent targets and regulations are introduced at UK, European and International levels.

3.12 Many organisations giving evidence to this inquiry and to other sections of our carbon reduction inquiry have emphasised the potential for Wales to be a leader in the field of carbon reduction technology. The demand for the research and development of new and existing technologies, some of which already exist in Wales, will increase in the near future. Witnesses considered that Wales must be in a position to capitalise on the potential employment opportunities offered by this increase. In addition to our headline recommendation 3, we also recommend:

Recommendation 1: The Welsh Assembly Government should ensure that there is sufficient support, including financial incentives and advice available to enable the low carbon technologies developed by bodies such as the Low Carbon Research Institute in Wales to be manufactured in and marketed from Wales.

Recommendation 2: The Welsh Assembly Government should set targets for the percentage of low carbon technologies developed by bodies such as the Low Carbon Research Institute in Wales that go on to be manufactured in Wales and should use incentive schemes to enable those targets to be reached.

Recommendation 3: The Welsh Assembly Government should work in partnership with the Higher and Further education sectors, the sector

skills councils, professional development bodies and schools and colleges to ensure that appropriate training and skills are available to meet the needs of companies developing in the low carbon technology market as part of its Green Jobs Strategy.

3.13 Our only concern about the potential effect of increased targets for carbon reduction on the competitiveness of Welsh business is that of the penalisation of early adopters.

3.14 Both the CBI and UPM Shotton expressed concern that those companies who had already made large savings in their carbon emissions would be required to make even more (and more costly) savings whilst getting no recognition for the work they have already undertaken. We therefore recommend:

Recommendation 4: That any Welsh Assembly Government targets for carbon reduction in industry should not penalise early adopters either by setting unrealistic targets that they cannot achieve because of the savings they have already made or by offering incentives for carbon reduction which they will not be able to access.

Consumer demand

3.15 There were conflicting views expressed in the evidence on the role of consumers in driving carbon reduction in the commercial sector.

Trading schemes

3.16 There appeared to be a general acceptance of the statutory trading schemes such as the European Union Emissions Trading Scheme (EUETS) and the proposed Carbon Reduction Commitment.

3.17 The Environment Agency, however, criticised the EUETS as it only applies at a member state level and therefore only means a requirement for a 1% reduction by large industries in Wales. They recommended that the third phase of the EUETS needs to include benchmarking by type of industry and measurement against that benchmark to encourage all industry to reduce its emissions.

3.18 They suggested that the most effective way to achieve the reductions in carbon necessary through the EUETS was to tie targets for individual countries and sectors into the targets set by the EU, namely a 28% – 32% reduction in carbon emissions by 2020.

3.19 We agree that greater emissions reduction targets should be imposed on those companies covered by the EUETS in Wales. We therefore recommend:

Recommendation 5: The Welsh Assembly Government should urge the UK Government to support the proposed amendments to Phase 3 of the EUETS to link state and sectoral targets to overall EU emissions targets.

3.20 The Climate Change Act 2008, introduces a Carbon Reduction Commitment (CRC). This is due to come into force in 2010 and will require many large companies in Wales to cap their carbon emissions to an agreed annual limit. Those exceeding the limit will have financial penalties imposed on them.

3.21 We have, as yet, been unable to get evidence of how many companies will potentially be affected by the CRC in Wales.

3.22 The Climate Change Act 2008 also introduces the powers for Welsh Ministers to introduce a carbon trading scheme in Wales. We consider that this would be very beneficial in helping to meet the Welsh Assembly Government's carbon reduction targets. We therefore recommend:

Recommendation 6: The Welsh Assembly Government should commission research in order to produce an evidence base for the establishment of an emission trading scheme in Wales by the end of 2009 through the powers given to it in Section 47 of the Climate Change Act 2008 with a view to using the scheme to contribute towards achieving national, UK and EU targets.

Recommendation 7: The Welsh Assembly Government should use the powers given to it in Schedule 4 of the Climate Change Act 2008 to require all businesses that are not covered by any national trading scheme to produce a carbon appraisal to establish a baseline for their trading agreement. The carbon appraisals should be carried out by the Carbon Trust.

Knowledge and information

3.23 A theme that has recurred throughout our inquiry into Carbon Reduction in Wales is that of the need for clear, concise, consistent and accessible information available from a single source. This section of the inquiry has been no different in the evidence we have received.

3.24 Marks and Spencer and PennPharm emphasised the need for businesses to know and understand their carbon footprint before they could start to reduce their emissions.

3.25 PennPharm pointed to the work that they had done with small and medium enterprises (SMEs), highlighting that the fact that many of them are not aware of carbon reduction issues and therefore do not know that they need information and help.

“However, I sometimes feel that I am filling in gaps that do not exist, or gaps that people are not aware exist, in terms of education and on guidance on where to start. My experience is that some businesses do not know what they do not know and there is no route-map to take them from A to B and C to D”

3.26 There was also criticism of the role of the Energy Saving and Carbon Trusts in providing advice to larger companies. UPM Shotton considered that they work “on the margins of carbon reduction” and only offer small scale solutions. They said that they got most of their help and advice on carbon reduction directly from the UK government or the EU.

