

# LANCASTER CITY COUNCIL

## Energy Strategy

Draft v2.7

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## 2 INTRODUCTION

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Lancaster City Council, as part of its ethos is committed to –

- Stewardship- ensuring the social, economic and environmental wellbeing of the local area.
- Municipal entrepreneurialism- capturing opportunities for collaborative innovation and income generation.
- Sustainability- ensuring the council contributes positively to the challenge of climate change and the need to manage our environment.
- Value for money- focusing on economy, efficiency and effectiveness.

One of the priorities of the Council is ‘Clean, green and safe places’. A part of the desired outcome of this priority is that ‘the Council’s impact on the environment’ will be minimised and we have a broad range of ongoing activities which help to achieve this.

Along with other local authorities, Lancaster City Council has already experienced a major reduction in funding from central government and this trend is set to continue. In order to respond to this challenge the Council has identified what its priorities are and to what extent they will be delivered.

There is a challenging budget shortfall which will rise further in 2016/17 and beyond. One approach which the council can take to deliver its stated aims and at the same time offset some of the impact of local authority funding cuts is to adopt a strategic approach to energy management.

The Council recognises, there is more to energy management than reducing the costs of our activities. There is scientific consensus that we need to reduce the amount of man-made carbon emissions to mitigate the worst effects of climate change. As a large user of energy in the district, the council is well placed to make a significant contribution to reducing the district’s carbon emissions by addressing how it uses its energy.

In order to address this, we have developed this Energy Strategy which details how we intend to achieve this in a way that matches our ethos and vision. Through this Strategy, we have identified the priority areas where our efforts and resources will generate the greatest benefits. This Strategy also contains an Action Plan (Appendix 1) of required tasks. This Strategy is a working document so as actions are undertaken and new processes established, Lancaster City Council will be able to ensure that the identification and implementation of energy saving projects becomes an integral part of the council’s operations.

This is not a new approach to energy management, but it recognises that the next steps required to further improve the council’s energy efficiency will require an increased commitment towards investment and future planning. It is also expected that in those areas where we are seeking to develop new energy projects, the council’s actions could present opportunities to secure wider economic benefits for the local area.

## 2.1 THE NEW FOCUS ON ENERGY

The focus on energy management is not new but it is one which has grown in importance in recent years. This has been reflected in the evolution of policy at both a national and international level, the most recent of these are as follows:

- *The Climate Change Act 2008*

The Act makes it the duty of the Secretary of State to ensure that the net UK carbon account for all six greenhouse gases for the year 2050 is at least 80% lower than the 1990 baseline, toward avoiding dangerous climate change.
- *Energy Act 2008*

The Energy Act was passed in November 2008, alongside the Climate Change Act to ensure the long term delivery of the Government's overall energy reduction and climate change. The Act led to the development of the Feed-in Tariff (FIT) and Renewable Heat Incentive (RHI); financial mechanisms to promote the uptake of renewable energy technologies.
- *Energy Act 2011*

The Act includes provision for the *Green Deal Energy Company Obligation (ECO)* and also financial mechanisms to support the installation of energy efficiency measures in domestic properties.
- *EU Energy Efficiency Directive 2012*

This Directive establishes a common framework of measures for the promotion of energy efficiency within the European Union (EU) in order to ensure the achievement of the EU's 2020 20% headline target on energy efficiency and to pave the way for further energy efficiency improvements beyond that date.
- *Energy Efficiency Strategy 2012*

Through the *Energy Efficiency Strategy* the UK Government sets out the direction for energy efficiency policy for the coming decades. It makes clear the UK Government's ambition, the barriers that they need to address, and the additional steps they are taking to stimulate the energy efficiency market. It shows how they will act to connect finance with demand, encourage innovation, and make energy efficiency information more accessible to the consumer.

As the pressure to achieve legally binding carbon reduction targets increases, it can be anticipated that the Government will place further duties on the Council. Therefore, there is a need to plan ahead, particularly when there are currently financial incentives available for renewable energy projects to assist in this regard.

## 2.2 THE BASE CASE

In recent years, Lancaster City Council has taken steps to improve how it uses energy. Energy usage across all Council functions is actively monitored. The overall trend is one of reduction.

Central to achieving these reductions has been the pro-active nature of the council. In 2008, the Carbon Trust undertook an *Assessment of Energy Saving Opportunities for Lancaster City Council*. The recommendations of this report helped direct actions for improvement and led to the development of staff working groups to reduce the amount of energy which the council uses.

