ANNEX 1
TO APPENDIX B

An Energy Strategy for Kingston

Royal Borough of Kingston upon Thames

April 2009

Contents

An Energy Strategy for Kingston Summary

1.1 Energy is essential to maintaining the quality of life in Kingston and a thriving economy. The climate change impacts of burning fossil fuels, increasing fuel prices and our dependence on imported fossil fuel energy, all point to a changing energy environment.

1.2 The energy strategy addresses these issues and is the first part of an overarching Climate Change Strategy that will address both mitigation (reducing the likelihood of extreme climate change) and adaptation (preparing the borough to meet the inevitability of some climate change).

1.3 The energy strategy will address the key elements of mitigation and will establish a strategic approach to tackle the energy challenges Kingston faces. This includes addressing energy use both in the Council's own assets and services and also the issues that the borough as a whole faces including developing the infrastructure for a low carbon and energy efficient borough, and the social issues of fuel poverty.

1.4 Therefore the energy strategy addresses the energy issues under the Council's varied roles; that of Community Leader; that of Local Planning Authority; and that of Service Provider and Asset Holder. And will help meet national, regional, and local carbon dioxide emissions reduction targets, renewables and fuel poverty targets.

1.5 The solutions fall under four broad approaches:

a) Reducing the unnecessary use of energy;

b) Using energy efficiency;

c) Using renewable and cleaner energy;

d) Getting more from conventional supplies, eg combined heat and power

1.6 Kingston mainly depends on national fuel networks and fossil fuels. The CO_2 emissions from the use of these fuels can be split into three sectors; the Domestic Sector, Transport, and Commerce and Industry. However, there are an increasing number of renewable and local energy sources in the borough.

1.7 The energy strategy sets twenty principle objectives; eight for Community Leadership, five for the Council as a Planning Authority, and seven for delivering services and managing our own estate. The

principle objectives provide the long-term direction on the strategy to 2020.

1.8 To achieve success it will be important for the Council to work together with its partners and others, particularly with the Kingston's Strategic Partnership and the organisations it represents through networks of common interest. The partnership will help lead to a co-ordinated approach to tackle climate change.

1.9 Kingston's Energy Strategy will be co-ordinated by the Council on behalf of the wider partnership. The Council will lead implementation of the Energy Strategy through three year rolling programme of actions known as the Annual Implementation Plan (AIP). The AIP sets out actions in detail for the first year and in outline for the second and third year.

1.10 The Energy Strategy will guide Kingston to a low carbon energy efficient borough by working in partnership to build on the Council's strategic commitments and securing actions are delivered over the next 10 years.

Energy Strategy Principal Objectives

1.11 The actions in the AIP help meet at least one of the Energy Strategy's 20 Principal Objectives. These are divided according to the Council's role as a Community Leader, as a Planning Authority, and as an Asset Holder and Service Provider. (See table 1, 2, and 3 respectively).

1.12 The roles for the Council can also be applied to other organisations to help them recognise the actions that be taken. The role of asset holder and service provider applies to for example Higher education institutes and the objectives can guide the actions undertaken and reported.

Table 1. Principal Objectives: The Council as a COMMUNITY LEADER

As Community Leader the Energy Strategy recognises that action cannot be delivered in isolation, all sectors of the community will contribute, and in doing so much of the action demonstrates the council working in partnership.
1. Reduce CO2 emissions arising from energy consumption by all sectors (Domestic, Industry and Commerce, and Transport.)
2. Increase energy and water resource efficiency
3. Increase the proportion of purchased and generated energy from renewable and clean alternative energy sources
4. A local research and development network with educational institutions, businesses and industry to develop local evidence and best practice.

5. A local labour and skills capacity to raise awareness and deliver energy improvements.
6. Opportunities to make best use of support and finance for investment in energy awareness and energy improvement programmes.
7. More members of the community committed to take personal responsibility for their energy use and carbon emissions.
8. Action to alleviate fuel poverty.

Table 2. The Council as a PLANNING AUTHORITY

The Council recognises the pressures from increasing population and the need to provide housing, services and infrastructure. The Energy Strategy seeks to influence planning to manage future growth and provide infrastructure that minimises impacts from energy use and supports opportunities for local clean renewable energy. The Council as Planning Authority provides the regulatory framework to set robust and challenging policy to meet the development needs. This will be set in the development of the Local Development Framework and the Core Strategy that takes Kingston from 2010 to 2025. The aim is to support the development and delivery of robust and challenging policy in the Core Strategy and provide spatial options that can ensure delivery.
9. An evidence base to support the Local Development Framework policies on climate change
10. Increased renewable and clean alternative energy capacity and infrastructure.
11. The development of low carbon areas.
12. High standards of energy performance from sustainable design and construction, of new and existing buildings.
13. Low carbon transport infrastructure and sustainable transport provision.

Table 3. The Council as a SERVICE PROVIDER AND ASSET HOLDER

The Council will work across all departments to ensure the best service is provided with minimal energy impacts by staff and operations, and the Council will deliver asset improvements to its building and fleet. The aim is to embed the principles of the energy hierarchy (use less, use it efficiently, use renewable and cleaner sources of energy, and get more from conventional generation) into the Council's working ethos, strengthening policy, staff commitment to addressing energy in the office and through their services and a programme of energy and water management.

14. A local authority that leads by example to follow the energy hierarchy.
15. A management plan and investment programme of asset and fleet improvement applying best value principles.
16. Increased staff awareness, training and accountability for energy use and travel choices.
17. The attribution of responsibility and accountability of energy use to Council services.
18. The assessment of building energy and transport implications in decision making for service delivery and capital investment.
19. A procurement process that applies best value principles to ensure energy and transport impacts are accounted for.
20. Use opportunities to increase energy generation from Council assets and contracts.

An Energy Strategy for Kingston

1 Introduction

1.1 Energy is essential to maintaining the quality lifestyle in Kingston that residents have come to enjoy and expect. A thriving local economy depends on business and commerce having access to reliable, and reliably priced, affordable energy supplies. Energy fuels all of our domestic, commercial and industrial activities on a day-to-day basis.

> *Electricity available for supply fell by almost 1% in 2006, the first such fall since 1997, and fell by a further 1% in 2007.*
>
> p24, BERR, UK Energy in Brief July 2008, Nation Statistic Publication

1.2 Most energy produced and consumed in the United Kingdom is derived from fossil fuels, principally gas, oil and coal[1]. This dependence on fossil fuels in the medium and long term is not sustainable as these are finite resources. Our increasing dependence on imported energy, a significant proportion of energy reserves held in unstable parts of the world, and the need to compete for supplies gives rise to concerns about energy security and higher energy costs.

> **UK Fuel production and imports**
>
> *…in 2005 the UK became a net importer of oil.*
>
> *Declining UK indigenous production allied to increasing demand led to the UK becoming a net importer of gas once more in 2004. This trend continued in 2005 and 2006. In 2007 [gas] imports rose by 39 per cent ….*
>
> *Since 2002 imports [of coal] have been rising at 15 per cent a year on average and in 2006 imports were at a record 50 million tonnes to meet strong demand from [electricity] generators and the steel industry. In 2007, imports fell back by 14 per cent to just over 43 million tonnes.*
>
> P17, p21 and p22, BERR, UK Energy in Brief July 2008, Nation Statistic Publication

1.1 _____

[1] Ref.: BERR, UK Energy in Brief July 2008, Nation Statistic Publication

1.3 Increasing fuel prices not only affect the viability of businesses but can also lead to increases in fuel poverty, and the ability of some people to keep themselves warm.

1.4 The problem of Climate Change is inextricably linked to the use of fossil fuels. Burning them for energy produces emissions of greenhouse gases particularly carbon dioxide (CO_2) emissions. We have to meet tough targets to reduce CO_2 emissions and have clear responsibilities to help the borough to meet the challenges posed by climate change and increasing fuel prices. The Council has already taken some steps to reduce dependence upon fossil fuels and improve our energy efficiency in their use. There have also been recent initiatives to involve the community and businesses in high-level Council decisions that will take energy into consideration. This can be seen through the evolution of the Local Development Framework[2], the Kingston Plan (Kingston's Sustainable Community Strategy), and the Local Area Agreements[3]. To meet the significant challenges ahead we need the engage with all of Kingston's community and work with Kingston's Local Strategic Partnership (LSP)[4].

1.5 This energy strategy is the first part of an overarching Climate Change Strategy that will address both mitigation (reducing the likelihood of extreme climate change by reducing emissions of greenhouse gases) and adaptation (preparing the borough and its community to meet the inevitability of some climate change). The energy strategy will address key elements of mitigation and will establish a strategic approach to tackle the energy challenges Kingston faces.

1.1 _____

[2] The Local Development Framework (formerly the Unitary Development Plan) sets spatial planning policies and documents that will guide future development in Kingston.

[3] The Local Area Agreement is an agreement between central government and the Council and others setting out the priorities for the borough. For Kingston this includes tackling carbon dioxide emissions from energy use.

[4] An LSP brings together at a local level the different parts of the public sector as well as the private, business, community and voluntary sectors so that different initiatives and services support each other and work together and provides a single overarching local co-ordinated framework within which other partners can operate.

2 Purpose and Scope of the Strategy

2.1 In August 2007, the Council signalled its commitment to addressing Climate Change by signing the *Nottingham Declaration on Climate Change*. This declaration requires the Council (and over 340 Local Authorities have signed) to have a Climate Change Strategy in place within 2 years of signing the Declaration. [5]

2.2 Naturally, as energy is the biggest contributor to greenhouse gas emissions, a separate Energy Strategy is required to manage the emissions arising from that area. After an Internal audit report of RBK in 2006, it was determined that an Energy Strategy would be developed in advance of the area with the overarching Climate Change Strategy, as energy was identified as the area with the greatest amount of financial and emissions savings to be made. This includes energy consumption from the whole borough; the domestic sector, transport, and business and commerce including the Public and Voluntary Sector such as the Council, Schools, and the Primary Care Trust.

2.3 An obvious overlap in utility management and consumption is that of water and energy. Water and energy go hand-in-hand when housing and facilities are considered, such as hot water systems, boilers and central heating systems. There is a direct correlation between water consumption and energy usage. The treatment of water for drinking and sewage treatment consumes large amounts of energy and increased water efficiency will lead to a reduction in energy consumption.

> *…we pump, treat, clean and heat water has profound implications for energy use. The water industry is a major energy user, and together with domestic hot water use, there's a carbon impact here that simply has to be tackled. Saving water reduces emissions.*
>
> Hilary Benn, Secretary of State for Environment, Food and Rural Affairs
>
> Defra, Future Water: The Governments Water Strategy for England, February 2008

2.4 The Council is responsible for many building, facilities and sites around Kingston and for the provision of a wide range of services either directly or through partnership contracts. We are seeking to improve the energy and water efficiency, and ensure that we have the information needed to do that and to make best use of funding opportunities.