3.27 The Centre for Business Relationships, Accountability, Sustainability and Society (BRASS) at Cardiff University identified environmental legislation as being a barrier to carbon reduction. They regarded it as very complicated and sometimes over burdensome and considered that companies often have trouble in keeping up to date with it.

3.28 We are very concerned that, yet again we have received strong evidence that the existing structures for providing help and advice on carbon reduction are inadequate. Whilst we acknowledge the work of the Energy Saving and Carbon Trusts in this area, we feel that they are limited by their remit and funding and are not taking a pro-active role in encouraging carbon emission reduction. We therefore, once again recommend:

Recommendation 8: The Welsh Assembly Government should establish a One Stop Shop for information and advice on carbon reduction. The one stop shop should take a pro active role in raising awareness of carbon reduction issues and giving help and advice to all business sectors.

3.29 We also received evidence from several organisations about the lack of clarity of the roles of the EU, UK Government and Welsh Assembly Government in setting targets and administering schemes. This was particularly emphasised by UPM Shotton whose parent company was not based in the UK.

3.30 We consider that, if Wales is to achieve national and international carbon reduction targets, the roles of each layer of government in setting and ensuring the achievement of those targets should be made explicit. We therefore recommend:

Recommendation 9: There should be clear and accurate information made available to business through the Carbon Trust (until the establishment of the body recommended in recommendation 8) on the differing roles undertaken and funding opportunities provided by the Welsh Assembly Government, UK Government and the EU

3.31 There was an agreement amongst all witnesses that there needs to be a sharing of good practice amongst organisations and companies in Wales. Several of them pointed to the Welsh Assembly Government as having a key role in facilitating this.

3.32 There was also concern expressed about the lack of clear, standardised benchmarking and information and reporting required by various statutory and voluntary schemes. The CBI Confederation of British Industry (CBI)

highlighted the problems encountered by many organisations in knowing how to compare the data and which standards are the correct ones to be measuring and comparing. They also highlighted the problems of data capture. Many of the schemes require the same data to be captured and reported in different ways, increasing costs and often resulting in incorrect data being submitted.

3.33 We are concerned about the lack of standardisation in the requirements for the benchmarking and reporting of data. This is an issue that will also be raised later in this report when we comment on public bodies in Wales. We therefore recommend:

Recommendation 10: The Welsh Assembly Government should work with the UK Government and other agencies to ensure that any Wales and UK wide requirements for measuring, benchmarking and reporting systems for carbon reduction should require data recording and reporting to be undertaken in the same way.

Leadership and support

3.34 Another recurring theme of our inquiries has been the call for the Welsh Assembly Government to show strong leadership in carbon reduction.

3.35 Many witnesses called for the Welsh Assembly Government to provide a lead by indicating where it wants business to go in terms of carbon reduction. There was particular concern expressed about the One Wales commitment. Several witnesses stressed that they were unsure of what it meant for the business sector in Wales and called for clarification as soon as possible.

3.36 The CBI emphasised the need for business to have a clear vision of what the Welsh Assembly Government wanted it to do so that it could plan for the future. Most companies have business plans for many years into the future and any changes to those plans need to be identified as soon as possible. Uncertainty in the business sector affected investment and growth and could, ultimately, affect competitiveness.

3.37 In common with witnesses in other parts of our carbon reduction inquiry, several contributors identified the planning system as a barrier to companies achieving carbon reduction. They cited the length of time taken to reach planning decisions and the bureaucracy and red tape involved in making a planning application as major challenges.

3.38 BRASS considered that the Welsh Assembly Government should review the planning system to seek to make best use of it to achieve its carbon reduction policies.

3.39 We will be revisiting the planning system and its impact on carbon reduction policies in the light of evidence we have received throughout the carbon reduction inquiry in a later part of the inquiry.

3.40 We agree that businesses need firm guidance from the Welsh Assembly Government to help them plan their future investment and business strategies. In addition to Headline Recommendation 3 we therefore recommend:

Recommendation 11: The Welsh Assembly Government to review other policies which impact on economic development and carbon reduction (e.g. planning policies) with a view to aligning them to the revised economic policies.

Behavioural change

3.41 All the evidence we received acknowledged the need for behavioural change from staff, customers and suppliers.

3.42 We received evidence of good practice from British Telecom. They have introduced innovative policies towards the ways in which their staff work, 'agile working' e.g. encouraging home and remote working, flexible hours and hot desking. These policies have resulted not only in increased retention of staff but also an estimated £500 million saving in estate costs (including heat and power). An independent assessment estimated that home working staff alone cut carbon emissions by 3,600 tonnes a year.