The council also developed a *Climate Change Strategy 2008-2014* which set out the key actions the council aimed to achieve to reduce energy consumption and resulting carbon emissions. Within this *Strategy* the council set a target of reducing carbon emissions by 34% by 2020. Although we are only halfway through this period, our success in reducing the emissions has been significant.

As examples-

- Energy consumption from both buildings and transport used by the council in the baseline year of 2008/09 was 11,000MWh, however, during the 2012/13 year, energy consumption had fallen to 7,730MWh. The resulting carbon emissions during the same period have fallen from 4,782.28 tonnes of Carbon Dioxide (tCO<sub>2</sub>) to 3,570.12 tCO<sub>2</sub>.
- The most dramatic reduction to date has been observed at the Council's sports facility, Salt Ayre Sports Centre, where technological and behavioural improvements achieved a large reduction in energy consumption since 2008. In recognition of this achievement, staff at Salt Ayre Sports Centre were awarded a nationally recognised *Green Apple Award*.
- Since 2011, the Council has taken steps to install solar photovoltaic panels at a number of its properties and to date has installed a total of 280kW at 12 locations, varying from the sports centre to council housing properties. This amount continues to increase.
- In addition, the council has taken steps to improve the energy consumption at its social housing properties. At Beck View Sheltered Housing Scheme, for example, a 26.5kW roof mounted solar PV system was installed in 2012 which has the capacity to generate approximately 24,000kWh of power per annum. In addition, a new LED lighting system has been installed which is expected to deliver 80% energy savings on the previous system, whilst a newly installed energy saving lift is designed to be up to 75% more energy efficient than conventional systems and non-regenerative drives. During 2013, the three boilers were replaced by two high energy efficiency condensing boilers and there are plans to install solar thermal panels to heat water during 2014.
- The council is currently in the process of reviewing its property estate to ensure that a more efficient use of space can be achieved. The results of this review will be instrumental in determining the most appropriate way forward when we look to address how we use our energy.

However, whilst significant successes are being achieved through our recent actions, we recognise that as the number of opportunities for improved efficiency declines, a greater focus on the potential for and development of the use of renewable energy generation will be required to maximise the potential gains for the Council. To help achieve this in the most economic, efficient and effective way, the opportunities for joint action with neighbouring authorities and external partners increases. In setting out how Lancaster City Council will address these issues, this Strategy considers how the council can take the next great leap in reducing energy consumption and the resulting costs and carbon emissions even further.

### 3 THE NEW TARGETS

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The principal aim of this Energy Strategy is that-

*“The Council’s impact on the environment will be minimised by reducing energy consumption and using renewable energy generation technologies”*

In achieving this aim, this Strategy will be driven by the following key targets:-

- To reduce energy consumption by 20% by 2020 against a baseline year of 2012/13
- To reduce the council’s carbon dioxide emissions by 20% by 2020 against a baseline year of 2012/13
- A growing proportion of the councils energy needs will be generated from renewable sources by 2020
- A growing proportion of the council’s mileage will be covered by Ultra-Low Emissions Vehicles by 2020 against a baseline year of 2012/13.
- New build Council social housing will be as energy efficient as possible

This approach involves a commitment to reducing energy demand, improving energy efficiency and considering renewable energy sources as an alternative to fossil fuels. In practical terms many of these activities will be delivered as a by-product of wider projects and initiatives but this strategic focus will ensure they form part of an integrated approach to the management of energy issues.

This Strategy will meet its principal aim by undertaking actions under a number of specific areas of focus (detailed below). Each area represents a topic where concerted effort is required in order to bring about a step change in energy consumption. Under each of these headings the Strategy outlines the current position and identifies areas for opportunities.

- Energy reduction and efficiency
- The council’s buildings
- Private sector buildings
- Transport
- Renewable energy projects

Contained within the Action Plan are a number of strategic actions for each area of focus. Detailed actions are not included within this Strategy as these can very quickly go out of date and do not allow for the development of responses to unexpected future opportunities which may present themselves. The exact actions that are needed to achieve the priority areas for action will therefore be determined in more detail by appropriate working groups within the Council.



## 4 ENERGY REDUCTION AND EFFICIENCY

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### 4.1 INTRODUCTION

The Government's Energy Strategy<sup>1</sup> identifies energy efficiency as:

*"A measure of energy used for delivering a given service. Improving energy efficiency means getting more from the energy that we use."*

When addressing ways to reduce the amount of energy that the council uses it is important to consider energy efficiency measures and technological improvements which may be available. Both aspects will be addressed in later sections of this strategy, but to ensure that there is a strategic direction which oversees their use, this section considers how the council will approach the general theme of energy reduction and efficiency.

