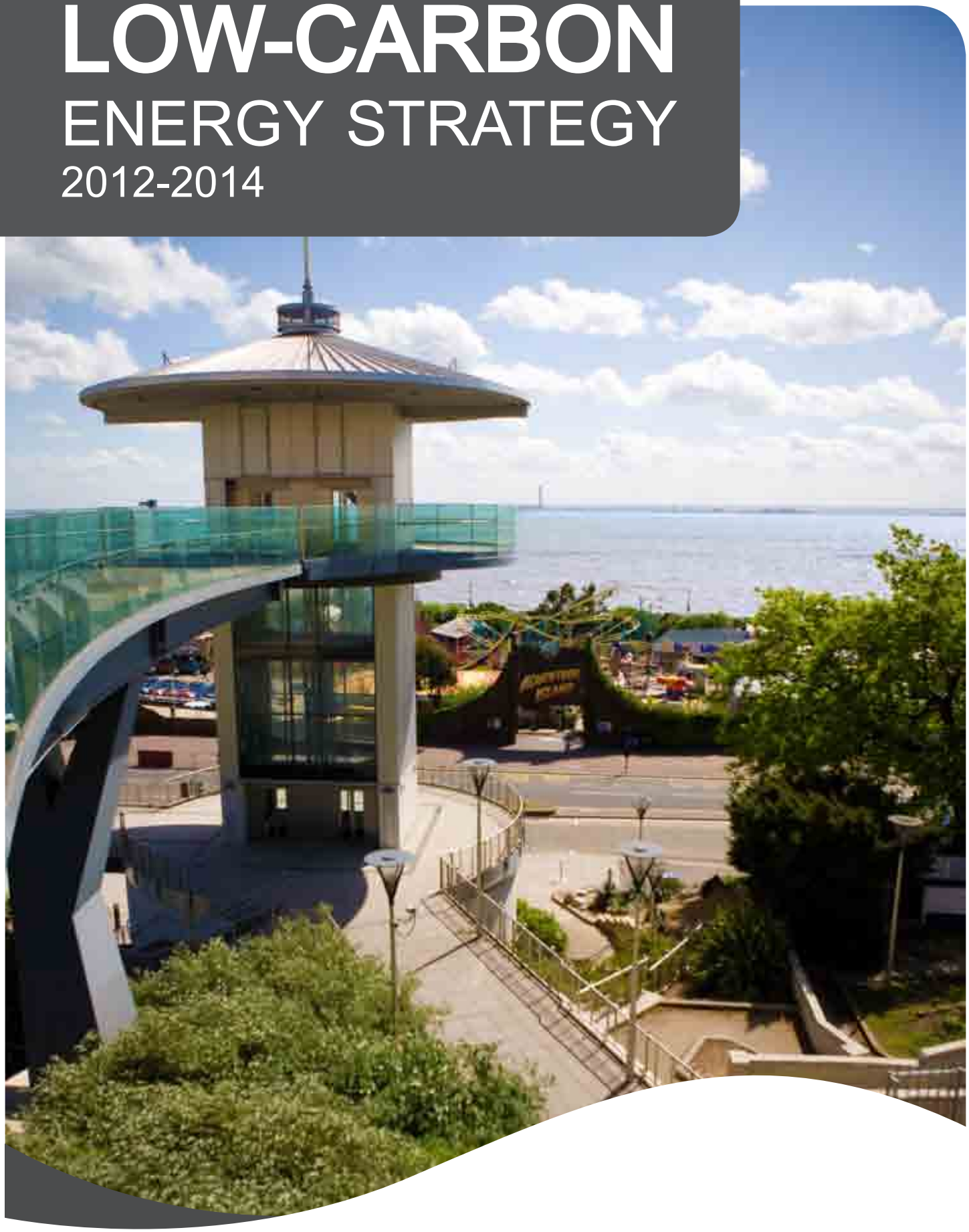
LOW-CARBON ENERGY STRATEGY 2012-2014



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LOW-CARBON
ENERGY STRATEGY
2012-2014

By signing the Climate Change Act 2008 (the 'Act') on 26th November 2008 the Government signaled its intention to lead the United Kingdom's transition to a low-carbon economy, whilst simultaneously taking action on the threats associated with climate change – including planning adaptation and mitigation measures for more rain, flooding, rising sea levels, heatwaves and droughts over the coming decades.