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[5] Ref. http://www.energysavingtrust.org.uk/nottingham

2.5 The Energy Strategy will sit alongside the existing Transport, Sustainable Communities (the Kingston Plan) and Waste Strategies and the Local Development Framework specifically identifying energy matters to ensure they are addressed through all the Council's responsibilities. The Strategy will help meet national indicators on climate change agree by the LSP (Kingston's Strategic Partnership).

2.6 For example although transport fuel use makes up a significant contribution to carbon emissions in the borough (see Figure. Kingston's CO_2 emissions for 2005) the energy strategy will not deliver specific transport actions. This is provided by Kingston's transport plan[6] which has the core philosophy of demand restraint and modal shift toward more sustainable forms of transport. The Energy Strategy will support methods to reduce energy consumption and minimise CO_2 emissions from vehicles by providing for example evidence and policy to support action through the existing transport planning activities.

2.7 Most people in Kingston are relatively affluent, have significant energy to meet their needs and are able to make the energy efficiency and investment necessary to tackle carbon emissions increased costs. However, there are some who are in fuel poverty and lack affordable warmth. These may be people living in the pockets of deprivation in the borough, retired people on fixed incomes living in larger older houses that are difficult to keep warm or to insulation, or disabled people or people with long-term health conditions whose need for warmth is greater because they spend most of their time at home and are unable to be active. The Energy Strategy will therefore also contribute to tackling fuel poverty in the borough.

2.8 Extreme weather events such as extreme cold and increasing extreme heat events put a demand on energy for heating and more often cooling. Therefore the Energy Strategy will take account of the energy used in buildings and vehicles that control temperature and take account of their impact on the outside microclimate. This is a key element of climate change adaptation and managing overheating and will need to be addressed in tandem to Kingston emerging Climate Change Strategy.

2.9 Additional environmental impacts such as air quality will also need to be considered in guiding the energy solutions most appropriate for the borough.

2.10 The Energy Strategy recognises the potential for green industry, services, research, and training to play an important part in Kingston's economic future. Kingston industrial profile and range of Higher Educational Institutes provide the resources to develop a local 'low-carbon economy' that can generate green collar job and demonstrate innovation in delivering sustainable energy solutions.

1.1 ———————————

[6] Kingston's Local Implementation Plan (LIP) March 2006 - 2011

2.11 The Energy Strategy takes into consideration economic, environmental and social issues and aims to set a strategic approach to tackle the energy challenges Kingston faces now and into the future to 2020. The Strategy will do this through addressing energy relevant issues under three roles for the Council:

a) Providing Community leadership through example and support

b) Providing statutory policy and guidance as a Planning Authority

c) As a Services Provider and Asset Holder through exemplar energy and carbon management and procurement methods.

2.12 The Energy Strategy will have an ongoing purpose to identify and benchmark where we are, as a Borough, now and what international, national and regional policies may affect us in the future. We will need to ensure that any work that has already been undertaken is recognised and built on. It is equally important to note those areas that have been neglected. Kingston's Energy Strategy presents an opportunity to co-ordinate action, address the gaps and build of good practice.

The Energy Saving Trust's One-to-One Programme assessment process highlights that the Council is performing most strongly with regards to its overall strategy for tackling climate change and sustainable energy but has opportunity for improvement in all areas, especially in terms of the Council's Own Estate and Service areas such as the domestic sector.

Ref. RBK (March 2009), Local area carbon emissions reduction report, Prepared by the Energy Saving Trust

2.13 The Strategy will address the Council's commitment to assist employees, residents and the businesses of Kingston mitigate against climate change. This will include providing information, advice and assistance in changing daily routines, behaviour and understanding.

2.14 Most of the energy we use reaches Kingston through national grids and networks. Greater energy efficiency is the key to managing our need for this energy. However decentralised energy supply, whether it is small scale renewables such as solar heating or photovoltaic panels, or heat networks, ground source heat pumps, or combined heat and power plants, reduces demand on the national grid and can potentially develop a more robust local energy base for Kingston.

2.15 The Energy Strategy recognises the solutions for Kingston can be guided by four approaches. If adopted as an Energy Hierarchy and each step applied in turn to an activity, it will help ensure that Kingston's energy needs are met in the most efficient way. However it must be recognised that it is not always suitable or cost effective to apply these

guiding approaches in strict order, and should be used as four broad approaches as listed below:

a) Reduce demand by reducing the unnecessary use of energy eg through changes in behaviour or incorporating sustainable building design solutions such as passive heating, cooling, and natural lighting

b) Reduce demand by using energy efficiently eg installing energy efficient lighting, heating and appliances or energy zoning in multiuse buildings

c) Conserve natural resources and reduce the amount of carbon dioxide released when energy is used by using renewable and cleaner energy eg solar water heating, or renewable tariff

d) Reduce the wastage of resources during energy generation and distribution by getting more from conventional supplies eg combined cooling, heating and power or local heat networks.

2.16 The Energy Hierarchy can be used to guide the decisions of a range of stakeholders, from architects, planners and developers to individuals in the home.

2.17 The strategy sets out a number of objectives (see chapter 6) to help address the issues identified. These will be supported by actions that can help meet those objectives. The Strategy will be accompanied by a rolling annual implementation plan (AIP). The first AIP for the period 2009/12 will cover the actions for 2009/10 in detail and for 2010/11 and 2011/12 in outline.

2.18 Annual monitoring and review of the AIP and reporting on progress will ensure that the implementation of the strategy is on track to meet the objectives.

SUMMARY of the Scope and Purpose

2.19 Purpose of the Energy Strategy is to provide a strategic framework that helps

a) To improve resource management

b) Reduce carbon dioxide emissions and contribute to mitigating against climate change

c) Contributing to tackling fuel poverty

d) Contributes to Kingston's economy by increasing job opportunities and innovation in delivering sustainable energy, and improving Kingston's housing and other building stock.

2.20 The Scope of the Energy Strategy is for the Council to:

a) Work in partnership with organisations and individuals to address energy and carbon management from all sectors of the borough; the domestic sector, transport, and business and commerce including the Public and Voluntary Sector such as the Council, Schools, and the Primary Care Trust.

b) Lead implementation in its capacity as Community Leader, as a Planning Authority, and as a Service Provider and Asset Holder

c) Ensure action is guided by four broad approaches to: Reduce the unnecessary use of energy, Use energy efficiently, Use Renewable cleaner energy, and Get more from conventional finite fuel sources.

d) Manage the co-ordination of action through a rolling annual implementation plan.

3 Vision and Challenge

3.1 The challenge for the RBK Community is to develop an Energy Strategy that will ensure Kingston has the energy it needs to continue to thrive and be a socially and economically vibrant borough in the short and long term. A bigger challenge is to accomplish all this while addressing climate change, and soaring fuel costs, a very serious consequence of energy use.

3.2 At present energy demand in Kingston is climbing, which leads to pressures on the community, business and the Council in terms of fuel poverty, provision of infrastructure and environmental impacts. Through the annual implementation plans, the Energy Strategy will attempt to find an acceptable balance between these factors and, over time, an alignment of goals.

Box 1. What will the borough be like in 2020?

A Sustainable Kingston: protecting and enhancing the environment for us and for future generations.

There will be a reduction in greenhouse gas emissions through a shift to low carbon energy, energy efficiency and use of renewable energy. There will be less use of cars, better provision for non car modes of transport, safer roads and improved air quality. New built developments will be far more energy efficient than in the past. Opportunities for the use of renewable energy will be taken where feasible, and all new homes will be carbon neutral (a national objective).

P6. Kingston Plan (March 2009) - Community Plan

3.3 The Energy Strategy will seek to build community knowledge and understanding of energy issues and its direct linkages on greenhouse gas emissions and climate change. The Strategy will strive to achieve a shift in community attitude and spur action individually and collectively. This Strategy will raise issues surrounding our use of energy and how changes can be made to achieve more efficient and effective use of energy. We will also seek to identify areas of god practice and learn from these.

3.4 We will see partnerships and networks developed to address energy use and energy provision for all members of the Kingston's community. And to work to bring funding to the borough for energy efficiency and low carbon projects.

3.5 We will see buildings and assets well managed with high levels of energy efficiency and comfort.

3.6 We will support and guide sustainable transport options and infrastructure in the borough and explore the provision of clean energy options for vehicles.

3.7 Kingston will thrive on a greener economy and innovation by working with local businesses, industry and educational providers to improve energy efficiency ad encourage the development of products and services fit for a low carbon economy and increase business innovation and development of environmental technologies and market opportunities.

3.8 The delivery of action will be governed by the four broad approaches defined as the Energy Hierarchy resulting in reduced energy consumption; more use of energy efficient appliances; efficient energy supply from decentralised energy in the borough; and a greater proportion of generated and purchased clean, renewable energy from sources within the borough and outside the borough.

3.9 Kingston will deliver action through a portfolio of tailored action projects throughout the borough. These will include Low Carbon Areas and Communities where a range of co-ordinated activities take place to reduce carbon emissions, increase energy efficiency and alleviate fuel poverty.

3.10 Kingston's Energy Strategy will help to meet the following national targets

a) Climate Change Act (Nov. 2008) puts into statute the UK's targets to reduce greenhouse gas emissions through domestic and international action by at least 80 per cent by 2050 and carbon dioxide emissions by at least 26 per cent by 2020, against a 1990 baseline.

b) Renewable Energy Strategy target to achieve 15% of our energy consumption from renewable by 2020.

c) UK Fuel Poverty Strategy (2001) set a target for Government to sek to end fuel poverty by 2016 and take all vulnerable households out of fuel poverty by 2010.

3.11 In contribute to national targets the Energy Strategy will seek to

a) Establish a partnership agreement to set and commit to a local carbon reduction target to 2020 and beyond to help mitigate against climate change

b) Reduce energy demand and increase renewable, clean and efficient energy supply and use in Kingston to reduce running costs in the home and businesses, and reduce the use of finite resources

c) Improve the domestic building stock to help alleviate fuel poverty

d) Support the provision of sustainable transport options and clear transport fuel and infrastructure provision in the borough.

e) Encourage technological innovation and development of the energy industry and services in the borough to provide green collar jobs and support Kingston's economy.

4 The Energy Strategy in Context

Kingston

4.1 The Royal Borough of Kingston upon Thames is known for its traditional cultural ties, its combination of old and new and its success as a busy location for workers, shoppers and students.

4.2 In recent years, the Council has been changing rapidly to streamline services, save money and take the lead in social, economic and environmental issues. Kingston, although one of the smallest boroughs, has a population of just under 158,000 in 2007[7] and has grown faster than most London boroughs and is set to increase to 164,600 by 2021[8]. Every week Kingston accommodates an additional 300,000 visitors for shopping work and leisure which swells in term-time by 20,000 students at Kingston College and University. As Kingston also has over 500 shops and is the second most popular shopping destination in London after the West End, there is a lot to consider in terms of planning, infrastructure, energy, climate change and other pressing issues.[9]

4.3 Kingston prides itself of the historical buildings and culture throughout the city. While this is a positive and unique feature of our Borough, it presents a challenge for implementing standard energy improvement measures.