### 4.2 THE CURRENT POSITION

The City Council is structured into five services:

- Environment
- Governance
- Health and Housing
- Regeneration and Planning
- Resources

Each Service has responsibility for the operations within their remit. However, the Property Group currently support and have existing working relationships with all Services within the council, providing services such building maintenance and energy monitoring.

### 4.3 THE WAY FORWARD

In order to successfully deliver this strategy, all Services must play an active role. Therefore, to ensure a uniform introduction, the responsibility for implementing this Strategy will be appropriately assigned to allow us to effectively coordinate the actions set out in this Action Plan to make sure that we are effective in achieving our goals. In addition, the energy consumption across the council's building portfolio will be closely examined with appropriate support provided for building managers.

#### **Easy Savings**

This strategy recognises that the easiest way of saving energy is to think of ways of not using it in the first place. Therefore it will focus on sensible, low cost, common sense ideas-

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<sup>1</sup> *The Energy Efficiency Strategy*, UK Government 2012; available from [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/65602/6927-energy-efficiency-strategy--the-energy-efficiency.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/65602/6927-energy-efficiency-strategy--the-energy-efficiency.pdf); accessed 29<sup>th</sup> May 2014

- The council currently requires that any decision which is required of Members, whether full Cabinet, a Cabinet Committee, an Individual Cabinet Member or an urgent business decision, requires a report which should be prepared along existing guidelines. This includes the requirement to check a number of additional considerations of a reports contents including, for example, the legal and financial implications. To ensure appropriate alignment of all future plans and resources to achieve energy reduction measures and support to carry out the measures in this Action Plan, consideration will be given towards incorporating an element of energy management into the report writing procedures.
- An easy example could be an IT programme that switches off all PCs that are still connected to the network at a predetermined time each evening. In general terms, the Council will focus on the different sources of money that can be used to fund energy efficiency and consideration will be given towards the use of the alternative sources of funding which may be available to the council.
- The UK Government is currently beginning the process of implementing the energy audits requirement under Article 8 of the Energy Efficiency Directive. When this is formally in place it will be necessary to undertake appropriate surveys to identify additional opportunities which may be appropriate. Energy audits are an essential tool to achieve energy savings and they are necessary to assess the existing energy consumption and identify the whole range of opportunities to save energy. Therefore, in advance of the expected requirements to be implemented by the UK Government, the council will work towards incorporating a programme of energy audits at all its major corporate buildings.

### **Staff Engagement**

Whilst physical changes to buildings are important, it is just as important to recognise that all of the council's staff have an instrumental role to play in improving how energy is used within the council. However, to provide the necessary support, the Council needs to ensure all who work for the Council understand why the Council is doing this and how all can play a part. To ensure that it is effective, it will need a plan that needs to be drawn up in consultation with the staff and trade unions. The key features of the scheme will include:

- A defined purpose i.e. to reduce the amount of energy that the Council uses, and the associated costs and environmental concerns.
- A work plan containing clear targets
- A determination of rewards available under this scheme to participants.
- Regular consideration of reports and progress by Management Team
- Records of improvement will be kept and circulated widely
- A process for consideration of staff suggestions
- A process for accessing funding to enable the financing of any changes which may be required
- Provision of appropriate training for any staff where a gain can be made e.g. how to use heating controls.

To ensure the awareness scheme is consistent throughout the council a lead role will be identified. This role, in conjunction with the Management Team and the Trade Unions, will shape the precise nature of the scheme to ensure that it remains effective and relevant to the council's needs.

Good communication is essential to maximise the potential success so through being open with the actions and achievements it is hoped that the council's staff will be able to engage with how changes to their habits can have a positive impact upon the council and individual working conditions.

The Council is a people business and the services that the Council is able to present are largely based on the people that it employs, in terms of experience, quality and commitment. To demonstrate the council's commitment to its staff, consideration will be given towards how the actions of this Strategy could also lead to potential benefits for staff. The Council will examine these potential benefits and Management Team will recommend proposals to be put in place alongside this strategy for consideration of members;

### **Procurement**

The council is comfortable that it currently has the best value for money through its arrangements for electricity procurement having recently re-procured a new deal to last until 2019. The gas contract is due to expire in 2015 and appropriate arrangements will be considered at this time.

## 5 THE COUNCIL'S BUILDINGS

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### 5.1 INTRODUCTION

Lancaster City Council's corporate buildings account for 57% of the council's total carbon dioxide emissions. The council currently operates a number of corporate buildings as well as a large number of homes within its social housing stock. This section considers the buildings the Council owns and operates, that have a cost to it and also impact on the services that it can provide.