The Act places a legal obligation on the UK to reduce its overall carbon emissions by at least 34% by 2020 and 80% by 2050 (both based on 1990 carbon emission levels). Meeting these targets will prove a challenge for both the public and private sector and will also require local residents and communities to change their behavior by adopting a more sustainable lifestyle.

There is now a pressing need to reduce energy demand, move away from carbon-intensive fossil fuels and ensure future energy security for all. This will require a significant shift in how the UK generates and delivers its energy through the development and expansion of low-carbon and renewable alternatives to coal, oil and gas – creating opportunities for growth and improving quality of life.

> "Now is the time for organisations to start assessing, planning and acting to deliver a low-carbon and more sustainable future."

Those that are proactive will find that they are able to benefit from financial savings on their utility bills, improved resource efficiency and economic growth. They will also be able to safeguard against the concerns surrounding future fuel security, rising energy costs and a changing climate.

Local Authorities have a leading role to play in promoting the growth of the low-carbon economy locally. This will present them with a unique opportunity to make a real contribution in delivering local objectives around health, fuel poverty, housing, air quality, transport, education, economic development and social inclusion. Make the wrong choices now and future generations will live with a changed climate, depleted resources and without the green space and biodiversity that positively contribute to our standard of living.

> “The Low-Carbon Energy Strategy 2012-2014 (the ‘Strategy’) is Southend on Sea Borough Council’s first step in becoming a leading local authority on the low-carbon agenda in the East of England.”

The Strategy will ensure that low-carbon and sustainable considerations are embedded into the Council’s strategy and policy framework and decision making processes. By adopting this approach now the Council will secure a better and more sustainable future for its residents, businesses and communities. It will also make Southend on Sea attractive to investment and benefit from the growth of the low-carbon goods and services sector.

THE KEY OBJECTIVES
LOW-CARBON ENERGY STRATEGY

The Strategy covers a two year period up until the end of 2014 and was commissioned to enable the Council to develop its knowledge base on how it can best facilitate the growth of the low-carbon economy and identify the opportunities that will be of most benefit to the Council and the Southend on Sea Borough as a whole.

Six key objectives will be targeted over the course of the Strategy and this will allow the Council to develop best practice in terms of promoting sustainability and implementing carbon reduction measures. This will allow more robust and long-term carbon reduction targets to be set in the Council's second Low-Carbon Energy Strategy, which will be published in 2015.

Initial work will centre upon ensuring that sustainability, energy efficiency and carbon reduction considerations are firmly embedded into the Council's decision making processes and included in all future strategies and policies.

The six objectives of the Strategy are set out opposite.

OBJECTIVE ONE

To reduce the carbon emissions associated with Southend on Sea Borough Council's property estate.

OBJECTIVE TWO

To begin work to reduce the carbon emissions associated with Southend on Sea Borough Council's services and operations.

OBJECTIVE THREE

To encourage the development of renewable energy throughout the Southend on Sea Borough.

OBJECTIVE FOUR

To help local residents reduce energy usage in domestic properties.

OBJECTIVE FIVE

To begin developing a low-carbon and more sustainable transport infrastructure.

OBJECTIVE SIX

To identify how Southend on Sea Borough Council can facilitate the growth of the low-carbon economy throughout the Southend on Sea Borough.

OBJECTIVE ONE

TO REDUCE THE CARBON EMISSIONS THAT ARE ASSOCIATED WITH SOUTHEND ON SEA BOROUGH COUNCIL'S PROPERTY ESTATE.

1.1 The Department of Energy and Climate Change has predicted that energy prices will rise by 43% for electricity and 24% for gas for commercial buildings by 2020. Without taking action to become more energy efficient and reducing carbon emissions the Council's energy bills will increase significantly. Furthermore, as a full participant of the Government's Carbon Reduction Commitment Energy Efficiency Scheme (CRC) the Council is required to report annually to the Environment Agency on its carbon footprint and the steps it is taking to reduce its carbon emissions and improve its energy efficiency. The Council will be charged for every tonne of carbon it emits through its CRC qualifying buildings and combined with increasing energy costs there is now even more incentive to reduce carbon emissions and help mitigate climate change.