4.4 Kingston has over 50 schools that serve the main purpose of housing children to teach in the daytime, but also play a role as community centres for adult education, community group meetings and as a venue for other community events. The schools are key drivers for implementing change through the buildings, the transport implications of the 'school run', and the opportunity to influence behaviour in the local community.

4.5 Kingston is one of the most affluent Boroughs in the United Kingdom.[10] This fact in itself will shape the Strategy and incentives promoted

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[7] Ref. p7, Greater London Authority (August 2008), Demography update. And Ref. p6, RBK (November 2008), Borough Profile 2008 based on mid year estimates from the Office of National Statistics: 157,900 mid year population estimates for Kingston.

[8] Ref. p28, Greater London Authority (March 2008), 2007 Round Demographic projections: Table A4: Total Population, Boroughs and Groupings, PLP High estimate

[9] Kingston First, guide to Kingston (April 2009): http://www.kingstonfirst.co.uk/getting-to-kingston/guide-to-kingston.htm

[10] Ref. p17, RBK (November 2008), Borough Profile 2008: According to the Department of Communities and Local Government released the English Indices of Deprivation in December 2007 (an update of the 2004 release) out of the 354 local authorities in England, Kingston is ranked 245th (1 = most deprived, 354 = least deprived). Kingston is the third least deprived borough in London behind Richmond upon Thames and the City of London.

through the Annual Implementation Plans. In developing any Strategy, the unique factors of our Borough need to be taken into consideration.

4.6 Kingston's population includes 16% of residents from Black, Asian and Minority Ethnic groups and is estimated to rise to 29% in 2026. The largest minority ethnic groups in the Borough are Tamils and Koreans and it is estimated that the Korean population in Europe is largest in Europe. [11] Kingston needs to ensure that all members of the community have equal access to energy improvement services.

Supply and Demand Management

4.7 The 158,000 residents of this Borough have come to expect that each time they flick the light switch to "on", the electricity to do that will follow. Energy has come to be determined as an essential service, which means that it is each individual's right to have access to energy in order to be able to live a normal life. Part of understanding energy use includes the fact that a reliable supply of electricity is an essential service that each resident has the right to access. It is the responsibility of energy utilities, the Central Government and RBK to ensure that the infrastructure and facilities are in place to supply the energy.

4.8 Kingston does not have any large electricity generators or gas supplies of its own. Therefore, most energy is imported to the Borough through national networks on demand. That being the case, the initial solution is to reduce energy consumption of the Borough is through "demand management". Demand side management is a set of policies or initiatives aimed at reducing consumption and increasing energy efficiency; following the need to follow the first two steps of broad approaches of the Energy Hierarchy outlined in Chapter 2.

4.9 The only way that demand-side management can occur is through each person, each household, each business and each building taking action to manage their own energy use. Generally, a household or building will use a significant percentage of energy just through having appliances on stand-by mode. Other large energy use is for heating and cooling, hot water, lighting and other energy appliances.

4.10 Travel choices contribute to the improvement of energy demand management from transport. However, much of the awareness and infrastructure provision is already delivered though Kingston's transport plan (Kingston's Local Implementation Plan March 2006-2011).

4.11 Once we have got our energy use or demand under control we can take steps to improving supply. Sourcing energy and generating energy for

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[11] p14 RBK (November 2008), Borough Profile 2008.

the borough that is renewable, clear, and does not waste energy or resources in generation and distribution. This leads to Kingston's opportunity to build local energy network – decentralised energy from for example combined cooling, heat and power.

4.12 In terms of transport the Energy Strategy has a role to play in influencing the provision of sustainable energy supply for cleaner vehicles required in the borough.

International Context

4.13 The 2007 IPCC (International Panel on Climate Change) report leaves no doubt that human activity contributes to global warming, and that climate change is happening now and in many places in the world.

Box 2. Climate change targets that commit the UK to reduce greenhouse gas emissions.

1. The **Kyoto Protocol** set the UK a legally binding obligation to reduce carbon dioxide emissions by 12.5% from 1990 levels by 2012.

2. Parallel to Kyoto the **UK Climate Strategy** (March 2006) set a domestic target to reduce CO_2 emissions by 20% below 1990 levels by 2010.

3. In November 2008 the Government published the **Climate Change Act** which puts into statute the UK's targets to reduce greenhouse gas emissions through domestic and international action by at least 80 per cent by 2050 and reduce CO_2 emissions by at least 26 per cent by 2020, against a 1990 baseline.

4. The Tyndall Centre for Climate Change Research shows that cuts of 70% by 2030, and 90% by 2050 are needed to avoid the world warming by the 2 degrees centigrade that is considered essential to avoid the worst impacts of climate change.

4.14 The Stern Review, published in November 2006, addresses the economics of climate change and concludes that ignoring climate change will eventually damage economic growth. Mitigation must be viewed as an investment; and the benefits of strong early action outweigh the costs. Stern also noted that, given that climate change is happening, measures to help people adapt are essential. The less mitigation we do now, the greater will be the difficulty of continuing to adapt in the future. The report also concludes that there is still time to avoid the worst impacts of climate change if strong collective action starts now.

4.15 The European Union and the individual member states are party to the UN convention on climate change and the Kyoto Protocol. The European Climate Change strategy addresses carbon capture and storage, passenger road transport, aviation, and carbon trading. Of particular interest is the European Directive on the energy performance of buildings. It includes minimum energy requirements for new and or large existing buildings being renovated, and the energy certification of buildings. For public buildings which require an energy certificate it must be on public display. Certificates are required for new buildings and when buildings are sold or rented out.

National Context

4.16 The UK Climate Change Programme published in 2006 sets a domestic target to reduce carbon dioxide emissions by 20% below 1990 levels by 2010 and 60% by 2050. It sets out the policies and measures which the UK is using to cut its emissions of greenhouse gases. And notes that action by local authorities is likely to be critical to the achievement of the government's climate change objectives.

4.17 The Climate Change Act gives statutory force to the Government's targets for cutting emissions. The target for 2050 has been increased to an 80% cut in greenhouse gas emissions below 1990 levels. The government will drive down responsibility for meeting some of these targets to local government.

4.18 The climate change levy is a tax on the use of energy in industry, commerce and the public sector, with offsetting cuts in employers' National Insurance Contributions and additional support for energy efficiency schemes and renewable sources of energy. The aim of the levy is to encourage users to improve energy efficiency and reduce emissions of greenhouse gases. Climate Change Agreements allow energy intensive business users to receive an 80 per cent discount from the Climate Change Levy, in return for meeting energy efficiency or carbon saving targets.

4.19 The Climate Change and Sustainable Energy Act 2006 was passed to enhance the UK's contribution to combating climate change and requires that in doing so regard be given to alleviating fuel poverty and securing a diverse and viable long-term energy supply. The act requires Local Authorities to have regard to the energy measures report[12] in exercising its functions. The report sets out measures that could help tackle climate change and fuel poverty and include measures to improve efficiency in the use of electricity, heat, gas fuel and other sources of energy;

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[12] BERR (September 2007), Energy Measures Report.
http://www.berr.gov.uk/energy/environment/measures/page41270.html

increase the amount of electricity generated, or heat produced by microgeneration or otherwise by plant which relies wholly or mainly on low-emissions sources or technologies; reducing emissions of greenhouse gases; and reducing the number of people in fuel poverty.

4.20 In 2010 the government will introduce the Carbon Reduction Commitment (CRC) which is a mandatory trading scheme for large non-energy intensive businesses and public sector organisations. An organisation will get an allocation of a carbon emission budget. If it emits more or less than its allowance then it can trade with other organisations. It is a mechanism to achieve national carbon emissions reductions.

4.21 The government has established a set of National Indicators (NIs) which measure the efficiency and effectiveness of Local Authority and other public services in an area. There are 3 NIs relevant to the Energy Strategy. These are:

a) The reduction in CO_2 emission from Local Authority operations (NI185).

b) The reduction in CO_2 emissions in the borough from industry and commerce, the public sector, residents, and transport (NI186).

c) Actions to tackle fuel poverty (NI187)

4.22 The Energy Act (November 2008) contains legislative provisions required to implement UK energy policy following the publication of the Energy Review 2006 and the Energy White Paper 2007. Most of the Act's provisions are outside the scope of a local Energy Strategy relating to supporting investment in energy exploration, and large scale infrastructure including for renewables. However it does enable the statutory roll-out of smart metering to medium sized businesses and in the longer term to small businesses and the domestic sector.

4.23 Under the new planning system which introduced the Local Development Framework (LDF) there is greater emphasis on delivering the national sustainable development and climate change strategies. Three of the key planning policy statements (PPS) are PPS 1 Delivering Sustainable Development and its supplement on Planning and Climate Change, and PPS22 Renewable Energy.

4.24 The government's Fuel Poverty Strategy tackles the rise of those in fuel poverty ie a household that has to spend more than 10% of their income on fuel to maintain an adequate level of warmth. Fuel prices have been rising and in 2008 the UK experienced three price increases in domestic electricity and gas. The National Housing Federation estimates that duel

fuel customers will see bills increase by an average of 25% in 2008[13]. Fuel poverty can come about through low income, poor insulation, under occupation, inefficient heating, or energy pricing and payment structures. It can lead to health complications which places further stress on the health system. For example, in London each year there are roughly 70,000 deaths, 6000 of which are related to fuel poverty.[14]

Box 3. Fuel Poverty: national documents that drive the need for action

1. Fuel Poverty Strategy (November 2001)
2. Energy Measures Report (September 2007)
3. 6th Annual Progress Report (October 2008)
4. Energy Suppliers Obligation: Carbon Emissions Reduction Target (April 2008 – 2011)
5. Community Energy Saving Programme (February 2009) – Consultation
6. Heat and Energy Strategy (February 2009) – Consultation

a. The Department of Energy and Climate Change (DECC) and the Department for Communities and Local Government (CLG) have jointly published a consultation on 'Heat and Energy Saving Strategy'. This document sets out the Government's vision up to 2020 and beyond to decarbonise the way we heat our homes and businesses, helping us to reduce the UK's CO_2 emissions. This includes policies to improve the insulation of homes, small scale renewables that may address properties with solid walls and low carbon heat generation options. This encompasses the recent consultation on the Community Energy Saving Strategy by DECC.

b. The financial framework encompasses funding from the Carbon Emissions Reduction Target funded by the energy suppliers' statutory obligation to 2012. In September 2008 the Prime Minister announced a proposal to increase investment by 20 per cent, which is expected to boost supplier household energy efficiency investment by some £560m.