### 5.2 THE CURRENT POSITION

#### 5.2.1 Corporate buildings

Lancaster City Council is responsible for the management of 160 buildings (excluding social housing). Of these properties, it has the sole responsibility for the energy management of 35 properties which include: town halls, depots, information centres, a sports centre, cemeteries, and public toilets.

The council holds data from Energy Performance Certificates (EPCs) and Display Energy Certificates (DECs) in relation to its buildings and collects full data on energy consumption which it uses for quarterly and annual reporting as well as identifying trends.

It also has access to Automatic Meter Reading (AMR) which shows the electricity and gas consumption for the majority of the council properties and uses the Npower "Encompass" and British Gas "Energy 360" systems respectively. The systems are currently used for reference only, but data is available on the kWh usage only per building, on a daily, weekly, monthly and annually periods. The council are currently in dialog with the encompass & Energy 360 teams to explore adapting the reporting options across a number of buildings so that they are in line with the Property Group's Energy monitor.

The Council is currently reviewing its property portfolio. The property review function is essential to the effective strategic management of the Council's property assets and is being undertaken to ensure we have the right properties in the right place and at the right time and cost for the delivery of all front line and support services. The process will enable us to:

- Challenge why we hold property and how we are making use of it.
- Consider property solutions to particular problems that are being encountered
- Find ways of achieving desired outcomes such as rationalisation, reducing costs, and increasing efficiency.

The review function allows us to take a corporate look at areas of concern, and allows us to find solutions to property related problems, issues and areas of under-performance to ensure the corporate property portfolio remains as efficient, effective and economical as it can be and supports the achievement of both corporate and service delivery objectives. For example, the review process can be used to identify poorly performing property with high maintenance

backlog, low suitability, poor utilisation and high running costs so that these issues can be addressed via rationalisation rather than just financial expenditure.

The Council is well aware of the costs of energy for its buildings and the energy performance of those buildings on the costs. In 2012 a Condition Survey was undertaken that led to a planned repair programme. The money for this work is in the Council's capital programme. However, the property review will determine the scope of the works which will be undertaken.

The Council has done some boiler replacement and fitted solar PV systems of 49kW on to both the White Lund Depot and Salt Ayre Sports Centre. However, there remains much more scope for the potential for on-site carbon reduction by way of renewable energy.

### **5.2.2 Social Housing**

The Council still retains its stock of council housing and is the largest provider of social housing within the district managing over 3,700 homes. Through its housing asset management strategy, the Council ensures that its homes are what current and future tenants will want, are of the right type, in the right location, affordable, energy efficient and environmentally responsible.

The Council is required to:

- Ensure that tenants' homes meet the standard set out in section five of the Government's Decent Homes Guidance and continue to maintain their homes to at least this standard
- Meet the standards of design and quality that applied when the home was built, and were required as a condition of publicly funded financial assistance, if these standards are higher than the Decent Homes Standard

To achieve this council has a long-term 30 year Housing Revenue Account (HRA) business plan which identifies the financial resources and the long term investment programme required to maintain the council's HRA assets. Through its housing capital programme the council is spending around £5 million a year in supporting these objectives. Within the programme there is a significant element of investment to address energy efficiency and the delivery of renewable technologies.

In September 2012 Cabinet agreed to adopt a HRA medium term financial strategy and sets a rent policy that supports the future investment needs of the HRA housing stock, and enables the council to consider using HRA funding in a wider regeneration context.

In addition to the Council housing capital programme, the Council has a planned maintenance programme over just over £1m a year over which £600,000 is allocated to servicing and maintaining existing heating systems which are predominantly gas central heating systems.

The council has ambitions of building new council houses in the district to address the needs for 1 bedroom accommodation, and has established a fund to deliver an initial programme that would support the spend of approximately £2m per year over a 3 year period. The exact specification for these homes has still to be decided but there is an expectation that they will be low energy use homes.

As part of the programme to install solar PV on the Council's corporate buildings, the council fitted solar PV systems totalling 187kW on twelve council housing properties. As with the corporate buildings, the council has not exhausted the potential for on-site carbon reduction by way of renewable energy.

## **5.3 THE WAY FORWARD**

### **5.3.1 Corporate Buildings**

The Council needs to expedite its work on the property review, in order that other decisions on energy can be taken in the knowledge that the properties in question will still be part of the Council's estate and therefore justify expenditure. Those buildings which are necessary to effectively deliver the Council's operations will be considered in a new light, focusing on the energy costs and potential for income generation. In this way, buildings which are currently significant liabilities, can be transformed into low cost assets or even assets that generate an income each year.