1.2 Since 2001/2002 the Council has reduced its overall energy consumption by 17.82%, which has resulted in a fall of its carbon footprint by 14% over that same period and now targets an annual carbon emission reduction of 2.5%. This has in part been due to the Council's proactive programme of installing automatic meter readers (AMR) and half-hourly meters throughout its commercial property estate and upgrading its energy management system in 2011.

1.3 Currently over 80% of electricity and 50% of gas data is collected via an AMR or half-hourly meter reader, which provides the Council with accurate energy data. By the end of 2014 the Council will have installed either an AMR or half-hourly meter in each of its commercial property buildings and this will ensure that the Council's carbon emission data is as accurate as it can be across its entire estate.

1.4 With over four hundred buildings in the Council's commercial property estate (including schools, libraries, offices and the Civic Centre) there are many opportunities for the Council to reduce its carbon footprint, for example, by implementing 'quick wins' by installing energy efficiency measures/ technologies that offer a short-term financial payback. Over the next two years the Council's recently launched 'Looking for Carbon' initiative will aim to identify the most effective means of reducing the carbon emissions that are associated with its commercial property estate.

1.5 By the end of 2012 the Council will have developed a business case to determine whether an initiative to reduce the energy consumption from the public highway by installing LED lighting into existing street lights is economically feasible to do so. This business case will then be utilised as a template to ensure that all future new builds and refurbishment work conducted from 2012 onwards will have energy efficiency and carbon reduction as one of its major considerations. This will involve implementing a 'whole-life costing' approach in future new build and refurbishment work, and calculating the associated life-time cost of the building's carbon emissions to the Council.

1.6 Further work through 'Looking for Carbon' will include establishing an initiative whereby the Council will create its own version of the Display Energy Certificates (DEC) scheme for every building within its estate. Currently a DEC is required for any public building over the size of one thousand square metres. This initiative will potentially see each of the Council's four hundred strong building stock (regardless of size) obtain their own energy rating and this will be updated on an annual basis. This will help the Council identify which buildings should be prioritised for carbon reduction projects and help to target the lowest performing buildings in terms of installing energy efficiency measures.

1.7 Through the 'Looking for Carbon' initiative the Borough's fifty two schools have already been identified as a priority area to target in order to reduce the Council's overall carbon footprint. From early 2012 the Council will offer an 'Energy Reduction' advisory service to each of its schools and this is intended to help identify where a school can improve its energy efficiency and reduce its associated carbon emissions.

1.8 The above measures are to be supported by a staff awareness campaign led by the Council's Green Staff Forum, which in 2010 identified over £20,000 worth of energy savings for the Council after an energy audit of the Civic Centre. This has also seen overnight energy wastage fall by 68% during the 2009/2010 financial year and has helped the Civic Centre's DEC Rating improve from a 'G' rating to an 'F' rating. All progress relating to carbon reduction will be published on the Council's website to ensure transparency and share best practice with local residents, businesses and community groups.

OBJECTIVE ONE
SUMMARY

- The Council is a full participant of the Government's CRC and is required to report its carbon footprint on an annual basis to the Environment Agency.

- The Council has reduced its carbon footprint by 14% since 2001/2002 and will continue to reduce its carbon emissions by 2.5% per annum.

- The Council will publish its second Low-Carbon Energy Strategy in 2015 and this will include revised carbon emission reduction targets.

- Currently over 80% of electricity and 50% of gas data is collected via an AMR or half-hourly meter reader, which provides the Council with incredibly accurate energy data. This will rise to 100% data collection via an AMR or half-hourly meter by the end of 2014.

- In May 2011 the Council launched its 'Looking for Carbon' initiative, which has been designed to identify ways the Council can improve its energy efficiency and reduce its carbon footprint throughout its four hundred strong commercial property estate.

- The Council will develop a business case to determine whether it is economically feasible to replace existing street lighting with more energy efficient LED replacements.

- The Council will launch its own Display Energy Certificate scheme in 2012 and will aim to provide each of its four hundred strong building stock with an energy rating.