3.43 BT has also influenced the carbon emissions of their suppliers by requiring them to reduce their emissions to retain their business and have actively engaged with their customers to identify reduced carbon solutions to their needs.

3.44 BRASS believed that, in order for companies to create behavioural change amongst their customers and employees, they must be convinced of the urgency, relevance and importance of the issue. They must also be able to see benefits to their business from tackling their carbon emissions.

3.45 Marks and Spencer and UPM Shotton both highlighted good practice in engaging employees. Marks and Spencer have climate change champions within each store and UPM Shotton use an employee suggestion scheme (with rewards) for employees to suggest ways in which the company could further reduce its carbon emissions.

3.46 The examples of good practice we have received show how far companies are able to go in influencing behavioural change. We believe, however, that for the majority of companies in Wales, they will not be able to achieve such changes without clear, consistent, accessible and relevant help and advice. We therefore think that recommendation 8 is essential to help companies to achieve behaviour change.

3.47 We also believe that companies can greatly influence the behaviour of their suppliers through the procurement process. We therefore recommend:

Recommendation 12: The Welsh Assembly Government should ensure that good practice in procurement is shared through the Value Wales initiative and should encourage small, medium and large scale businesses to interact and share ideas.

Chapter 4 – Carbon reduction by public bodies

4.1 The public sector forms the largest employer and owner of property in Wales. As such, and with its day to day contacts with individuals and organisations across the country, it has the potential to take a leading role in achieving carbon reduction targets in Wales.

4.2 We were disappointed at the lack of response to the consultation exercise from local authorities and other public bodies. Four local authorities and four other public bodies (two NHS Trusts, one police force and the National Public Health Service for Wales) submitted evidence to the written consultation. We found it very hard, on this evidence, to identify not only the issues encountered by public bodies, but also examples of good practice.

Leadership

4.3 As with the private companies we took evidence from in this inquiry, there were calls from the public sector for more leadership from the Welsh Assembly Government on carbon reduction issues and more 'joining up' of policies being made in Wales.

4.4 Whilst there was a general recognition of the potential for public bodies to be seen as leaders in carbon reduction, several public bodies called for more guidance and help from the Welsh Assembly Government on how to achieve the carbon reduction targets they have been and will be set.

4.5 The Local Government Information Unit (LGIU) also emphasised the leadership role of local authorities. They can not only act as exemplars but also bring together different organisations to develop and share good practice. They stated, however, that, with the exception of Cardiff Council and a few isolated local examples, local authorities in Wales are not demonstrating the necessary leadership to tackle carbon emissions effectively.

4.6 There was also concern expressed about the way in which Welsh Assembly Government policies could be seen to be contradictory.

4.7 The Welsh Health Estates considered that there is a tension between Welsh Assembly Government health policy demand and carbon reduction. They see a constant battle to reduce carbon whilst coping with increased demand due to reductions in waiting times, out of hours and weekend working, increased diagnostic tests and more high tech equipment. They consider that the new model of decentralising health services will undoubtedly result in increased carbon emissions.

4.8 The LGIU and Cardiff Council identified the lack of co-ordination within local authorities on carbon reduction issues.

4.9 The LGIU considered that the local authority economic development function is not reflecting the need to address carbon reduction. They called for leadership from the Welsh Assembly Government in identifying how carbon

reduction can be mainstreamed into economic development policy at a local level.

4.10 The importance of engagement with the carbon reduction agenda at a high level within public bodies was also emphasised.

4.11 Cardiff Council considered that their success in carbon reduction can be attributed to the fact that the Chief Executive and Members have signed up to the carbon reduction strategy and form a sustainable development panel. Various scrutiny committees are also scrutinising the council's performance on carbon reduction.

4.12 The LGIU identified that there are enthusiastic individuals in local authorities across Wales who are promoting the carbon reduction agenda but leaders and chief executives of many Welsh local authorities aren't recognising it as an agenda they need to address. They also called for stronger leadership from the WLGA on the carbon reduction agenda. They consider that the WLGA isn't engaging with the carbon reduction agenda at a high enough level.

4.13 The Tyndall Centre for Climate Change Research suggested that the public sector could take the lead by reducing their carbon emissions by 100%. Whilst we think that this would be too large a burden to impose on public bodies currently, it is something we would like to see them aspire to in the not too distant future.

4.14 We recognise the potential for public bodies in Wales to play a leading role in carbon reduction and this has been emphasised by our headline recommendation 5. We are concerned, however, at the apparent lack of leadership currently being displayed by many of them, by the WLGA and by the Welsh Assembly Government. We therefore recommend:

Recommendation 13: The Welsh Assembly Government work together with the WLGA to ensure that local authorities in Wales fulfil their role as key leaders in carbon reduction.

Recommendation 14: The Welsh Assembly Government should issue guidance to local authorities on the ways in which the targets in the Energy Efficiency Performance Indicator could be achieved.

Recommendation 15: The Welsh Assembly Government should consider rolling out the support currently given to all local authorities to develop energy strategies.