1.1 _____

[13] Energy Prices and Debt Sept 2008 written for the Federation by IPA Energy and Water Economics

[14] Ref. p.viii, Mayor of London (February 2004), Green Light to Green Power; The Mayor's Energy Strategy.

4.25 The increase in investment is supported by the Community Energy Saving Strategy. This aims to offer energy efficiency measures as a package to homes, to deliver a 'whole house approach' – so that homes can receive all the major energy efficiency measures they need, which could also include district heating schemes.

Regional Context

4.26 The Mayor of London published his Energy Strategy "Green Light to lean Power" in February 2004. This addresses energy efficiency, fuel poverty and reducing emissions. In February 2007 he published a climate change action plan "Action Today to Protect Tomorrow" which focussed on CO_2 mitigation and on what is required to deliver the CO_2 targets in the London Plan[15]. These include a target to reduce CO_2 emissions by 60% by 2025 from 1990 levels and requirements for onsite renewable energy generation.

4.27 More recently, in August 2008, the Mayor of London published his consultation on London's Climate Change Adaptation Strategy, identifying the key risks to London and Londoners and prioritises the actions necessary to manage those risks. This has an impact on the Kingston's Energy Strategy to guide actions linked to energy demand and water management during extreme weather events. There will be a need to take consideration of environmental impacts and health risks from for example extreme heat.

4.28 In July 2008 the Mayor of London (MoL) announced an initiative to create Low Carbon Zones in London. The initiative will be managed by the London Energy Partnership with support from the MoL's office and the Greater London Authority. Low Carbon Zones aim to deliver low carbon solutions for households, businesses and public buildings through local partnerships.

4.29 Other London strategies that guide us on energy are the Mayor of London's Waste Strategy, the Air Quality Strategy and the Mayor's Green Procurement Code. Energy from Waste can include incineration with heat recovery, and refuse derived fuel.

Local Context

1.1

[15] The London Plan (February 2004) – Spatial development strategy for Greater London consolidated with alterations since 2004. Updates now managed on the website http://www.london.gov.uk/thelondonplan/

4.30 The council and its partners have committed to work in partnership to deliver a sustainable community. The Sustainable Community Strategy (The Kingston Plan) for 2008-2020 is how this will be done and is produced on behalf of Kingston Strategic Partnership (Kingston's LSP). Kingston Strategic Partnership represents a wide range of delivery organisations including the Primary Care Trust, the Council, Kingston University, the Police, Kingston First, Kingston Chamber of Commerce and Kingston Voluntary Action. The Kingston Plan (March 2009) recognises climate change as one of three principal cross cutting issues and Kingston's Energy Strategy is a mechanism to deliver some of the commitments outlined in the plan.

4.31 In our Local Area Agreement[16] we have an agreed target for reducing the carbon dioxide emissions in the borough. This is to reduce carbon emissions by 10% by 2010 compared to emissions in 2005. This means tackling carbon dioxide emissions from energy use by business, residents, the public sector and those from transport use. This and other eg national, targets can only be achieved through action and commitment by everyone. Local Authorities are expected to lead the way in achieving these targets, as Councils have more hands-on involvement with the community. However, the responsibility for acting to address Kingston's increasing energy use and the associated increase in emissions rests with the whole Kingston community. Therefore, it is essential that the community (as consumers and residents), the commercial and industry sectors as well as the Council, be actively involved in the development of the Strategy from the very beginning.

4.32 Energy demand and use will change with the changing profile of Kingston's social and economic profile. Therefore, Kingston Energy Strategy is set in the context of growth and development. This will be managed as part of the Local Development Framework, a national spatial planning regulatory framework that guides future development in Kingston. The foundation of this is the Core Strategy that will set the vision, objectives and strategic policies from 2010-2025. The Energy Strategy influences the development of energy related policies and their spatial delivery options.

4.33 All the local drivers, the Community Plan, the Nottingham Declaration, the Local Area Agreement, and the Local Development Framework are guided by the "One Kingston One Council" approach. What matters to residents is that the services they need are easily accessible, not who is responsible for delivering them. This reinforces the need for partnership working across all sectors of the borough (like the Kingston Strategic Partnership) and working effectively across all departments in the Council and linking the two. Thus the Energy Strategy highlights the need for this approach to deliver action.

1.1

[16] An agreement between central government and the Council and others ie the Local Strategic Partnership, setting out priorities for the borough.

4.34 The role of the Council is to work as a Community Leader, as a Planning Authority and as a Service Provider and Asset Holder to deliver action against the energy challenges for Kingston. However, this has to be set in the context of Kingston Council's financial situation. The Council operates under ever tighter public sector finances. For example, around one third of rent from our Council home tenants goes direct to central Government to be spent on housing elsewhere in the country. We also receive less grant from central Government than most other London boroughs which means we have to raise around 70% of our costs from Council Tax. This creates some difficult tensions. Therefore, the Energy Strategy needs to prioritise its resources to deliver clear tangible outcomes. However working in partnership to deliver action can ensure that appropriate funding from external sources is used to maximise the benefits for all parties.

5 Kingston's Energy Profile

5.1 In order to identify actions to be taken to help Kingston work towards an efficient low carbon borough, there is a need to understand in more detail where and how we use energy.

Methodology

5.2 The information for Kingston's energy profile represents national energy and carbon emissions data and is complemented by local information. The two key sources of national published statistics for the whole borough covering Domestic, Transport, and Industry and Commerce sectors are:

a) CO_2 emissions estimates published by Department of Environment, Food and Rural Affaires (Defra)[17] which is uses to monitor progress against National Indicator 186, adopted in Kingston Local Area Agreement.

b) Energy consumption data published by the Department of Business Enterprise and Regulator Reform (BERR)[18] which was given national statistics status in March 2008 covers: gas and electricity consumption from domestic sector and industry and commerce; road transport fuel consumption; and non gas, electricity and transport fuel energy consumption such as solid fuel and renewables.

5.3 Local information has been gathered from the Council and informed by stakeholder discussion. However this is not comprehensive and further work is needed to create a robust local energy and carbon emissions inventory.

1.1 _____

[17] This information should be interpreted in light of guidance provided by Defra about the accuracy and comparability of data. Ref.: Defra (18th September 2008), Local Authority CO_2 emissions estimates 2006, Statistical summary

- CO_2 emissions data for NI186 are published annually at http://www.defra.gov.uk/environment/statistics/globatmos/galocalghg.htm .

[18] This information should be interpreted in light of guidance provided by Department of Energy and Climate Change (DECC) about methodology. Ref.: DECC, Guidance Note for Regional Energy Data, PUBLICATION URN 09D/515.

- Energy data is published by local authority area annually by BERR at http://www.berr.gov.uk/energy/statistics/regional/index.html

5.4 There is scope to divide the three sectors of emission data according to stakeholder groups. For example Industry and Commerce also includes public sector emissions and comprehensive detail could be gathered regarding, for example, emissions from the Council, Schools, Higher education institutes, and the Primary Care Trust.

5.5 The data gathered from national sources can help set a baseline against which to monitor progress and further local data will inform detailed targets.

CO_2 emissions in Kingston

5.6 One baseline is the borough's CO_2 emissions data produced by Defra for monitoring NI186. The baseline year for NI186 will be 2005. The revised data from September 2008 estimates 866 kilo tonnes of CO2 were produced from the borough in 2005 from Domestic sector, Industry and Commerce, and Transport. The data also estimates that 5.63 kilo tonnes of CO2 emissions per person in the borough in 2005. The breakdown by sector for 2005 is shown in the pie chart below.

5.7 These statistics are derived from information about energy use compiled from a range of sources including BERR data, Department for Tranport data, and UK National Atmospheric Emissions Inventory. The amount of fuel used be sector is then converted to tonnes of carbon dioxide emissions. Conversion factors are used dependant on the fuel being used and a range of corrections are made to estimate emissions by local authority area. [19]

Figure 1. Kingston's CO_2 emissions for 2005[20]

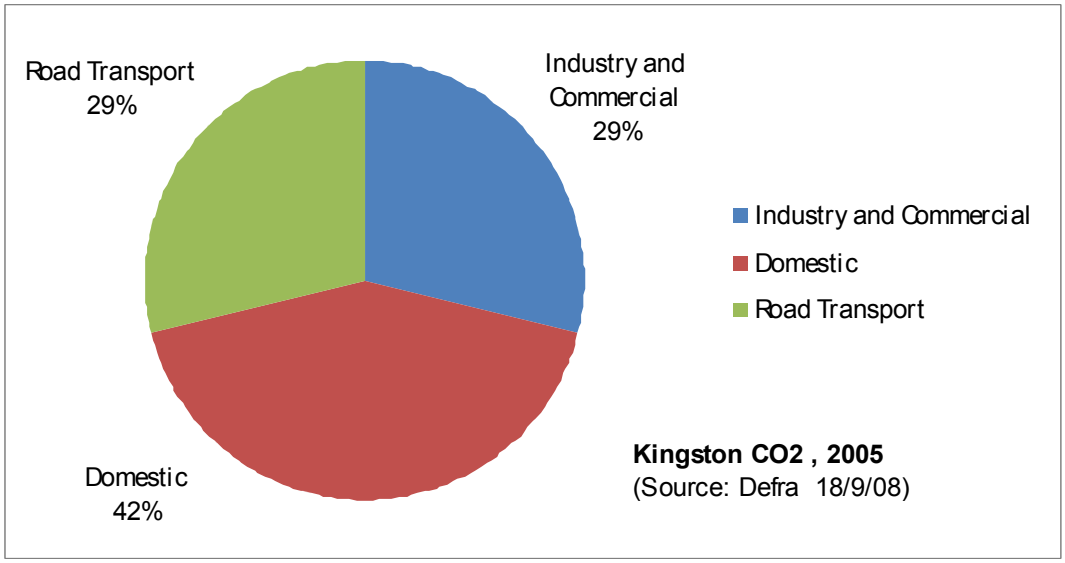
1.1 _____

[19] The statistics show emissions allocated on an "end-user" basis - the general principle here is that emissions are distributed according to the point of energy consumption (or point of emission if not energy related).

The data used for monitoring NI186 as presented here does not include emissions associated with, Motorways, EU Emissions Trading Scheme sites (except energy suppliers, e.g. power stations in the scheme, whose emissions *are* indirectly included via the end user estimates, e.g. for electricity use), Diesel railways, Land Use, Land Use Change, and Forestry.

Ref. Defra (18th September 2008), Local Authority CO_2 emissions estimates 2006, Methodology Summary

[20] 2005 & 2006 data (Microsoft Excel workbook 1.02Mb)
http://www.defra.gov.uk/environment/statistics/globatmos/galocalghg.htm



5.8 The data estimates that the majority of emissions in Kingston are from the domestic sector representing 42% of CO_2 emissions in 2005. This indicates that addressing energy use from housing is an important area to focus activity.