- The Council has identified its fifty two schools as a priority target for carbon reduction and energy efficiency initiatives.

- The Council will promote 'whole-life costing' considerations into all future builds and refurbishment works and this will involve calculating the associated life-time cost of the building's carbon emissions and potential impacts.

- The importance of carbon reduction and energy efficiency will be supported by a staff awareness campaign led by the Council's Green Staff Forum.


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OBJECTIVE TWO

BEGIN WORK TO REDUCE THE CARBON EMISSIONS ASSOCIATED WITH SOUTHEND ON SEA BOROUGH COUNCIL'S SERVICES AND OPERATIONS.

2.1 Carbon is not just about energy management and reducing the Council's energy bills – instead it is a consideration that needs to be embedded into every service, operation and decision that is made by the Council. For example, if a product that the Council utilises is made through an energy intensive process then with energy prices increasing this will cause the product to be more expensive to the Council in the future.

2.2 The initial stage of the Council's longer-term Low-Carbon Energy Strategy relating to this objective will be to achieve a greater understanding of how carbon can impact upon both the delivery of its services and operations of the Council and identifying ways that the Council can reduce this impact.

2.3 Therefore it is essential for the Council to ensure that every future policy or strategy acknowledges how carbon could impact upon the delivery of that policy or strategy. This process will also drive greater resource efficiency throughout the Council by associating a carbon or cost saving to each decision that is made. The less carbon that can be attributed to a Council service or operation the more money the Council will save, which is vital at a time of public sector cuts.

2.4 One of the main means to achieve this is through procurement. The Council launched its Sustainable Procurement Policy in 2010 and this looks to ensure that the procurement process and all future tenders take both the environmental performance of a company and associated carbon emissions of a service or product before awarding a contract. The Policy will be reviewed on an annual basis and will require all service contract specifications to be reviewed, before, retendering specifically in respect to energy, water, transport and staff travel. The evaluation of all future tenders shall specifically include these elements.

2.5 In 2012 the Council will publish an environmental footprint that will calculate the amount of (i) carbon (gas/electricity); (ii) water; and (iii) waste that can be attributed to each individual member of staff. This will form a benchmark for future improvements in the Council's overall environmental performance and promote the importance of resource efficiency to staff at all levels.

2.6 In terms of service delivery an important aspect for this Strategy is to encourage a reduction in the Council's overall vehicle usage and the carbon emissions that come from staff travel. The first stage will be to consider a Travel Plan for the Council, which will then be made available to businesses and organisations throughout the Southend on Sea Borough. In addition the Council will ensure that all future service contracts have a Travel Plan and that retendered contracts shall include such a plan and the plan should form part of the tender evaluation.

2.7 Finally, in light of increasingly stringent legislation there will also be a need to collate and publish annual mileage data to show the steps that the Council is undertaking to reduce its carbon emissions e.g. promoting car sharing and the use of public transport.

OBJECTIVE TWO
SUMMARY

- The Council will ensure that carbon is embedded in the decision making process and will be considered in all future policies and strategies and promote resource efficiency.
- The Council will identify how carbon can impact upon the delivery of both its services and operations and will look at how these impacts can be reduced.
- The Council will review its Sustainable Procurement Policy on an annual basis and ensure that all companies that the Council works with are taking steps to reduce their own environmental impact.
- All future service contract/tender specifications will need to include information relating to energy, water, transport and staff travel.
- An environmental footprint for staff will be published in 2012 and be used as a benchmark for improvements in the Council's overall environmental performance (in terms of energy and water consumption and waste production). This will also include the publication of the Council's annual mileage data.
- The Council will consider the benefits it can ascertain from establishing a Travel Plan.
- The Council will ensure that all future service contracts have an accompanying Travel Plan.

OBJECTIVE THREE

ENCOURAGE THE DEVELOPMENT OF RENEWABLE AND LOW-CARBON ENERGY THROUGHOUT THE SOUTHEND ON SEA BOROUGH

3.1 In January 2008, the European Union published its Climate and Energy Package setting out proposals to achieve a 20% reduction in EU greenhouse gas emissions by 2020. As part of this package, the UK has a target to deliver 15% of its energy from renewable sources by 2020 – a tenfold increase in renewable energy consumption from 2008 levels.