Knowledge and information

4.15 Several witnesses identified a lack of knowledge about carbon reduction issues and techniques and a lack of information about the level and source of carbon emissions within their own organisations as major barriers.

4.16 The City and County of Swansea considered that they do not have sufficient local and internal expertise, experience and knowledge and lacked the resources to find quality solutions to their carbon emissions.

4.17 Cardiff City Council expressed concern about the lack of benchmarking of carbon emission being carried out by local authorities in Wales. An exercise conducted by them had identified their main source of carbon emissions as being from schools whereas they had assumed it was from their vehicle fleet. They emphasised the need for benchmarking so that public bodies could target their carbon reduction strategy more accurately.

4.18 Several witnesses highlighted the difficulty in obtaining information about their carbon emissions as the information had not been kept historically. Rhondda Cynon Taff (RCT) emphasised the importance of having reliable, accurate and auditable data, common reporting mechanisms and a greater role for the Wales Audit Office in benchmarking and assessing carbon emissions.

4.19 We consider that information about and benchmarking of carbon emissions is essential for public bodies to be able to tackle their carbon emissions in a strategic and targeted manner and consider that our headline recommendation 6 is vitally important in helping to achieve this.

Resources

4.20 One of the issues that has been common to all the sections of our inquiry into carbon reduction in Wales has been that of the availability of resources to tackle carbon reduction.

4.21 All those who submitted evidence for this part of the inquiry highlighted the costs involved with implementing carbon reduction measures.

4.22 The Consortium of Local Authorities (CLAW) and Cardiff Council emphasised the cost savings that could be achieved by carbon reduction measures in the long term. CLAW estimated that it will cost an estimated £0.5 million to achieve savings of around £2.5 million through carbon reduction over 5 years.

4.23 They highlighted the problems associated with the initial outlay of capital funding for energy efficiency measures. Any work done on using renewables or other energy efficiency measures must be funded from the capital already available to local authorities and may be difficult to find. The payback time of renewable technologies could mean that public bodies are not seeing a return on their investment for several years in the future and may mean that they are not able to justify the initial outlay.

4.24 Several witnesses highlighted the need to emphasise cost savings as well as carbon reduction as a driver for emissions reduction projects. Cardiff Council considered that carbon reduction measures make sound financial sense for public bodies.

4.25 Much of the evidence called for funding for public bodies to offset the initial capital outlay for carbon reduction measures. Rhondda Cynon Taff County Borough Council went as far as to recommend that carbon emission reduction should be a key part of the criteria for allocating or awarding funding to public bodies.

4.26 We recognise all the competing demands made on capital funding for public bodies and acknowledge the difficulties in allocating funding to areas that may not be perceived as being 'front line'.

4.27 We consider, however, that realistic attempts to meet carbon reduction targets in Wales can only be made by 'pump priming' some of the initial capital costs for public bodies in Wales. The long term savings, both in terms of carbon emissions and in financial terms, make the short term injection of funding essential. We believe that headline recommendation 7 should be implemented to achieve the dual aims of carbon reduction and savings in energy costs.

Targets

4.28 Much of the activity of the public sector in Wales is subject to the requirement to achieve targets set both internally and externally by the Welsh Assembly Government. To date, carbon reduction targets have mainly taken the form of performance indicators for all or parts of the organisation. The CRC referred to in the previous chapter will affect some, if not all, of the local authorities in Wales and will require them to meet carbon targets across the whole of their estate.

4.29 All of our evidence acknowledged the continuing need for targets in the public sector and called for them to be clear and consistent with each other.

4.30 Several public bodies called for Welsh Assembly Government to set a greater carbon reduction target for public bodies than for other sectors in Wales. The National Public Health Service for Wales estimated that, to achieve an 80-90% reduction in carbon emissions by 2030, the NHS in England and Wales will need to reduce energy consumption by between 6% and 8% per year. RCT recommended that a more stringent annual carbon reduction target of 10% by 2011 should be set. They do not believe that the 3% target will be enough. When questioned, many of the witnesses said that they would consistently be able to achieve carbon reductions of above the 3% proposed by the Welsh Assembly Government.

4.31 We welcome this initiative from the public sector and urge the Welsh Assembly Government to seize the opportunity to implement our headline recommendation 5 and consider requiring a higher percentage reduction in emissions from public bodies in Wales than from other sectors.

4.32 The Welsh Health Estates were concerned about the carbon reduction targets that they had been set as they didn't reflect an increase in demand.

Targets for things other than carbon reduction such as reduced waiting times are leading to carbon emissions remaining stable even though energy efficiency measures have been taken to reduce them. They advocated energy labelling for each building so that their energy efficiency can be measured and monitored.

4.33 CLAW also identified a missed opportunity for targets for local authorities to encourage mainstreaming of carbon reduction in the fact that the new energy performance indicator for energy usage is not included in the Core Asset Suite of indicators.