5.9 The local authority statistics now include consistent figures for more than one year – 2005 and 2006. The current data was published in September 2008 and supersedes the previous publication since improvements in the quality of the input data. See table below.

Table 4. Comparison between 2005 and 2006 CO_2 for Kingston

End User	CO_2 emissions (kton CO_2) (published 18.9.08)		Approx. Difference between 2005 and 2006
	2005	2006	
Domestic	363	366	+3 kton CO_2
Industry and Commerce	248	255	+7 kton CO_2
Transport	254	243	-11 kton CO_2
Total	866	866	=
Population (thousand)	153	155	+2 thousand
Per capita CO_2 emissions	5.63	5.55	-0.08 kton CO_2 / capita

5.10 Despite the improvements made since 2007, current estimates to 2006 are not perfect. They stretch the information available to the limit in order to provide estimates for each authority. For example, most relevant for Kingston is that road transport emission estimates rely on national traffic statistics, and distribution of traffic on minor roads has had to be imputed at local level from regional level data.[21]

5.11 RBK has one of the lowest carbon emission rates in London, it ranks 13th out of thirty-three, on a per capita basis, with 5.55 tonnes per capita being emitted in 2006. This is still well below both London (6.60 t CO_2) and the United Kingdom (8.78 t CO_2) per capita emission rates, however it suggests that there is a lot that can be done within the borough to reduce energy use, improve energy efficiencies and sustainable transport alternatives, develop and support renewable energy technologies and associated infrastructure, and encourage behaviour change.

Local supporting data

5.12 The local data looks in more detail at the composition of the borough and draws on national energy data from Defra and BERR to indicate how energy is used by different sectors.

Domestic

5.13 The two main sources of fuel consumption are electricity and gas resulting in CO_2 emissions. The majority of emissions are generated by gas consumption representing approximately 55% of emissions from the domestic sector in 2005. See table below.

Table 5. Kingston Upon Thames CO_2 emissions from the Domestic Sector[22]

DOMESTIC SECTOR	CO_2 emissions	
	2005	**2006**
Electricity	153	159
Gas	203	201

1.1

[21] Ref.p6. Defra (18th September 2008), Local Authority CO_2 emissions estimates 2006, Statistical summary

[22] 2005 & 2006 data (Microsoft Excel workbook 1.02Mb) http://www.defra.gov.uk/environment/statistics/globatmos/galocalghg.htm

Oil	2	2
Solid fuel	1	1
House and Garden Oil	1	1
Products	4	4

5.14 However in terms of fuel consumed the 203ktones of CO_2 emissions represents approximately 1145GWh worth of gas consumed by the households in the borough in 2005. The main use of gas in the home is for heating and hot water. Therefore improving the ability of a house to retain heat and have a more energy efficiently heating systems is an important area for action in the borough. See table below

Table 6. Domestic Sector Electricity and Gas consumption in 2005 and 2006 in Kingston upon Thames

DOMESTIC SECTOR	**Energy Consumption (GWh)**	
	2005	**2006**
Electricity[23]	296	294
Gas[24]	1145	1109

5.15 Understanding the energy performance of a building can indicate where action is needed in the existing housing stock.

5.16 The borough now has a total of approximately 63,000 existing properties. Of these 56,000 (89%) are in the private sector and the rest are split between council housing stock (4,852 or 8%) and Registered Social Housing Landlords (2,045 or 3% managed by approximately 30 different RSLs). The majority of these properties are built before 1965 and so are mainly detached and semi-detached houses, with 34 percent being reported as having solid walls – therefore are considered hard to treat properties when implementing energy efficiency measures.

1.1 _____

[23] December 2008: Regional and local authority electricity consumption statistics: 2005, 2006 and 2007 (Microsoft Excel workbook 287KB) File: URN 08/487c, from http://www.berr.gov.uk/energy/statistics/regional/regional-local-electricity/page36213.html

[24] 31st March 2009: Gas sales and numbers of customers by region and local authority: 2005, 2006 and 2007 (Microsoft Excel workbook 327KB) File: URN 08D/P55c/REV1, from http://www.berr.gov.uk/energy/statistics/regional/regional-local-gas/page36200.html

5.17 The energy performance of housing is measured according to the SAP rating (Standard Assessment Procedure)[25]. The 2008 sample mailing by the Energy Saving Trust indicates that the overall efficiency of the housing stock is 58 SAP points, with an average SAP rating of 58 for social housing, 56 for private owned and 50 for private rented accommodation. However, the Council's own housing stock represented a higher performance with a rating of 62 SAP points.

5.18 It is important to be aware the 12th HECA Report for Kingston indicates that averages of 14% of private sector properties per ward (16 wards) have a SAP rating below 35. [26] This information can help target the most inefficient homes in the borough.

5.19 In addition Kingston has an average household size of 2.34, single person households form the largest group (32%), with 13% being lone pensioners, followed by couples with dependent children (21%) and couples with no children (17%). This is important to consider when targeting advice and understanding how and when energy is used by residents in the borough. [27]

5.20 The emissions and energy consumption in the domestic sector in the future also needs to take into account the housing targets set in the London Plan to deliver 3850 new homes in the borough 2007- 2017, equivalent to delivering approximately 385 homes per annum until 2017 and thereafter until a further target is set.

5.21 The housing information is important in targeting the existing housing stock, setting policy for new housing and targeting those in fuel poverty.

Transport

5.22 The two main fuels consumed by transport are petrol and diesel. The majority of emissions are generated by petrol consumption representing approximately 57% of emissions from the Transport sector in 2005. See table below.

Table 7. Kingston upon Thames CO_2 emissions from the Transport Sector[28]

1.1

[25] SAP Rating: Standard Assessment Procedure – method to assess the energy efficiency of homes based on energy costs associated with space heating, water heating, ventilation and lighting. This is measured on a scale of 1 to 100 with 1 being highly inefficient and 100 being highly efficient.

[26] RBK (2009), 12th HECA Report, Ref. p22 Energy Saving Trust's (March 2009), RBK Local Area Emissions Reduction Report: Recommendations Report

[27] Ref. p9 RBK (April 2009), Core Strategy Consultation

[28] 2005 & 2006 data (Microsoft Excel workbook 1.02Mb) http://www.defra.gov.uk/environment/statistics/globatmos/galocalghg.htm

TRANSPORT SECTOR	CO_2 emissions	
	2005	**2006**
A-Road Petrol	84	77
A-Road Diesel	58	51
Minor Road Petrol	61	58
Minor Road Diesel	50	50
Road other	1	1

5.23 In terms of the fuel consumer the road transport data from BERR is divided into several sources and is summarised as personal and freight. Of these, personal transport consumes the most fuel representing approximately three quarters of fuel consumed by the transport sector. Therefore personal travel by residents, commuters and visitors to the borough are core groups to be targeted.

Table 8. Transport Sector fuel consumption in 2005 and 2006 in Kingston upon Thames

TRANSPORT SECTOR	Fuel Consumption (thousand tonnes of fuel) [29]	
	2005	**2006**
Personal	53.0	51.6
Freight	16.9	16.8
Total	**69.9**	**68.4**

5.24 Kingston's Transport Plan indicates that well over 80% of the borough's residents have easy access to a car. Although it is reported that 52% of trips in the borough, based on the 2001 London Area Travel Survey, are made by vehicles and 29% are made on foot ie many are short journeys.

5.25 Key features of the borough's transport networks include[30]:

1.1

[29] June 2008: Regional and local authority road transport consumption statistics: 2005, 2006 (Microsoft Excel workbook 243KB) File: URN 08/443c, from http://www.berr.gov.uk/energy/statistics/regional/road-transport/page36199.html

a) a strategic road network, including the A3 Kingston by-pass, that carries high levels of traffic passing through the borough as well as local traffic and has a significant influence on the local environment

b) good rail services on the South West Trains mainline via Surbiton, but relatively poor suburban services on the Kingston loop, Shepperton, Hampton Court and Chessington lines

c) a comprehensive bus network provided by Transport for London (TfL) London Buses, but poor cross-boundary bus services to Surrey Districts resulting in high car use to and from these areas

d) a comprehensive network of cycle routes (part of the London Cycle Network)

e) several strategic walking routes including the Thames Path National Trail and the Hogsmill Valley Walk, which is part of the London Loop.

5.26 Kingston transport features need to be taken into consideration when targeting future action to improve existing sustainable transport options and when considering providing cleaner transport fuel, and analysing emissions and fuel use in the borough.

Industry and Commerce

5.27 Industry and Commerce includes the retail sector and the public sector such as the Council and Schools. The employment figures in the borough also indicate the profile of energy demand in the borough. In 2006 there were approximately 86,000 jobs in the borough, with high proportions in business activities, finance and IT (41%); distribution, retail and catering (23%) and public administration (21%).

5.28 In general the Defra data indicates that the two main sources of emissions are electricity and gas. However unlike the domestic sector the majority of emissions are generated from electricity consumption representing 72% of emissions from Industry and Commerce in 2005. See table below

1.3

[30] Ref. p10 RBK (April 2009), Core Strategy Consultation

Table 9. Kingston upon Thames CO_2 emissions from Industry and Commerce[31]

INDUSTRY & COMMERCE SECTOR	CO_2 emissions	
	2005	**2006**
Electricity	179	190
Gas	55	51
Oil	2	2
Waste and Biofuels	1	1
Industry off road	10	10
Diesel Railway	1	1

5.29 The intensity of electricity demand reflects the changing economic profile of the borough. Over the past 20 years the economy has transformed from a manufacturing sector base to one based on business and service industries and the public sector.

5.30 The actual energy consumption of gas and electricity as reported by BERR is about equal, 347GWh of electricity and 309GWh of gas. This indicates that electricity generates more CO_2 emissions than gas. Therefore it is important to consider how the electricity demand can be managed and how supply can be decarbonised – generate less carbon per unit of energy produced.

Table 10. Industry and Commerce Electricity and Gas consumption in 2005 and 2006 in Kingston upon Thames

INDUSTRY & COMMERCE	Energy Consumption (GWh)	
	2005	**2006**
Electricity[32]	347	347
Gas[33]	309	285

1.1

[31] 2005 & 2006 data (Microsoft Excel workbook 1.02Mb) http://www.defra.gov.uk/environment/statistics/globatmos/galocalghg.htm

[32] December 2008: Regional and local authority electricity consumption statistics: 2005, 2006 and 2007 (Microsoft Excel workbook 287KB) File: URN 08/487c, from http://www.berr.gov.uk/energy/statistics/regional/regional-local-electricity/page36213.html

5.31 Kingston Town Centre, one of 11 metropolitan centres across London, is the borough's main commercial centre and a sub-regional shopping centre. In addition to this there are the three district centres of Surbiton, New Malden and Tolworth which cater for more everyday needs.