3.2 Local authorities are in a unique position to help Government deliver upon its renewable energy targets. Initially this will include the Council investigating the best approach for generating low-carbon energy throughout the Borough through micro-renewable technologies, which harness the energy from natural resources such as solar, wind and tidal.

3.3 Through the implementation of Policy KP2 of its adopted Core Strategy Development Plan Document (2007) the Council requires that at least 10% of the energy needs of all new development comes from on-site renewable options, such as those set out within SPD1 Design and Townscape Guide (2009). Work will also be conducted into how the Council can utilise its powers under section 106 of the Town and Country Planning Act 1990 to generate finances that will be invested into programmes that improve green spaces across the Borough, support energy efficiency initiatives and further develop the Council's work on climate change adaptation.

3.4 The Council will also look to determine whether it is able to utilise government backed incentives such as the Feed-in Tariffs and Renewable Heat Incentive as a means to generate additional income streams.



3.5 Furthermore, energy planning policies and strategies are being drafted to encourage the growth of micro-renewable technologies in all new builds and developments, and the planning process will make it easier for households, communities and businesses to generate their own electricity. This will result in an increase in renewable heat and electricity generation in the Borough.

3.6 The Council has already commenced installing micro-renewable technologies in its existing building stock. Examples include (i) ground source heat pumps (and energy efficiency lighting) at Futures Community College; (ii) solar voltaic panels at Southend Pier; (iii) solar thermal and air source heat pumps at Shoebury Connection; (iv) wind turbines, solar voltaic panels and a woodchip boiler at Chalkwell Hall Metal; and (v) a complete retrofit of the North Road Chapel, which is now Southend's most energy efficient building.

3.7 The Council will continue to promote how local residents, businesses and community groups can also benefit from micro-renewable technologies and this will focus upon providing information on (i) Government backed initiatives, such as, the Feed-in Tariff, Renewable Heat Incentive Scheme and the Green Deal; and (ii) the associated cost savings that can result in generating your own energy at a time of ever increasing energy prices. The majority of this information will be web-based.

OBJECTIVE THREE
SUMMARY

- The Council will determine how it can create a 'low-carbon fund' to support energy efficiency initiatives through the use of Section 106 Agreements and utilising Government backed incentives such as the Feed-in Tariff and Renewable Heat Incentive.

- Promote the use of micro-renewable technologies in all new builds and developments and promote this through all future planning policies and strategies.

- Through the implementation of Policy KP2 of its adopted Core Strategy Development Plan Document (2007) the Council requires that at least 10% of the energy needs of all new development comes from on-site renewable options.

OBJECTIVE FOUR

TO HELP LOCAL RESIDENTS REDUCE ENERGY USAGE IN DOMESTIC PROPERTIES

4.1 The Government estimates that between £2-3billion worth of energy is wasted every year because homes are poorly insulated and inefficiently run. With the threat of rising energy prices for the domestic housing sector – a 33% rise in the cost of electricity and a 19% rise in the cost of gas by 2020 (DECC 2010) – it is predicted that there will be an increase in the number of those vulnerable to fuel poverty (defined as those who spend more than 10% of their income on home energy costs). It is clear that action is required by local authorities to help homeowners reduce their energy use and, in turn, address fuel poverty and associated health inequalities.

4.2 The Council is a Home Energy Conservation Authority (HECA) covering an area of approximately twelve square miles and is the second most populous district in the East of England region. The total housing stock comprises of 73,000 dwellings and about half of which were built prior to the 1940s. As a HECA the Council has responsibilities for promoting the conservation of energy in all private residential accommodation throughout the Borough and has recently approved a Fuel Poverty Strategy that aims to help vulnerable households.

4.3 A lot of the initial work conducted through this Strategy will centre upon further developing the Council's understanding on how it can best help its residents reduce this wastage in terms of improving energy efficiency, reducing the associated carbon emissions and delivering affordable warmth. This includes providing information to local residents about how they can benefit through Government backed schemes including the Feed-in Tariff, the Renewable Heat Incentive Scheme and the Green Deal - all have the potential to provide local solutions to transform communities and deliver a real reduction in the Borough's carbon emissions.