The Council will consolidate the work that it has done to date on building use and energy consumption to inform this new strategy. However, the new work programme should have a heavy energy use / renewables element, to ensure that every aspect of energy use in the building, the carbon effectiveness of its fabric, and the potential for renewables on site has been examined.

In order to reduce energy consumption across the Council's portfolio, greater interrogation of the existing meters and sub-meters will be undertaken. A system of benchmarking will be developed which will reflect both published benchmarks for buildings and local factors influencing consumption. This will be used to provide an assessment of energy performance of each building and lead to the development of an energy reduction plan for all buildings. The responsibility for undertaking these actions will be identified and assigned accordingly.

### **5.3.2 Social housing**

The Council's social housing is in good shape, and the council is in a good position to move its housing work into a more low carbon model. The potential for expanding the housing related solar PV scheme should be investigated, as this offers good potential for a HRA based scheme.

The capital and planned maintenance programmes identified for 2014/15 have been drawn up from the information from the 2001, and 2008 Stock Condition Surveys which have informed the investment requirements within the 30 year HRA business plan. The investment needs of the HRA assets will be further informed by undertaking a stock condition survey. The improvement work will consider the potential for fitting renewables at the same time as other, more routine, maintenance and improvement work is undertaken.

The Council has indicated that it intends to build a significant number of new houses over the next ten years. In general these homes will aim to be as energy efficient as possible. Work is currently taking place to establish how to achieve this in the most effective way.

## 6 THE PRIVATE SECTOR

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### 6.1 INTRODUCTION

This Strategy is primarily focused on the improvements in energy consumption which can be made by the Council. However, the Council has a major impact on the energy consumption in the wider community. This section considers the role of the planning system and the impact the private sector housing in the district has on addressing fuel poverty.

### 6.2 THE CURRENT POSITION

#### 6.2.1 Regulatory Functions

The Regeneration and Planning Service can influence and determine the standards, quality and design of new development through the planning system. Sustainable design can make a positive contribution to improving the overall sustainability of new development in the district by minimising or avoiding any negative environmental impacts that may be caused by new development. It can also contribute to the transition of a low carbon future by addressing the Government's national zero carbon buildings policy. The national policy sets clear deadlines for new homes and non-residential buildings achieving the zero carbon standards. The proposed mechanism for achieving the requirements of this policy is through an incremental increase in the energy efficiency requirements of the Building Regulations (Part L). These requirements concern the carbon emissions of new development and will eventually lead to Building Regulations requiring new development to achieve a zero carbon rating in accordance with an agreed definition. Checking compliance with Building Regulations is a separate process to getting planning approval; however both processes must be complied with. In the context of sustainable design applicants are encouraged to consider both together at the design stage as this will help to avoid problems, delays and increased costs as proposals are progressed through to application stage.

Furthermore, there are rigorous standards applied to the design and quality of new affordable housing, driven through the Homes and Communities Agency's Design and Quality Standards and Housing Quality Indicators. At present, all new affordable dwellings are required to meet Code Level 3 of the Code for Sustainable Homes as a minimum, but the Homes and Communities Agency actively encourage Registered Providers to provide housing that exceeds Code Level 3, and higher standards could become a mandatory requirement in the future.

Lancaster City Council is developing a Development Plan Document (DPD) 2011-2031 which provides a new planning framework for the district. Contained within the DPD are a number of policies of which Policy DM17 sets out the Council's position on Renewable Energy Generation. Proposals for wind energy should also be assessed against the criteria set out in Policy DM18 of this document.

A large number of buildings in Lancaster District are typified by stone wall construction or a mixture of stone and render, and the vast majority of these which were constructed before the late 19<sup>th</sup> century are also of solid wall

construction, with cavity wall construction becoming more common in the inter war years.

Since energy costs began to rise in the 1970's moves have been made in new and existing construction to reduce energy usage and loss of heat from buildings through applying insulation measures. Over recent years improvements have focused on cavity wall buildings with attention now turning to include solid wall construction.

Insulation of solid wall constructed buildings and in particular stone built is not without its problems, both visually and technically. Two approaches are generally available, either adding insulation to the exterior or to the internal wall surfaces.

This is a particular problem where the appearance of the external wall needs to be retained as in the case of listed buildings and buildings in conservation areas. In Lancaster District there are a large number of buildings listed around 1300 plus or buildings located within one of the 37 Conservation Areas. For listed buildings, internal features and detailing can also be important to retain and therefore alterations to the internal walls can create significant problems and loss of historical significance.