5.32 Outside the main centres, there are nine Industrial/Business/ Warehouse areas providing a range of business premises and employment opportunities. This includes: Chessington Industrial Area, Barwell Business Park, Silverglade Business Park, Red Lion Business Centre, St Johns Industrial Estate, St. Georges Industrial Estate, Canbury Park Business Area, Fairfield Industrial Area, Kingsmill Business Park.

5.33 There is a cluster of offices along London Road in Kingston, plus numerous sites across the borough, particularly along the main roads, representing some of the boroughs Small and Medium Enterprises (SMEs).

Public Sector

5.34 Kingston has significant public sector services providers, some of which fulfil a sub-regional role. Public Sector organisations with an impact on a wide range of buildings and fleet assets include:

a) Kingston Council: Offices, schools, leisure service, care homes, fleet, and street lighting

b) Surrey County Council Offices, Penrhyn Road

c) Kingston Hospital, Kingston Hill

d) Kingston University: lecture facilities and student accommodation

e) Kingston College

f) County and Crown Courts

The Council's Energy Use

5.35 The Council itself will establish a comprehensive emissions inventory as part of its statutory duty to report on NI185.

1.3

[33] 31st March 2009: Gas sales and numbers of customers by region and local authority: 2005, 2006 and 2007 (Microsoft Excel workbook 327KB) File: URN 08D/P55c/REV1, from http://www.berr.gov.uk/energy/statistics/regional/regional-local-gas/page36200.html

5.36 Data for 2007 indicates Council expenditure on energy including schools was £2million of which schools represented 37 per cent. In 2007 the total energy consumption for RBK corporate sites and schools was just under 42,000,000kWh for electricity (metered and un-metered), gas, oil and water.

5.37 Current data is available for the corporate energy consumption and street lighting (which represented un-metered electricity) for fuel consumption of electricity, gas and oil for 2007 and 2008.

Table 11. Kingston Council's energy consumption for 2007 and 2008 (excluding schools)[34]

Utility	2008		2007	
	Consumption	Cost	Consumption	Cost
	kWh	£	kWh	£
Electricity	7,257,242	533,126	7,380,225	511,081
Electricity- unmetered supplies	5808542	539631	5719607	476789
Gas	9959333	323650	10,582,493	193,367
Oil	469000	23390	483,541	17,990
Total Energy	**23,494,117**	**1,419,797**	**24,165,866**	**1,199,227**

Percentage Change year on year	**-2.78%**	**18.39%**

5.38 The biggest energy consumer is Guildhall 2, council offices which represents 15% of the council's total energy consumption. Two thirds of this is for gas consumption indicating a high heating demand.

5.39 Street lighting represents approximately a quarter of the Council's energy consumption. However, this is a well managed department where energy efficiencies and carbon savings are being made despite an increase in lighting demands in the borough.

5.40 Schools represent 46% of the Council's monitored energy consumption. This represents the majority of Kingston's 48 State Schools which includes 35 primary schools, 10 secondary schools, and 3 special schools. These encompass community schools, religious schools, foundation schools, and voluntary aided schools. The majority of fuel use monitored for these schools is gas accounting for approximately

1.1 _____

[34] Date file produced by NPS for RBK (February 2009), Consumption and cost data for 2007 and 2008, (Microsoft Office Excel file)

three quarters of their energy consumption. This indicates that there is a high demand for heating and hot water.

5.41 In addition there are 6 independent schools for which the Council does not have energy data for.

Renewable and Local Low Carbon Energy in the borough.

5.42 The data for the number of renewable or low carbon energy generation in the borough is not comprehensive, however below are a few examples from both the private and public sector:

a) Chessington Community College has 32 Photo Voltaic (PV) panels on the roof and a heating system run by a biomass boiler fuelled by wood pellets installed in 2008. The PV system consists of 32 x 215Wp Sunpower modules (monocrystalline), giving 6.88kWp total. Predicted kWh generation / year is 5400 (obtained using Standard Assessment Procedure). The panels should generate in the order of 5400kWhrs of electricity, the savings will depend on how much the school are paying for their electricity. At a notional 6p/kWhr this would equate to £325 per year.[35]

b) Five 8kW panels solar thermal panels were installed at Hugh Herland House, sheltered accommodation site in Portland Road, Kingston (50% grant funded from Clear Skies) in Feb 2004. Two more were installed at Saxson House, Kingston and Four Oaks, Chessington Council social housing stock following the success of Hugh Herland House.[36]

c) Kingston Hospital, NHS Trust, Kingston Hill installed a Combined Heat and Power unit in December 2007 providing heating and cooling for the Kingston Hill site. During the first year the plant helped reduced the Trust's carbon dioxide emissions by some 4,000 tonnes.[37]

d) The Thames Water sewage treatment works generates electricity from methane produced on site.

1.1

[35] RBK, Children Families and Learning Services

[36] RBK, Housing Services

[37] Kingston Hospital NHS Trust Press Release (January 2009)

5.43 Further research would help to uncover more installations and engagement with stakeholders will be important to monitor the real time performance of new technology.

6 Kingston's Energy Strategy Objectives

6.1 The Energy Strategy for Kingston upon Thames is co-ordinated by the Council for the borough. The strategy aims to achieve a socially and economically vibrant borough, manage the development of infrastructure and buildings in the borough, and manage the Council's own operations and assets to demonstrate good practice, while addressing the energy challenge.

6.2 Therefore, the Energy Strategy presents an approach that considers three roles for the Council; that of Community Leader, Planning Authority, and Service Provider and Asset holder.

6.3 These represent the need to work with others to deliver action across all sectors – as a community leader. Manage and plan the built environment through planning policy and spatial options – as a planning authority. Finally, the Council must lead by example and demonstrate implementation of energy improvement measures through its own operations and asset management.

6.4 In establishing objectives for each of these roles, particularly for those relating to community leadership and the planning framework we have engaged with representatives of key sectors – business, retail, education, housing, health, developers, and energy efficiency advice providers – to provide a framework to help them and us move to an energy efficient and low carbon borough. To achieve success it will be important for the Council to work together with its partners and others, and particularly with Kingston Strategic Partnership and the organisations it represents, through networks of common interest. An annual/biannual energy and climate change forum would link these networks.

Energy Strategy Principal Objectives

6.5 The Energy Strategy sets out 20 principal objectives for the three roles of the Council; 8 for community leadership, 5 for our responsibilities as a planning authority, and 7 for delivering services and managing our own assets. The principal objectives provide the long-term direction of the strategy to 2020.

6.6 The roles for the Council can also be applied to other organisations to help them recognise the actions that be taken. The role of asset holder and service provider applies to for example Higher education institutes and the objectives can guide the actions undertaken and reported.

The Council as a COMMUNITY LEADER

As Community Leader the Energy Strategy recognises that action cannot be delivered in isolation, all sectors of the community will contribute, and in doing so much of the action demonstrates the council working in partnership.	
Principal Objective	**Description**
1. Reduce CO_2 emissions arising from energy consumption by all sectors (Domestic, Industry and Commerce, and Transport.)	The demand for energy to support the economy and well being of Kingston is likely to remain strong. Meeting this objective will ensure that we do not compromise our efforts on climate change mitigation and will support our commitments to the Nottingham Declaration on Climate Change
2. Increase energy and water resource efficiency	Kingston is a well established economic and residential community. Improved energy and water efficiency is the most effective way to reduce the demand for and cost of energy. Energy is used for sewage and water treatment; to pump supplies; and for cooling and heating water. Greater water efficiency can reduce the demand for energy.
3. Increase the proportion of purchased and generated energy from renewable and clean alternative energy sources	This will reduce dependence on fossil fuels imports. It will also build the demand on which the technological development of renewable and clean alternative energy sources depends, and which leads to lower costs.
4. A local research and development network with educational institutions, businesses and industry to develop local evidence and best practice.	Kingston is fortunate to have a University and a College of Further Education. Together with business, local industry and schools we can accelerate local knowledge and opportunities through such a network.
5. A local labour and skills capacity to raise awareness and deliver energy improvements.	The delivery of energy efficiency measures and new renewable technologies can be held back by a shortage of knowledge and skills. Developing a labour and skills capacity will provide employment opportunities and help meet our other objectives.
6. Opportunities to make best use of support and finance for investment in energy awareness and energy improvement programmes.	There is support and finance available for energy efficiency, renewables, and infrastructure for both the private and public sectors; and for domestic properties. Access to and benefit from these resources can be improved through joint projects, combining

	funding, and improving knowledge.
7. More members of the community committed to take personal responsibility for their energy use and carbon emissions.	Personal responsibility leads to action and the behaviour change needed to tackle the energy problem and climate change.
8. Action to alleviate fuel poverty.	Kingston is an affluent borough. However there are pockets of deprivation. This objective will ensure that all people have access to affordable warmth and the energy to meet basic needs.

The Council as a PLANNING AUTHORITY

The Council recognises the pressures from increasing population and the need to provide housing, services and infrastructure. The Energy Strategy seeks to influence planning to manage future growth and provide infrastructure that minimises impacts from energy use and supports opportunities for local clean renewable energy.

The Council as Planning Authority provides the regulatory framework to set robust and challenging policy to meet the development needs. This will be set in the development of the Local Development Framework and the Core Strategy that takes Kingston from 2010 to 2025. The aim is to support the development and delivery of robust and challenging policy in the Core Strategy and provide spatial options that can ensure delivery.

Principal Objective	**Description**
9. An evidence base to support the Local Development Framework policies on climate change	To support local policies and initiatives evidence needs to be provided on energy demand, development opportunities and technology options.
10. Increased renewable and clean alternative energy capacity and infrastructure.	There are targets set nationally and by the Mayor of London that Kingston needs to meet. These include ▪ identifying opportunities in new development to provide a range of renewable technologies. ▪ developing policy to guide retrofit technology for existing buildings and ▪ developing policy to create local

	energy networks for new and existing development. ▪ monitoring performance of renewable technology in the borough to meet targets.
11. The development of low carbon areas.	The Mayor of London is promoting this approach to target specific areas with a range of measures that suit the local need. For example this could include areas where the need to address fuel poverty is the main issue.
12. High standards of energy performance from sustainable design and construction, of new and existing buildings.	The built environment offers significant potential for low carbon development and to design buildings to minimise the need for heating and cooling.
13. Low carbon transport infrastructure and sustainable transport provision.	Energy use from transport is significant and the planning system can influence the need for transport and well as the type of transport used.

The Council as a SERVICE PROVIDER AND ASSET HOLDER

The Council will work across all departments to ensure the best service is provided with minimal energy impacts by staff and operations, and the Council will deliver asset improvements to its building and fleet.

The aim is to embed the principles of the energy hierarchy (use less, use it efficiently, use renewable and cleaner sources of energy, and get more from conventional generation) into the Council's working ethos, strengthening policy, staff commitment to addressing energy in the office and through their services and a programme of energy and water management.