4.34 We are concerned about the lack of 'joined up' target setting both by and for public bodies. We believe that it is vital to encourage as much ownership of the carbon reduction agenda by all areas of public bodies as possible. To this end, we urge the Welsh Assembly Government to implement our headline recommendation 8 to ensure consistency in target setting for public bodies. We also recommend:

Recommendation 16 : That the new performance indicator for energy usage be included in the Core Asset Management Suite of indicators to ensure the connections are made between managing the local government estate and reducing carbon emissions.

4.35 Concern was also expressed about the readiness of public bodies in Wales for the introduction of the CRC. The LGIU gave evidence that, of the 22 local authorities in Wales, only one, Cardiff Council, has joined the carbon trading scheme set up for local authorities to shadow the CRC. This was also reflected in the written evidence, as few of the local authorities who responded were aware of if they would be covered by the CRC or, if they were, how it would affect them.

4.36 We are concerned about the lack of apparent preparedness for the scheme which is due to come into force in 2009. As yet, we have not been able to access figures for the number of public bodies in Wales who will be covered by the scheme but wish to emphasise the need for all public bodies to be ready for it. We therefore recommend:

Recommendation 17: That the Welsh Assembly Government identifies at an early stage those local authorities and public bodies who will come under the Carbon Reduction Commitment and works with those organisations to ensure that they have sufficient expertise and resources to meet the requirements of the scheme.

Annex A: Summary of recommendations

Headline Recommendation 1: The Welsh Assembly Government sets targets for carbon reduction in the industrial and business sector in Wales as part of its implementation of the One Wales carbon reduction commitment. Following a five year period of voluntary action by the industrial and business sector in Wales to meet the targets imposed on them, the Welsh Assembly Government implements regulations that require the targets to be met.

Headline Recommendation 2: The Welsh Assembly Government should carry out an assessment of the employment opportunities that could be created in Wales through reducing carbon emissions, which should include an evaluation of the skills needed within the workforce. The assessment and evaluation should inform the Welsh Assembly Government's Green Jobs Strategy.

Headline Recommendation 3: The Welsh Assembly Government to revise/replace current economic strategies to give carbon reduction a high profile and be explicit about how it can act as one of the key principles to sustainable economic growth.

Headline Recommendation 4: The Welsh Assembly Government to introduce a sliding scale rebate on Business Rates to businesses not covered by any carbon trading scheme who achieve agreed levels of carbon reduction or agreed levels of accreditation in schemes such as The Green Dragon Environmental Standard.

Headline Recommendation 5: The Welsh Assembly Government sets targets for carbon reduction across the whole of the Public Sector in Wales as part of its implementation of the One Wales carbon reduction commitment. The Welsh Assembly Government should consider setting those targets in excess of 3% for the public sector in Wales.

Headline Recommendation 6 : The Welsh Assembly Government should work closely with the WLGA and other public sector bodies to produce guidelines for local authorities and public bodies on the baselining, collection and reporting of carbon reduction information to ensure a consistent and understandable approach.

Headline Recommendation 7: The Welsh Assembly Government should consider making money available to appropriate public bodies to 'kick start' capital programmes for achieving carbon reduction. The Welsh Assembly Government should agree a programme of offsetting the capital funding through subsequent savings in energy bills (having regard to substantial changes in fuel prices) at the time of providing the funding.

Headline Recommendation 8: The Welsh Assembly Government reviews and amends where necessary all the targets set for public bodies in Wales to ensure that they are consistent with carbon reduction targets.

Recommendation 1: The Welsh Assembly Government should ensure that there is sufficient support, including financial incentives and advice available to enable the low carbon technologies developed by bodies such as the Low Carbon Research Institute in Wales to be manufactured in and marketed from Wales.

Recommendation 2: The Welsh Assembly Government should set targets for the percentage of low carbon technologies developed by bodies such as the Low Carbon Research Institute in Wales that go on to be manufactured in Wales and should use incentive schemes to enable those targets to be reached.

Recommendation 3: The Welsh Assembly Government should work in partnership with the Higher and Further education sectors, the sector skills councils, professional development bodies and schools and colleges to ensure that appropriate training and skills are available to meet the needs of companies developing in the low carbon technology market as part of its Green Jobs Strategy.

Recommendation 4: That any Welsh Assembly Government targets for carbon reduction in industry should not penalise early adopters either by setting unrealistic targets that they cannot achieve because of the savings they have already made or by offering incentives for carbon reduction which they will not be able to access.

Recommendation 5: The Welsh Assembly Government should urge the UK Government to support the proposed amendments to Phase 3 of the EUETS to link state and sectoral targets to overall EU emissions targets.

Recommendation 6: The Welsh Assembly Government should commission research in order to produce an evidence base for the establishment of an emission trading scheme in Wales by the end of 2009 through the powers given to it in Section 47 of the Climate Change Act 2008 with a view to using the scheme to contribute towards achieving national, UK and EU targets.