For listed buildings, any form of alteration which would affect the character and significance of the property both internally and externally will require listed building consent. In Conservation Areas, planning permission would be required for the addition of cladding or render to the external walls.

For residential buildings in other areas planning permission for the addition of cladding would be required for flats or apartment if it were to overhang the adjacent highway or if the proposed cladding was not of a similar visual appearance.

### **6.2.2 Affordable Warmth / ECO**

Lancaster City Council recognises the importance of tackling fuel poverty as a means of improving the health and wellbeing of vulnerable members of the community, although, we also acknowledge that the Council's ability to influence fuel prices and household incomes is limited.

The fuel poverty statistics published by DECC in 2014<sup>2</sup> identified 6,869 households in the Lancaster District (12% of the total number of households) as being in fuel poverty; the 59<sup>th</sup> highest rate of fuel poverty out of the 326 authorities across England.

Lancaster City Council has as strong record of providing assistance to those residents who are struggling to heat their homes adequately, are in ill health or living in poor housing. Housing conditions relating to excess cold and damp in the private rental sector are being tackled through working with private sector landlords and taking enforcement action where appropriate.

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<sup>2</sup> Information available from <http://www.lancashire.gov.uk/corporate/web/?siteid=6121&pageid=35490&e=e> accessed 23<sup>rd</sup> June 2014



In addition, the Council's Home Improvement Agency (HIA) helps vulnerable residents who are elderly disabled or on a low income to repair, improve, maintain and adapt their homes. This is achieved by providing services and free impartial advice on repairs and maintenance, energy efficiency, home safety, getting building estimates, increasing benefits and raising finance to carry out work, independent advice on moving home and providing information on Safe Trader registered contractors. The HIA also delivers the Warm Homes Service which offers a wide range of practical assistance to help the most vulnerable residents remain warm and safe in their homes over the winter period. The measures available will be decided following an assessment and depend on the resident's individual circumstances.

A partnership was formed in 2011 between the four local authorities of Blackpool, Fylde, Wyre and Lancaster, and Public Health in the two primary care trusts (PCTs) of Blackpool and North Lancashire, to help ensure a co-ordinated approach to addressing fuel poverty in the district. This partnership oversaw the development of an Affordable Warmth Statement and 10 point Action Plan to ensure that action is being taken in the district to address the most pressing affordable warmth related issues.. This built on the established Lancaster district Affordable Warmth Group which was a partnership between Lancaster City Council, Lancashire County Council, Help Direct, CAB and LESS. Following the NHS reforms, the Public Health support for Affordable Warmth has continued from Lancashire County Council and Blackpool Unitary Council.

### **6.3 THE WAY FORWARD**

The Council is developing the DPD which provides a new planning framework for the area. Although reference to the guidance is made in this strategy, it is not replicated here to avoid duplication. The DPD is currently subject to public examination and the current position will be confirmed once completed.

When looking to address how planning concerns can be addressed when considering energy improvement measures, in addition to the aforementioned character and heritage issues, numerous technical issues would need to be considered which would influence a design, in particular condensation, cold bridging and the need to allow the building to breathe. Considerable debate/research is currently being undertaken nationally as to what may be the best approach and what materials to use for the addition of linings to the internal surfaces of solid wall buildings although there are many examples of internal lining work currently being undertaken on conversion of vacant buildings in the district.

Whilst this debate is ongoing, it may be more cost effective to look at the property as a whole and give consideration to air leakage problems, draught proofing windows and doors, insulating roof spaces, suspended floors and improvements to the heating system and its operation.

#### **6.3.1 Fuel Poverty / Affordable Warmth**

The Council has recently developed an *Affordable Warmth Action Plan* which details the actions the council will take to address affordable warmth issues

within the Lancaster district. A commitment from this Strategy will be to oversee the application of this *Action Plan*.

The Council will aim to establish a model to maximise opportunities through the ECO and equivalent initiatives. However, considering ongoing actions being undertaken by other authorities within the Lancashire area, in the short-term the Council will also keep a watching brief on these in order to determine the most appropriate way forward.

## **7 TRANSPORT**

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### **7.1 INTRODUCTION**

Lancaster City Council has a vehicle fuel budget of £723,300 for the current financial year (2014/15), and the CO2 emissions from the Council's transport is a major source of greenhouse emissions, accounting for 43% of the council's total carbon emissions. This section explores the options available to address the energy consumption from the Council's transport.