Principal Objective	**Description**
14. A local authority that leads by example to follow the energy hierarchy.	To demonstrate responsibility and to provide evidence for others.
15. A management plan and investment programme of asset and fleet improvement applying best value principles.	To identify and prioritise the most effective action.

16. Increased staff awareness, training and accountability for energy use and travel choices.	Simple measures such as switching off computer monitors and planning work journeys more efficiently can have a significant cumulative effect on energy consumption in an organisation.
17. The attribution of responsibility and accountability of energy use to Council services.	This can shift the focus from providing a particular service to providing a service that is energy and carbon efficient. It will allow us to identify the energy and carbon cost of a service; reward good practice and target high energy services for action.
18. The assessment of building energy and transport implications in decision making for service delivery and capital investment.	There may be alternative ways to deliver a service which are more energy efficient while maintaining the core purpose of the service.
19. A procurement process that applies best value principles to ensure energy and transport impacts are accounted for.	Many of the Council's services, such as waste collection, school transport, and leisure centres are delivered through partnership contracts. We also commission the new buildings or refurbishments.
20. Use opportunities to increase energy generation from Council assets and contracts.	Land and buildings may be suitable for a number of small or medium scale renewable or clean energy technologies – solar, wind, ground source heat pumps or local heat networks.

Milestones to success

6.7 To achieve the vision and objectives of the Kingston's Energy Strategy a selection of activities have been highlighted in the table below to guide the direction of action to 2020. These are divided into short medium and long-term aims.

6.8 These will contribute to implementing the Energy Strategy objectives by providing

a) accurate baseline data from which to measure progress against

b) clear indicators and targets with timeframes for achieving improvements

c) adequate resources in terms of expertise, co-ordination time, and financial support

d) a partnership approach critical to ensure stakeholders support action and resources are used efficiently for most benefit

6.9 And will be underpinned by:

a) ongoing advise, education, and training is provided to ensure the most appropriate solutions are being applied

b) accessible communication methods to engage with the community and our stakeholders to share resources and provide support to others to contribute to delivering actions.

6.10 The implementation of the Energy Strategy will take account of consultation comments and ideas which showed particular support for the:

a) attribution of responsibility and accountability

b) need for partnership and networks

c) key role that spatial planning policies can play

6.11 In addition to the consultation the Council applied and were successfully accepted onto the Energy Saving Trust's (EST) One-to-One Support Programme to help inform the priority actions for the Energy Strategy. This involved an assessment of the Council's sustainable energy performance in four key areas: Strategic approach, Services, Community Leadership, and Own Estate. The outcome was a recommendations report guiding actions the Council can take to become a higher performing authority in providing leadership on the sustainable use of energy. The assessment process highlighted the Council is performing most strongly with regards to its overall strategy for tackling climate change and sustainable energy but has opportunity for improvement in all areas, especially in terms of the Council's Own Estate and Service areas such as the domestic sector. The EST recommendations will inform the implementation of the Energy Strategy and help meet the objectives of the Energy Strategy.

Short (2009/10, 10/11, 11/12	**Medium 2015**	**Long-term 2020**
Form a Partnership agreement to work towards achieving the objectives of Kingston's Energy Strategy, agree to contribute energy and emissions data to set a	A partnership that represents the major energy users in the borough, large businesses and the majority of Small Medium Enterprises.	A Partnership which is making significant progress towards its long-term CO_2 reduction targets and is addressing the range of environmental, economic and social issue

local accurate baseline and monitor progress, agree a CO_2 target for the partner organisations.		raised in the Energy Strategy.
Set up a web-based forum for the Partnership to log data and share good practice.	A data base of accurate, meter read energy data from the Partnership on a quarterly basis used to report annual progress and inform priorities.	A data set of renewable energy sources in the borough and actual energy generation monitored and reported on a quarterly basis.
Develop a Climate Change Strategy with an agreed CO_2 target for the whole borough beyond the year 2010	Climate Change adaptation and mitigation considered in the energy priorities for the borough	The Energy Strategy forms a corner stone of climate change actions delivered within the Royal Borough of Kingston
The Energy Strategy objectives and Climate Change issues are clearly reflected in Kingston's Local Development Framework	The Supplement to Planning Policy Statement 1 on Planning and Climate Change is clearly delivered through planning policy and investment	Kingston's LDF Policies are enforced in new and existing building projects, and infrastructure projects for transport and energy
Domestic sector emissions data is mapped and updated annually with local information of building type, age and thermal performance, and information on investment in energy measures, those in fuel poverty and at risk of fuel poverty to help target action	Majority of cavity and lofts to be insulated in the borough. Hard to treat properties targeted with a phased programme of measures to improve energy performance	The borough is actively delivering a co-ordinated programme of "whole house" measures to improve the energy performance of the existing housing stock that includes advice, insulation, real-time energy monitoring, fixtures and fittings, appliances, and alternative energy technology.
The Council is leading the delivery of actions by setting an accurate energy and CO_2 emissions baseline for the Council, agreeing a Council CO_2 emissions reduction target, and committing to a programme of investment of energy improvements to Council assets and Service delivery	The Council demonstrates a portfolio of assets with considerable improvements in energy and carbon performance	The Council is committed to delivering innovative solutions to meeting its CO_2 targets.
The Energy Strategy objectives are supported by a range of local	Local training is provided to improve the skills base in the borough of energy	Local jobs are created to deliver energy infrastructure, building

educational and research institutes	experts	improvements and related energy services.
The Council and its partners are informed of and assisted to take advantage of all appropriate local, regional and national funding to implement energy and carbon improvement measures	The Borough has a invest to save fund for implementing innovative improvement measures	The Borough is generating money from energy services and reinvesting in ongoing activity.

7 Implementation of the Energy Strategy

Introduction

7.1 Kingston's Energy Strategy will be co-ordinated by the Council on behalf of a wider partnership, of which the Kingston Strategic Partnership will be the core.

7.2 The Strategy is expected to last until 2020 in line with the Sustainable Community Strategy. It will be supported by a three year rolling programme to deliver projects and achieve tangible changes – these will be presented in annual implementation plans (AIP).

7.3 Projects will be developed in partnership with other organisations and fed into the AIP; where appropriate actions will be targeted at Neighbourhood level to ensure focus, community ownership and partnership working.

7.4 A hierarchy of governance will allow for accountability and leadership to the community and within the Council. The role of the groups within the governance structure is to develop, prioritise and deliver actions for the AIP. This will involve working in partnership with internal and external stakeholders and partners to

a) seek expert advice and recommendation that will inform the establishment of SMART targets (Specific, Measurable, Attainable, Realistic, and Timely),

b) secure commitment from partners to work towards the targets

c) and ensure partners deliver action

d) progress is monitored and evaluated.

AIP Proforma

7.5 To meet the objectives of the Energy Strategy a proforma has been created to ensure actions identify process, indicators to assess performance and the person responsible for delivery. It is anticipated that this will be used by internal and external organisations to report proposed actions.

7.6 When detailing an action the proforma recognises that an action may link to more than one objective, require working with other organisations and partners and links to other existing strategies.

7.7 In monitoring progress the proforma requests indicators for carbon dioxide emissions and energy consumption/generation, were this is not

possible it is important to identify other indicators and outcomes to assess the success of a project.

Reporting

7.8 An AIP will be published each year and will contain plans for the next three years; actions are in detail for the first year and in outline for the next two years. In addition progress against actions will be collected biannually to inform the following year's priorities.

7.9 Within Kingston Council, Directorates are expected to included actions presented in the AIP Proforma in their Service Plans. This ensures that energy actions are incorporated into service delivery and officer capacity is given to deliver action and report progress.

7.10 Officer time will be required to liaise with internal and external partners to develop actions and collate progress information.

Monitoring

7.11 In the progress reports specific energy and carbon emissions data can be monitored and used to inform priorities for the Council. This information can be gained as part of the Council's Local Performance Framework to report on National Indicators.

7.12 The adoption of NI 186: per capita CO_2 emissions in the Local Authority area, in the LAA is a reflection of the priority in the Kingston Plan to tackle climate change. The Energy Strategy encompasses actions that provide carbon dioxide (CO_2) emissions saving within Kingston. Action in the AIP helps implement and monitor progress against the NI 186 target and provides evidence for the Comprehensive Area Assessment for performance monitoring.

7.13 The Council can provide direct emissions data as part of annual reporting for NI185 carbon emissions from local authority operations, as part of the Council's statutory requirement. The information gathered can contribute to establishing a baseline for the Council against which to set targets and improve performance as Community Leader and as an Asset holder and Service Provider for the Energy Strategy AIP.

7.14 Individual organisations will be encouraged to monitor energy and carbon to allow opportunities to be identified and investment priorities made.

7.15 Through a partnership agreement to monitor and share energy and carbon emission information from other organisations in the borough a more detailed picture of energy consumption and carbon emissions can be gained to help prioritise actions to meet the energy strategy

objectives. (see London Borough of Islington example: Climate Change Partnership)

Example 1. Islington Climate Change Partnership baseline data study

- Islington Strategic Partnership has adopted a borough-wide carbon reduction target of 55,000 tonnes of C02 by 2010, as part of its Local Area Agreement with the Government. To achieve this target, a unique local Climate Change Partnership has been established.
- As part of setting up the partnership two workshops were held. The first event introduced partners to the process and secured their commitment to share their energy use and carbon emissions data. This data was then collected and analysed by the Centre for Sustainable Energy (CSE) using the Chartered Institution of Building Services Engineers (CIBSE) benchmarks to identify likely areas for carbon reduction. Overall the Partnership captures many of the large carbon emitters in the borough. The data collected by CSE represents about 10% of all emissions from Islington, approximately half of which are related to energy used by the Council.
- The outcome of the second workshop was a decision by the Partnership Steering Group to adopt a Partnership emissions reduction target of 15% by 2010, along with a strategy to increase membership such that the Partnership would represent baseline emissions of 125,000 tonnes CO_2. Taken together, these measures mean that the Partnership's 15% target equates to 18,750 tonnes CO_2, or 1.76% of Islington emissions in 2005.
- There are now are over 100 Islington organisations from all sectors including public, private and voluntary that have pledged to reduce their carbon dioxide emissions by 15% by 2010.
- This would not have been possible without the support of the council and the wider Strategic Partnership. However, for these potential reductions to be realised, this support needs to be guaranteed for the long term. It is therefore important that both the council and the Strategic Partnership create certainty by making a clear long-term commitment to support the Islington Climate Change Partnership, including the provision of adequate staffing and project resources.

Ref. Centre for Sustainable Energy, Islington Carbon Baseline Study, (Sept. 2007)

Partnership

7.16 The Energy Strategy can not be delivered by the Council alone.

Box 4. Kingston Plan Vision, Theme 1. A Sustainable Kingston: protecting the environment for us and for future generations.