4.4 The Council intends to establish a series of 'Low-Carbon Zones' throughout the Borough to improve the quality of life for its residents. This will see a targeted approach to future funding bids, which aim to identify ways to improve the energy efficiency of buildings, reduce fuel bills and tackle the problems associated with fuel poverty. Work on the Council's first 'Low-Carbon Zone' commences in mid-2012 where sixty properties in the St Luke's Ward will have their carbon emissions reduced by 40% through the 'ReallySmartHouse' initiative.

4.5 Critical to the success of this Strategy is the need for the Council to maintain and extend partnerships with external organisations, agencies and other local authorities in order to build, develop and share best practice in terms of reducing carbon emissions from domestic dwellings and tackling fuel poverty. To help achieve this objective the Council will establish a database of national and European funding opportunities that will help homeowners in the Southend on Sea Borough reduce their energy use and promote energy efficiency and carbon reduction initiatives.

OBJECTIVE FOUR
SUMMARY

- As a Home Energy Conservation Authority the Council has responsibilities for promoting the conservation of energy in all private residential accommodation across the Borough.
- The Council will continue to reduce fuel poverty throughout the Borough and address the associated health inequalities in the process.
- Information will be provided to local residents on how they can benefit through Government backed schemes that are intended to promote energy efficiency and reduce carbon emissions.
- The Council will look to identify new funding streams that will allow local residents to benefit from reduced fuel bills and carbon emissions.
- The Council is in the process of launching an initiative called 'Really Smart Homes', which looks to develop best practice for retrofitting fifty hard-to-treat properties with energy saving measures and renewable technologies.
- It is important for the Council to work with external organisations and partnerships to develop and share best practice in terms of carbon reduction for domestic buildings and tackling fuel poverty.

OBJECTIVE FIVE

DEVELOPING A LOW-CARBON TRANSPORT INFRASTRUCTURE

5.1 With domestic transport accounting for 22% of the UK's greenhouse gas emissions it is clear that the decarbonisation of the transport network is a key area to target if the Council is to help Government meet its greenhouse gas emission reduction targets. This is especially relevant because the Environment Agency anticipates that road transport in the UK is expected to grow by 33% over the next twenty years.

5.2 The Council is therefore required to ensure that future decisions in this area support a shift to new technologies and fuels, promote lower carbon choices and start developing a low-carbon and sustainable transport infrastructure. Furthermore, low-carbon travel initiatives offer an opportunity to make a real contribution, not only in decarbonising transport, but also in delivering local objectives around health, congestion, education, housing, air quality, economic development and social inclusion.

5.3 The Southend Local Transport Plan 3 Strategy Document 2011-2026 – the major policy document for the Council's transport policies and implementation plans – places a strong emphasis on low carbon transport and the need to develop a low carbon infrastructure for the Borough's future transportation needs. Emphasis is placed on tackling the problem at its cause, through influencing transport demand as opposed to mitigating its impact. It also requires better information and targeted marketing to influence driver behaviour and choices. One target is a ten per cent reduction in short car trips (under five miles) throughout the Borough, which would actually result in an overall ten per cent reduction in the carbon emissions associated with road transport and will promote zero-carbon options, such as, walking and cycling.

5.4 The Council already utilises a carbon calculator tool that can test future policies and schemes to predict carbon savings and also utilises the planning process (see Objective Three) in order to specify that transport infrastructure is established or improved when new developments are created. As a partner of the Evalu8 project the Council will be helping to install an operationally effective electric vehicle charging network across the East of England by March 2013. The Council's involvement in the project will help it to determine how it can plan for the anticipated growth and roll-out of electric motor vehicles in the coming decades.

5.5 Southend on Sea already has good public transport network. The Council will continue to encourage the use of public transport (and cycling) as an alternative to single vehicle journeys through initiatives such as Cycle Southend, MoveEasy, Bike Friendly Cities, an electric bike hire scheme and the promotion of travel plans to schools, local businesses and residential developments. This will be financed through the Council's successful bid of over £4.8million, which it won through the Local Sustainable Transport Fund in July 2011.