Recommendation 7: The Welsh Assembly Government should use the powers given to it in Schedule 4 of the Climate Change Act 2008 to require all businesses that are not covered by any national trading scheme to produce a carbon appraisal to establish a baseline for their trading agreement. The carbon appraisals should be carried out by the Carbon Trust.

Recommendation 8: The Welsh Assembly Government should establish a One Stop Shop for information and advice on carbon reduction. The

one stop shop should take a pro active role in raising awareness of carbon reduction issues and giving help and advice to all business sectors.

Recommendation 9: There should be clear and accurate information made available to business through the Carbon Trust (until the establishment of the body recommended in recommendation 8) on the differing roles undertaken and funding opportunities provided by the Welsh Assembly Government, UK Government and the EU

Recommendation 10: The Welsh Assembly Government should work with the UK Government and other agencies to ensure that any Wales and UK wide requirements for measuring, benchmarking and reporting systems for carbon reduction should require data recording and reporting to be undertaken in the same way.

Recommendation 11: The Welsh Assembly Government to review other policies which impact on economic development and carbon reduction (e.g. planning policies) with a view to aligning them to the revised economic polices.

Recommendation 12: The Welsh Assembly Government should ensure that good practice in procurement is shared through the Value Wales initiative and should encourage small, medium and large scale businesses to interact and share ideas.

Recommendation 13: The Welsh Assembly Government work together with the WLGA to ensure that local authorities in Wales fulfil their role as key leaders in carbon reduction.

Recommendation 14: The Welsh Assembly Government should issue guidance to local authorities on the ways in which the targets in the Energy Efficiency Performance Indicator could be achieved.

Recommendation 15: The Welsh Assembly Government should consider rolling out the support currently given to all local authorities to develop energy strategies.

Recommendation 16 : That the new performance indicator for energy usage be included in the Core Asset Management Suite of indicators to ensure the connections are made between managing the local government estate and reducing carbon emissions.

Recommendation 17: That the Welsh Assembly Government identifies at an early stage those local authorities and public bodies who will come under the Carbon Reduction Commitment and works with those organisations to ensure that they have sufficient expertise and resources to meet the requirements of the scheme.

Annex B: List of respondents to the call for written evidence

http://www.assemblywales.org/bus-home/bus-committees/bus-committees-third1/bus-committees-third-sc-home/inquiries_sd/inquiries_-_carbon_reduction/carbon_industry.htm

Barry and Vale Friends of the Earth

Bro Morgannwg NHS Trust

Carbon Trust in Wales

Cardiff Council

Camarthenshire NHS Trust

City and Council of Swansea

Energy Saving Trust Wales

Flintshire County

Local Government Information Unit (LGIU)

[National Public Health Service for Wales](#)

[North Wales Police \(PDF49KB\)](#)

[Rhondda Cynon Taf County Borough Council](#)

[Royal Institution of Chartered Surveyors Wales \(RICS Wales\)](#)

[UPM Kymmene \(UK\) Ltd](#)

[Wales Environment Link](#)

[Waste Network of SE Wales Friends of the Earth Groups](#)

[Welsh Local Government Association](#)

Annex C – List of witnesses providing oral evidence

Thursday 7 February 2007 – [SC\(3\)-03-08 : Transcript](#)

Tyndall Centre

[SC\(3\)-03-08 : Paper 1 : Tyndall Centre](#)

Centre for Business Relationships, Accountability, Sustainability and Society, Cardiff University

[SC\(3\)-03-08 : Paper 2 : Centre for Business Relationships, Accountability, Sustainability and Society, Cardiff University](#)

Environment Agency Wales

[SC\(3\)-03-08 : Paper 3 : Environment Agency Wales](#)

The Carbon Trust in Wales

[SC\(3\)-03-08 : Paper 4 : The Carbon Trust in Wales](#)

Thursday 21 February 2007 – [SC\(3\)-04-08 : Transcript](#)

Confederation of British Industry Wales

[SC\(3\)-04-08 Paper 1 : Confederation of British Industry Wales](#)

British Telecom

[SC\(3\)-04-08 Paper 2 : British Telecom](#)

Marks and Spencer

[SC\(3\)-04-08 Paper 3 : Marks and Spencer](#)

UPM Shotton

[SC\(3\)-04-08 Paper 4 : UPM Shotton](#)

[SC\(3\)-04-08 Paper 4 : Additional Paper from UPM Kymmene \(UK\) Ltd - A Report of Carbon Reduction at UPM Shotton Paper Mill, Flintshire](#)

PennPharm

[SC\(3\)-04-08 : Paper 5 : Paper on Carbon Reduction by Industry from Penn Pharmaceutical Services Ltd](#)

[SC\(3\)-04-08 : Paper 5 : Penn Pharmaceuticals 3-Year Health, Safety and Environment Plan Proposed Timescale \(pdf 11.5 KB\)](#)