"There will be a reduction of greenhouse gas emissions through a shift to low carbon energy, energy efficiency and the use of renewables. There will be less use of cars, better provision for non far modes of transport, safer roads and improved air quality. New built developments will be car more energy efficient than the past. Opportunities for the use of renewable energy will be taken where feasible, and new homes will be carbon neutral"

7.17 The Kingston Strategic Partnership has a responsibility to deliver the Kingston Plan and the supporting LAA targets. To that end it will be part of the Energy Strategy delivery mechanism to establish a working relationship with the KSP and its delivery groups to embed the energy strategy objectives in their service delivery and operations. The KSP will be engaged to form the foundation of an Energy and Climate Change Partnership as the representatives can support increased involvement by others in the community by initially demonstrating Community Leadership.

Example 2. Camden Climate Change Alliance

The success of the Alliance depends upon the enthusiasm of its members and their willingness to share their knowledge and real experiences of carbon reduction

Organisations that wish to join the Camden Climate Change Alliance will be asked to sign the Climate Commitment. As a member the organisation commits to make a positive contribution towards achieving a joint carbon emissions reduction target for the London Borough of Camden.

In return for the organisations commitment and involvement the Camden Climate Change Alliance:

- Support the process of quantifying member's carbon footprints.
- Help members of the Alliance to identify practical emissions reduction measures and set a realistic target.
- Organise events to share best practice and to introduce new carbon reduction solutions.
- Hold workshops to build the capacity of members to manage and reduce their emissions.
- Manage an information resource to share case studies, register emissions reductions, and keep members informed of new developments.

As part of the alliance organisation can: Put forward examples, take part in workshops, speak at events, provide facilities, and taking part by supporting the alliances activities and providing feedback.

The Camden Climate Alliance has a team of 5 Council Officers and an advisory team including a leading Council Officer as Chairperson and 4 Members.

7.18 The role of a Kingston Energy and Climate Change Partnership would be to:

a) Adopt a long-term carbon reduction target based on achievable measures, provide data to update Kingston's Borough's emissions inventory and monitor progress

b) Encourage and support members to draw up action plans to meet the targets including the Council.

c) Establish data monitoring procedure

d) Establish an Energy Manager network / forum: Key energy contacts at each site would greatly benefit from a network or forum where ideas and experiences could be shared across the Partnership. This could take the form of a webhosted forum or regular meetings/seminars covering topics of interest and concern.

7.19 A Climate Change and Energy Partnership would drive action to firstly establish accurate baseline data to support the Defra statistics for NI186 for the borough and lead to a co-ordinated approach to tackle climate change. This is strengthened by the Council's commitment to develop a Climate Change Strategy in 2009 under the Nottingham Declaration.

Proposed Governance

7.20 The governance of activities within the scope of the Energy Strategy is proposed as a three tier hierarchy: a member officer committee, a corporate steering group, project / delivery steering group.

The Member Officer Group

7.21 The Member Officer Group would include cross political party representation and Service managers responsible for delivery and expertise in topics such as Procurement, Transport and Planning. There could be potential to include external partners or stakeholders. The group would champion projects in the community and steer priorities. The administration of the group would be best provided by democratic services and capacity would have to be found. (see London Borough of Camden example: Cross Party Task Force)

Example 3. Cross Party task force Camden

The Sustainability Task Force is an all-party body of councillors concerned about climate change and the end of cheap oil. The Task Force supports Cllr Alexis Rowell, Camden's Eco Champion. Meetings are held approximately every 2 months in the evening and are open to all.

The Corporate Steering Group

7.22 The Corporate Steering Group would include representatives from all Directorates and disseminate Energy Strategy priorities to their Directorates and assist in the co-ordination of project involvement at Service level.

Internal Contacts

7.23 Internal operational teams will continue or will be engaged to inform decision making in service delivery. For example schools will be

consulted on the delivery priorities in the AIP through the Schools Premises Consultative Team, the Head teachers' Partnership Board, and the Governors' Report. This structure of information sharing ensures there is understanding within the Council's assets management team. In parallel information is shared with the Schools as budget holders and the Governors as those that can determine the direction and priorities for the school.

7.24 Many Council services are provided by third party contractors. To deliver ongoing improvement in energy performance from service delivery and asset management a dialogue with the Council's Contractors (those that provide the service and technical expertise) and their internal client officers (those that manage the scope of service required) needs to be used more effectively. The aim is to build on the existing partnership with contractors to allow Directorates to make informed decisions on investment and service provision with appropriate technical input from the Contractors and client officers.

Project / Delivery Steering Groups

7.25 Project Delivery Groups would evolve with project priorities. For example project teams could include the Fuel Poverty focus group, the Energy Saving Trust One-to-One Support Programme Operation Team, and the Carbon Trust's Local Authority Carbon Management Team. Within the groups council officers and/or external organisations take ownership of ensuring projects are delivered from start to finish and resources are secured for an organisation to take responsibility for ongoing management and reporting.

Proposed networks

7.26 Below is an outline proposal of three delivery networks that could aid the implementation for the Energy Strategy: the Fuel Poverty Focus Group, a "renewables" network, and a voluntary staff Energy Green Team in the Council.

7.27 The Fuel Poverty Focus Group established as part of the consultation phase for the Energy Strategy met a second time in January 2009 to develop a framework for future action on fuel poverty in Kingston. It will be important to continue engagement with those original strategic partners and allow the group to influence and co-ordinate the different types of activity that will be necessary to tackle fuel poverty in Kingston. The benefits of the group and the possible fuel poverty strategy that will follow are outlined in Box 2.

Box 5. Fuel Poverty Focus Group: the benefits of a co-ordinated approach

The benefits of a well-planned, organised and implemented strategy for fuel poverty can help local authorities to:

- Raise general awareness of fuel poverty and affordable warmth issues.
- Encourage cross-departmental and inter-agency partnership working to maximise resources
- Promote cross-community participation, co-operation and wider ownership of the strategy.
- Maximise and target resources and initiatives where they are most needed.
- Facilitate policy and service integration.
- Set out measurable targets and timescales for action.
- Develop training and employment opportunities.
- Provide feedback for target monitoring and reporting purposes.

Ref. Beacon Council Fuel Poverty Tool Kit, IDeA (2002-03)

7.28 An online local advisory network could be a useful group to develop to guide the delivery of the Energy Strategy, building on local expertise and resources in Kingston to deliver innovative projects at a local level. A local “renewables” network has the potential to be consulted on business prospects, technology and installation, finance options, and details of community energy – including information to the public, scope of management and pricing contracts. A range of organisations would need to be consulted to establish the scope of their commitment and expertise that can help meet the Energy Strategy objects. The network will link to regional organisations such as the London Energy Partnership and national organisations such as the Centre of Sustainable Energy to provide impartial expertise and support.

Example 4. Kingston's academic resources

Examples of two of Kingston's academic resources: the university and the college.

- **Kingston University CSCAIPE** department is the Centre for Sustainable Communities Achieved through Integrated Professional Education. CSCAIPE is the only one of 74 Centres for Excellence in Teaching & Learning (CETLs) funded by HEFCE (the Higher Education Funding Council for England) in the UK that combines sustainability and the built environment; a resource that can provide research and development opportunities specific for Kingston.

- **Kingston College, Centre for Business Enterprise** department is launching sustainable energy training as part of joint venture with Carshalton College for providing energy courses for Industry, called 'The Power and Assessment Centre'. A resource provide technical expertise and training opportunities.

7.29 There is a need for an internal Energy Management Team, which should be initiated as part of the Carbon Trust Local Authority Carbon Management (LACM) Programme starting in May 2009. There is, however, a need for a bottom up approach to get staff involved and allow ownership for action. By establishing a voluntary Energy Green Team the Council can begin to focus on the small, no-cost initiatives that will reduce carbon emissions and save money. Staff should be invited to become volunteers that promote and champion positive energy action. The Energy Green Team would work alongside the technical team developing and implementing internal energy management.

Example 5. West Sussex County Council Green Team

- Green Teams are groups of employees who have volunteered to help to raise awareness on environmental issues in the workplace. They play a crucial role in helping to deliver the environmental element of the Council's Sustainability Targets.
- There are a number of Green Teams in existence across the County representing various services.
- Green teams are an important link in a chain of information that makes sure messages get from staff to senior officers and vice versa. They also help to ensure that the decisions made by senior management become reality.

7.30 Green teams would be resources by voluntary staff from all directorates to offer approximately 5 days of their time to activities. To acknowledge their commitment and extension of duties outside the remit of their existing job description an annual incentive would be given. Their proposed duties would include:

a) educating colleagues in their area on energy-saving initiatives;

b) monitoring behaviour in the workplace;

c) doing “walk around” assessments of their section;

d) organising the display of posters, reminder stickers and other information;

e) deciding upon a reward system for good practice, and sharing examples of good practice with other members of the Team;

f) identifying and reported weaknesses and areas for improvement; and

g) attending meetings, workshops and training.

7.31 Ultimately, the work of the Energy Green Team and their achievements will make up part of the Annual Implementation Plan for the Energy Strategy.

Community Delivery Mechanism

Neighbourhood Committees and Neighbourhood Planning Sub-Committees

7.32 There are four Neighbourhood Committees made up of the Councillors representing the electoral wards in each Neighbourhood, responsible for providing many of the services in their area.

7.33 In implementing a low carbon approach across the borough those delivering action need to understand the needs of the four Neighbourhood areas which can be established by consulting with the Committee members. The Neighbourhood spending should ensure that services are delivered in respect of the Energy Strategy and planning policy. Therefore, the Energy Strategy AIP will seek to provide up-to-date information on local activity being implemented (awareness activity, investment for efficiency measures, and energy infrastructure proposals). The AIP will also seek to train Neighbourhood Committee members on new planning policy to inform planning and investment decisions.

Development Control Committee

7.34 This Committee determines planning applications over a certain density, size and sensitivity, plus some planning applications which the Neighbourhood Committees are unable to hear.

7.35 Councillors on the Committee are expected to have a base level of knowledge to make informed decisions. Each Committee Member must

undertake training to gain this knowledge. The emerging Local Development Framework, will secure new low carbon development and sustainable energy policies. The Energy Strategy AIP will ensure up-to-date training is provided for Committee members to enforce new policy and align with the priorities of the Kingston Plan.

SUMMARY of the Implementation of the Energy Strategy

7.36 Implementation of the Energy Strategy will be through Annual Implementation Plans

7.37 The AIP will monitor energy and CO_2 emissions from

a) Council Operations

b) The borough as published by the Defra for NI186

c) Emissions reported by the Climate Change and Energy Partnership

7.38 The AIP will be report progress every 6 months

7.39 All actions will be logged through an AIP Proforma

7.40 Actions will be developed as part of a partnership approach lead initially by the local strategic partnership

7.41 The Energy Strategy and AIP will be championed through a Member Officer Committee and delivered corporately and via appropriate project groups

7.42 Community engagement will involve Neighbourhood Committees, the Planning Sub-Committee, and the Development Control Committee.