OBJECTIVE FIVE
SUMMARY

- The new Local Transport Plan places strong emphasis on low-carbon and sustainable transport, whilst highlighting the need to develop low carbon infrastructure for the Borough's future transportation needs.
- Developing a low-carbon transport infrastructure will help the Council to deliver local objectives around health, congestion, education, housing, air quality, economic development and social inclusion.
- The Council has set a target to reduce short car trips (under 5 miles) by 10%, which would result in a 10% reduction in the carbon emissions associated with road transport.
- The Council will promote both low and zero carbon options, such as, walking, cycling and increased use of public transport, and encourage changes towards more sustainable patterns of travel behavior through initiatives such as Cycle Southend, E-Bikes and Evalu8.
- The Council has been successful (June 2011) with a bid of over £4.8million through the Local Sustainable Transport Fund, which will further develop low-carbon transport throughout the Borough and a sustained marketing and behavioural change programme.
- The Council has also recently (March 2012) been awarded a grant of £1.577 million as part of the Better Bus Area Fund administered by DfT. This will support measures to improve bus punctuality, bus stops and interchanges, better marketing and driver training

OBJECTIVE SIX

TO IDENTIFY HOW THE COUNCIL CAN FACILITATE THE GROWTH OF THE LOW-CARBON ECONOMY THROUGHOUT THE SOUTHEND ON SEA BOROUGH.

6.1 The Department for Business Innovation & Skills puts the global market value of the low-carbon and environmental goods and services sector at around £3.2 trillion in 2008/09 and this is anticipated to increase by a further fifty per cent by 2015. The UK's share of this sector is already valued at £112billion with almost 910,000 jobs and both are set to increase over the coming decades. It is anticipated that there will be an additional one million jobs created in this sector by 2030.

6.2 As such the UK's low-carbon transition will transform the entire economy and provides many opportunities to create new jobs and encourage new businesses to choose Southend on Sea as their place of work. Through an initiative entitled 'Sustainability on Sea' the Council has already embarked on a strategy to make the town and surrounding areas a benchmark for sustainability. The initiative will offer a series of events and seminars, including the Council's annual national conference on sustainability and carbon reduction **'Funding a Green Future**'.

6.3 It is envisaged that 'Sustainability on Sea' will act as the first steps to facilitate future low-carbon growth throughout the Borough and help identify how the Council can benefit from the positive developments of the low-carbon transition. By the end of this Strategy the Council will aim to become one of the leading low-carbon authorities in Essex and will have thoroughly assessed the best mechanisms for economic growth for the Southend Borough.

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6.4 The Council will also support regional work with other local authorities to determine how the East of England can benefit from low-carbon growth, for example, with regards to an approach with the Green Deal and conducting a feasibility study with other local authorities to determine the investment opportunities in the region.

6.5 This will be achieved by prioritising the identification of low-carbon funding streams that are available throughout Europe that aim to encourage economic growth. The Council will place emphasis on developing innovative initiatives that could attract both European and private sector funding and ensure that all future funding bids consider the development of the low-carbon economy as a key point.

6.6 One way the Council can facilitate the growth of the low-carbon economy is to encourage local businesses to achieve carbon and financial savings through energy efficiency initiatives. The Council is actively involved in the Thames Gateway South East 'Leading a Low Carbon Business' Programme, which is designed to assist and support businesses throughout the Borough reduce their carbon emissions and improve their energy efficiency performance. The programme offers fully funded business advice, green business planning and capital and revenue grants. For the 2009/10 calendar year the Council exceeded all of its targets under the European funded scheme.

OBJECTIVE SIX
SUMMARY

- The Council aims to lead the move to a low carbon economy in Essex in order to help encourage economic recovery, create local jobs and encourage new businesses to choose Southend as their place of work.

- A regional approach will be adopted where the Council works closely with other Local Authorities in the East of England to develop the low-carbon economy.

- The Council looks to encourage this growth through an initiative called 'Sustainability on Sea', which will offer a series of events and seminars.

- The Council will host an annual national conference for the public sector on the UK's transition to a low-carbon economy entitled, which is designed to promote the opportunities available to the public sector in this area.

- Funding streams will be identified and bids made specifically to encourage low-carbon growth and development in the Southend on Sea Borough.

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