[SC\(3\)-04-08 : Paper 5 : Penn Pharmaceuticals Key Data on Human Resources, Health, Safety and Environment \(pdf 41.6 KB\)](#)

Thursday 28 February 2008 – [SC\(3\)-05-08 : Transcript](#)

Consortium of Local Authorities Wales

[SC\(3\)-05-08 : Paper 1 : Submission by Consortium of Local Authorities in Wales on Carbon Reduction by Industry and Public Bodies](#)

Welsh Assembly Government

[SC\(3\)-05-08 : Paper 2 : Submission from the Welsh Assembly Government on NHS Estates on Carbon Reduction in Wales](#)

Countryside Council for Wales

[SC\(3\)-05-08 : Paper 3 : Countryside Council for Wales Submission on Carbon Reduction by Industry and Public Bodies](#)

Thursday 8 May 2008 – [SC\(3\)-09-08 : Transcript](#)

Local Government Information Unit

[SC\(3\)-09-08 : Paper 1 : Consultation Response from Local Government Information Unit \(LGiU\) on Carbon Reduction in Wales](#)

Cardiff Council

[SC\(3\)-09-08 : Paper 2 : Consultation Response from Cardiff Council on Carbon Reduction in Wales](#)

Wednesday 18 June 2008 – [SC\(3\)-13-08 : Transcript](#)

Deputy First Minister and Minister for Economy and Transport

[SC\(3\)-13-08 : Paper 2 : Paper from the Welsh Assembly Government on Carbon Reduction by Industry](#)

Wednesday 16 July 2008 - [SC\(3\)-17-08 : Transcript](#)

Minister for Social Justice and Local Government

Annex D: Carbon reduction calculations

This paper describes the potential carbon emissions reductions achievable through some of the headline recommendations of the Public Sector and Industry section of the Inquiry into Carbon Emissions in Wales.

Headline Recommendation 1: The Welsh Assembly Government sets targets for carbon reduction in the industrial and business sector in Wales as part of its implementation of the One Wales carbon reduction commitment. Following a five year period of voluntary action by the industrial and business sector in Wales to meet the targets imposed on them, the Welsh Assembly Government implements regulations that require the targets to be met.

Assumptions:

- Voluntary action continues the overall trend in Wales between 1990 and 2006 (a 1.3% annual reduction for the sector defined as 'business', and 0.2% reduction for 'industrial processes').
- Following the five years of voluntary reductions (starting in 2006-07 and ending in 2011-12), subsequent reductions are fixed at 3 % annually.

Emissions reductions will be in the order of 680,000 tonnes over the five years to 2011, with 97 % of the reduction arising from the 'business' sector, and 3 % from 'industrial processes'. Emissions reductions over the subsequent eight years would be 2.65 million tonnes, with 80 % of the reductions accrued by 'business', and 20 % by 'industrial processes'.

Total savings = 3,330,000 tonnes between 2006 and 2019

Headline Recommendation 4: The Welsh Assembly Government to introduce a sliding scale rebate on Business Rates to businesses not covered by any carbon trading scheme who achieve agreed levels of carbon reduction or agreed levels of accreditation in schemes such as The Green Dragon Environmental Standard.

Assumptions:

- 'Agreed levels of carbon reduction' are in addition to those outlined in Headline Recommendation 1.

- The scheme applies to the sector classified as 'business', and starts in 2012-13 to coincide with the proposed regulations outlined in Headline Recommendation 1.
- 20 % of the total businesses (as measured by emissions) exceed the 3 % goal by 1 %, 15 % exceed it by 2 %, and 10 % exceed it by 3 %.

Emissions reductions will be 475,000 tonnes over the period for those exceeding the target by 1 %, 432,000 tonnes for those exceeding the target by 2 %, and 336,000 tonnes for those exceeding the target by 3 %.

Total savings (over and above those from Headline Recommendation 1)
= 417,000 tonnes between 2012 and 2019

Headline Recommendation 5: The Welsh Assembly Government sets targets for carbon reduction across the whole of the Public Sector in Wales as part of its implementation of the One Wales carbon reduction commitment. The Welsh Assembly Government should consider setting those targets in excess of 3% for the public sector in Wales.

Summary

Public sector emissions (as defined below) are shown in Table 1 for the financial years 2003-04 to 2007-08. Transport, electricity and gas emissions are counted from the majority of major public sector emitters in Wales.

Table 1 Total emissions of carbon dioxide from the public sector

	2003-04	2004-05	2005-06	2006-07	2007-08
Total emissions of carbon dioxide (tonnes)	752,318	855,687	872,536	734,555	764,133

Public sector carbon emissions have followed an inconsistent pattern over the past five years.

Detail

For the purpose of this paper, public sector carbon emissions are defined as those arising from transport and energy in the Welsh NHS Trusts, police forces, local authorities, and Welsh Assembly Government.