### **7.2 THE CURRENT POSITION**

Lancaster City Council's vehicles fit into two broad categories, namely the formal commercial fleet vehicles (predominantly vehicles owned or leased by the Council to undertake its functions) and grey fleet i.e. mileage allowances paid to staff to undertake their duties on behalf of the Council.

#### **7.2.1 Commercial fleet**

The Council operates approximately 180 vehicles comprising Large Goods Vehicles (LGV), small and medium sized vans and specialised grounds maintenance equipment. All the vehicles are maintained in-house and are usually kept for 5 - 6 years for light vehicles and 6 - 7 years for LGVs, although this is currently being reviewed.

As with most Councils, all vehicles have to be purchased via a competitive tender process. Considerations when procuring new vehicles are based on the suitability of the asset to do the job for which it is being purchased, and the whole life cost of the vehicle.

Work is taking place to assess the feasibility of transition to the use of Ultra low emission vehicles (ULEV) as possible replacement for some fleet vehicles in the future.

Fitting telematics to the Council's vehicles is a priority that is currently being implemented.

#### **7.2.2 Grey Fleet**

The Council currently operates a Casual Users Allowance scheme with some posts designated as being Essential Users for this current financial year. However, a project is underway to review current demand for business travel across each Service within the Council. The key focus of the review will be on the grey fleet demand with the main objectives being as follows:

- Develop a clear and broader understanding of business travel activity across the Council (current and future)
- Assess how we can best remove the need for staff to use their own vehicle for business use
- Reduce the need for business travel and in turn the cost of transport

The aim is to complete the review and report any findings and recommendations during the current financial year.

The Council currently has no Electric Vehicle (EV) charging points at present and has no EVs in operation at the moment. However, EVs have been tested to assess their suitability and the Council's emerging Parking Strategy includes the action to consider the provision of electric vehicle charging points at suitable locations.

### **7.3 THE WAY FORWARD**

The Council is in an ideal position to move forwards on the vehicle and transport agenda but the starting point is to develop a robust business case which identifies which roles are suitable for use of electric vehicles. Whilst there are ultra-low emission vehicles (ULEVs), such as refuse freighters, they are expensive and the business case needs to be made over time. Some of the older small vans could potentially be replaced with EV's but clearly this would be dependent on the daily distance travelled, availability of recharging stations and payload. The position is easier with the grey fleet, where action will be timely due to the current review of business travel.

However, rather than simply seeking to replace a petrol/diesel journeys with an electric one, central to developing a business case for reviewing the council's fleet will be conducting a review of current journeys and their purpose. If this data is not currently available, then consideration will be given to introducing new procedures and deploying some staff time to interrogate past mileage documentation to prepare a new database which identifies suitable data.

Upon collection of the appropriate data a separate Vehicles Plan will be developed which will be underpinned by a business case, making clear the potential costs to transfer to EVs and the savings that can be expected.

The Vehicles Plan will aim to cover a ten year plan for vehicles, which will cover the Grey Fleet in the short-term, more infrastructure for EVs being installed in the medium term, and the Council's commercial fleet being reviewed in the longer term. The aim will be to introduce a fleet of Council owned electric vehicles to undertake the journeys required by staff. This will have a number of advantages:

- For staff, it will mean that they do not have to use their own car
- For the Council it will reduce cost
- It will reduce the carbon footprint of the Council and the area
- It will demonstrate leadership on the green agenda
- It will lead to chargers being fitted in the City area
- It will be linked to staff terms and conditions to give staff new benefits, such as salary sacrifice to buy an EV, supply of cars at cost, maintenance of cars by the Council and fitting of a free home charger
- If the Council fits the chargers, it can make a profit on the fitting costs

The Vehicle Plan will also consider the wider situation in Lancaster, including the private sector and the public. Charging infrastructure can be installed for the benefit of all and the public generally can be encouraged to move to EVs themselves by a good communications plan and leadership by example. The Plan will also consider the wider applicability of a scheme, for example involving the third sector and charities.

As part of the move towards EV, financing arrangements will need to be considered. If the vehicles were outright purchased in future, rather than leased, it would enable the Council to review the vehicles condition and decide whether it was financially viable to run it for longer than anticipated based on its condition at the time.

## **8 RENEWABLE ENERGY PROJECTS**

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### **8.1 INTRODUCTION**

Embracing renewable energy generation requires a step change in the way that we think about energy generation. This section considers how Lancaster City Council will move forward on developing a greater use of renewable energy technologies.

### **8.2 THE CURRENT POSITION**

Energy generation requires careful consideration of short term or aesthetic impacts in relation to long term or global impacts and a revision of the way that we consider the resources that we have in the Lancaster district. Existing consumption patterns are reliant on the abundance of the concentrated mineral wealth of oil, coal and gas, while alternative technologies are reliant on diffuse sources: wind, sunshine, waves and plant material. Such diffuse energy resources may often require large land requirements and may have a significant impact on land use.

The Council has a strong record of embracing the use of renewable energy technologies which commenced in 2011 when Cabinet approved the allocation of up to £750,000 from the General Fund's Invest to Save Reserve to install solar PV panels on the Council's corporate buildings. In addition, Cabinet approved the allocation of up to £1M from the HRA's Major Repairs Reserve to install solar PV panels on council housing communal buildings. This decision was based on Council priorities to reduce energy costs and increase income whilst also taking action to tackle the challenges of climate change.

As part of the programme of installations, the Council has successfully installed solar PV at the corporate buildings of Salt Ayre Sports Centre and the White Lund Depot. In addition, installations have been completed at ten council housing properties. The total size of the systems installed at the 12 sites amounts to 280kW which will provide an annual output for the Council of approximately 313MWh.

### **8.3 THE WAY FORWARD**

The council has successfully overseen the installation of solar PV at a number of its properties and the further expansion of this programme will be assessed to identify further properties which will be suitable for solar PV installations.

There are a number of other opportunities for expanding the use of renewable energy technologies by Lancaster City Council. The development of this Strategy has prioritised the following areas for further investigation and will ensure that consideration be given to finding the most advantageous way of delivering these projects:

#### **8.3.1 Development of Ground Mounted Solar PV**

Consideration is being given to the construction of a ground mounted solar PV installation on council owned land which may have limited alternative development potential. A feasibility study has been commissioned through the Lancashire Regeneration Property Partnership in order to inform the design and to establish the impact any existing constraints may have on the development and the layout of designs.

#### **8.3.2 The introduction of biomass boilers**

Biomass is a renewable, low carbon fuel that is already widely available throughout the UK. Correctly managed, biomass is a sustainable fuel that can deliver a significant reduction in net carbon emissions when compared with fossil fuels. The primary focus when installing a biomass boiler will be the replacement of sites using fuel oil, and sites with large consumption of gas. One proposal could be for a biomass boiler to replace the current gas CHP engine in the Council's Salt Ayre leisure centre. An energy investment audit has been commissioned to undertake a feasibility study into this proposal amongst other cost saving measures.

#### **8.3.3 The development of a biomass supply chain**

The development of a biomass supply chain would ensure that a processing depot is closer to the biomass boilers than external suppliers can be so reducing haulage costs. The depot would secure lower cost feedstock if it can obtain wood from the Council's own woodlands (and other such low cost sources). It can also underpin woodland management and provide a use for vacant land as well as stabilizing the long term costs of energy and creating local jobs. Developing a site to process biomass would require investment in new infrastructure including a wood fuel shed and drying floor, weighbridge and handlers and loaders.

#### **8.3.4 The harnessing of wind power**

Over the coming years, opportunities to generate energy through wind-related technologies may occur and the council will consider the viability of such opportunities as they arise.

## 9 CONCLUSIONS

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This Strategy sets out the agreed direction of travel for Lancaster City Council to improve how it uses energy. It sets out the priority areas where effort needs to be focused to help us meet our aspirations and has identified a number of key actions to be undertaken if these aspirations are to be realised.

These remain high level to enable the development of more detailed actions around them and to be flexible enough to allow a sensible reaction to any new opportunities that arise or unexpected national / international policy changes.

Cabinet has confirmed that delivery of the Renewable Energy Strategy is a priority and in view of this has approved the proposed use of the invest to Save Reserve (for the General Fund) and the Business Support Reserve (for Council Housing) to meet the costs of consultants and in-house provision as necessary to allow full proposals to be developed and brought forward for consideration and final approval.



## 10 GLOSSARY

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|      |   |   |
|------|---|---|
| AMR  | - | Automatic Meter Reading                 |
| DECC | - | Department of Energy and Climate Change |
| ECO  | - | Energy Company Obligation               |
| ESCO | - | Energy Services Company                 |
| EV   | - | Electric Vehicles                       |
| HRA  | - | Housing Revenue Account                 |
| kWh  | - | Kilo Watt Hour                          |
| LGV  | - | Large Goods Vehicle                     |
| MWh  | - | Mega Watt Hour                          |
| PV   | - | Photovoltaic (solar)                    |
| RCV  | - | Refuse Collection Vehicles              |
| RHI  | - | Renewable Heat Incentive                |
| ULEV | - | Ultra-Low Energy Vehicle                |