Only those public sector bodies that have information for the last five years have been included. This comprises:

- 8 of the 9 Welsh NHS Trusts
- All 4 Welsh police forces
- 17 of the 22 Welsh local authorities (transport costs), and 16 (electricity and gas)
- The Welsh Assembly Government

Table 2 shows the total amount paid by these public sector organisations for transport fuel during each of the past five financial years, the resulting amount of fuel purchased, and the carbon dioxide emissions associated with that.

Table 2 Carbon dioxide emissions from public sector transport fuel

	Cost of fuel (£'000)				
	2003-04	2004-05	2005-06	2006-07	2007-08
Welsh NHS	3,488	3,675	4,320	4,559	4,979
Police	3,305	3,730	4,185	4,430	4,610
Local authorities	12,790	14,191	16,565	16,952	18,680
Welsh Assembly Government	184	259	278	358	292
Total	19,767	21,855	25,348	26,299	28,561
Average price of diesel ²³ (p/l)	77.9	81.9	90.9	95.2	96.9
Average price of diesel (less VAT) ²⁴	66.3	69.7	77.4	81.0	82.5
Millions of litres of fuel used	29.814	31.356	32.749	32.468	34.619
Conversion factor (kgCO ₂ /l)	2.68				
Tonnes of carbon dioxide emitted	79,903	84,034	87,768	87,014	92,780

Table 3 shows the total amount paid by these public sector organisations for electricity and gas during each of the past five financial years, the resulting amount of fuel purchased, and the carbon dioxide emissions associated with that. Because only the total cost is known, the assumed split between electricity and gas is 65:35²⁵.

Table 3 Carbon dioxide emissions from public sector electricity and gas use

	Cost of fuel (£'000)

²³ DBERR, [Table 4.1.2: Average annual retail prices of petroleum products and a crude oil price index](#) [accessed 19 February 2009], values for calendar years only.

²⁴ HMRC has advised me that public bodies are able to claim VAT back for journeys undertaken for 'business needs'

²⁵ Based on the split for several public bodies for which details are available

	2003-04	2004-05	2005-06	2006-07	2007-08
Welsh NHS	15,741	20,908	31,217	30,499	28,537
Police	1,814	1,983	2,913	4,012	3,753
Local authorities	29,535	31,106	39,235	46,511	44,314
Welsh Assembly Government	754	908	1,056	1,492	1,835
Total	47,844	54,905	74,421	82,514	78,439
Average price of electricity ²⁶ (p/kWh)	3.62 ²⁷	3.62	4.53	6.18	6.24
Average price of gas (p/kWh)	1.05 ²⁸	1.05	1.52	2.00	1.63
Millions of kWh (electricity)	859.1	985.9	1,067.9	867.9	817.1
Millions of kWh (gas)	1,594.8	1,830.2	1,713.6	1,444.0	1,684.3
Conversion factor (kgCO ₂ /kWh) (electricity)	0.43				
Conversion factor (kgCO ₂ /kWh) (gas)	0.19				
Tonnes of carbon dioxide emitted (electricity)	369,403	423,921	459,176	373,182	351,341
Tonnes of carbon dioxide emitted (gas)	303,012	347,732	325,592	274,359	320,012
Total tonnes of carbon dioxide emitted	672,415	771,653	784,768	647,541	671,353

Assumptions:

- A target of either 4 % or 5 % annual reductions is applied and achieved overall (allowing scope for some authorities to perform better or worse than the target).
- The target applies to the sector classified as 'public'.
- The target applies for the period 2010-11 to 2019-20.

Total savings = 2.6 million tonnes between 2010 and 2019 for the 4 % target

²⁶ DBERR, [Table 3.4.1: Prices of fuels purchased by non-domestic consumers in the United Kingdom \(including the Climate Change Levy\)](#) [accessed 19 February 2009]. The prices quoted are those for 'large consumers' (defined as an annual consumption of 20,000-70,000kWh of electricity and 27,778-277,777kWh of gas).

²⁷ No information is available for 2003, so the 2004 value has been used.

²⁸ No information is available for 2003, so the 2004 value has been used.

3.1 million tonnes between 2010 and 2019 for the 5 % target

Headline Recommendation 7: The Welsh Assembly Government should consider making money available to appropriate public bodies to 'kick start' capital programmes for achieving carbon reduction. The Welsh Assembly Government should agree a programme of offsetting the capital funding through subsequent savings in energy bills (having regard to substantial changes in fuel prices) at the time of providing the funding.

The carbon savings calculated below relate to a revolving loan scheme for Small and Medium Enterprises.

Assumptions:

- Carbon savings are equal to those achieved by Loan Action Scotland (see <http://www.scotland.gov.uk/Resource/Doc/173994/0048525.pdf> for further details). This is based on an assumption that the same number of applicants succeed in securing loans for energy efficiency measures in Wales as have been successful in Scotland (a function of marketing and loan availability, rather than number of businesses and turnover).

Total savings = 2,650 tonnes per year, or 26,500 tonnes over 10 years