

# Southend-on-Sea Borough Council

Agenda  
Item No.

**16**

Report of Corporate Director for Place

To  
**Cabinet**  
11 November 2014

Report prepared by  
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## Low Carbon Energy and Sustainability Strategy 2015-2020

**Executive Councillor: Councillor Longley**

***A Part 1 Public Agenda Item***

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### **1. Purpose of Report**

- 1.1. To consider Southend on Sea Borough Council's ('the Council') Low Carbon Energy and Sustainability Strategy 2015-2020, which will replace the Council's first low carbon energy strategy that was published in 2012 and runs until the end of December 2014.

### **2. Recommendations**

- 2.1 **That the Cabinet notes the comments included in this report provided by Members at the Place Scrutiny Committee meeting held on 13<sup>th</sup> October 2014.**
- 2.2 **That Cabinet agrees the Strategy and that the Council should sign up to the Local Government Association's Climate Local Initiative.**

### **3. Background**

- 3.1 In 2012 the Council became the first local authority in Essex to publish a specific low carbon energy strategy, which looked to identify the opportunities available to the Council through the growth in the low carbon and environmental sector and the risks from issues including rising energy prices and the future impacts of climate change on the Borough.
- 3.2 The original strategy covered a two-year period in order to help the Council build capacity and further its understanding on the above before setting more ambitious targets from 2015 onwards. The strategy also aimed to demonstrate the Council's commitment to support key government greenhouse gas emission reduction targets under the Climate Change Act 2008, which placed 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 emissions levels).

- 3.3 The successor to the Council's first strategy – Low Carbon Energy and Sustainability Strategy 2015-2020 – focuses upon delivering low carbon growth, improving energy efficiency and providing a more sustainable future for the Borough's residents, communities and businesses.
- 3.4 As part of the original strategy, the Council signed the Nottingham Declaration on Climate Change. This has now been replaced by Climate Local which is an LGA initiative supported by the Environment Agency Climate Ready service to drive, inspire and support Council action on climate change. As part of the new Strategy, it is proposed that the Council joins the Climate Local initiative.
- 3.5 In addition, it provides the Council with the opportunity to safeguard against rising energy costs, make efficiency savings and explore new revenue models at the time of public sector cutbacks and help deliver local objectives around health and well-being, housing, fuel poverty, air quality, transport, education, economic development and community cohesion.
- 3.6 The Low Carbon Energy and Sustainability Strategy 2015-2020 covers a five year period and has the overriding objective of establishing Southend on Sea as a 'Low Carbon City' by 2020. The aims and objectives of the second strategy are more ambitious than its predecessor and has identified six key focus areas to target delivery upon:
- Focus Area One: Reducing our Carbon Emissions;  
Focus Area Two: Policy and Regulation;  
Focus Area Three: Delivering a Local Low Carbon Economy;  
Focus Area Four: Supporting Low Carbon Communities;  
Focus Area Five: Encouraging Sustainable Transport and Travel; and  
Focus Area Six: Adapting to Climate Change and Enhancing Biodiversity
- 3.7 The new strategy will be supported through an Action Plan to ensure progress in all focus areas is coordinated and maintained and a Communications Strategy to ensure engagement with key stakeholders both in the short and longer term.
- 3.8 The Low Carbon Energy and Sustainability Strategy 2015-2020 has been drafted to enable the Council to target European Union funding, particularly Horizon 2020 - a programme with an available budget of €79 billion to spend between now and 2020.

#### **4. Comments from the Place Scrutiny Committee**

- 4.1 On Monday 13<sup>th</sup> October 2014 the draft Strategy was presented to the Place Scrutiny Committee as part of Pre-Cabinet Scrutiny. Members were very supportive of the draft Strategy and the level of ambition set within it. The following matters were raised by Committee Members:
- 4.2 Scrutiny Committee Members agreed that the Council should sign up to Climate Local as the successor to the Nottingham Declaration.

- 4.3 Confirmation was sought that the Low Carbon Offset Fund described on page 12 of the Strategy would be developed in line with existing Planning policies and plans.
- 4.4 Confirmation was sought as to whether the carbon footprint mentioned in the Strategy takes into account population growth and transport.
- 4.5 Details on how many residents have signed up to the Green Deal across the Borough were requested.
- 4.6 Information relating to the health benefits of the successful implementation of the new Strategy was requested.
- 4.7 Further details were requested on how the benefits of an energy efficiency and renewable installation programme across the Borough's school estate would be realised when a school is managed outside of the Council's control, with particular reference to the Borough's academy schools.
- 4.8 Additional information was sought about how the Council intends to extend the opportunities for energy generation and energy savings to local businesses throughout the Borough.
- 4.9. The financial return from the energy projects is estimated at between 1-3% of installation cost each year for 20 years. It was perceived that this margin was thin and that risk materialisation could result in a cost to the Council.
- 4.10. Further clarification on the context around borrowing, opportunity costs and risks that are associated with delivering a pipeline of low carbon projects was requested. With particular information sought on the influence of the network operator, the amount of tax payers' money being used to fund the works, and whether the business case for future projects take into account the likely increases in the cost of biomass.

## **5. Response to Scrutiny Committee's Comments**

- 5.1 The Committee supported the recommendation that the Council sign up to Climate Local as the successor to the Nottingham Declaration (which the Council become a signatory to in 2008).
- 5.2 The Strategy proposes the potential to establish a Low Carbon Offset Fund, which have already been adopted by Milton Keynes Council and Southampton City Council. The fund would be developed in line with future legislative requirements associated with Zero Carbon Developments, which are expected to come into force in 2016. The Council's Planning Department would be consulted throughout the process to ensure that the fund would support existing and future planning and development policies
- 5.3 To meet the legally binding greenhouse gas emission targets outlined at 3.2 above, the Committee on Climate Change (CCC) – an independent, statutory body - was established. The CCC provides advice to the Government on emissions targets and report to Parliament on the progress that has been

made in reducing greenhouse gas emissions and preparing for climate change.

5.4 The CCC has developed indicators to track carbon emissions, progress in low-carbon investments, and the development of relevant government policies across the UK. This allows early identification of any areas where targets could be missed. Some of the indicators that are tracked include:

- Grams of CO<sub>2</sub> in an average unit of electricity – and how low this could go if we used our existing power infrastructure differently.
- Number of gigawatts of capacity from onshore and offshore wind farms at various stage of the project cycle.
- Grams of CO<sub>2</sub> per kilometre from new cars and the rate of development in electric vehicles market.
- The number of lofts and walls being insulated and boilers upgraded, including moves to low-carbon heat such as ultra-efficient heat pumps.
- Progress of government policies such as the Green Deal and those involving Electricity Market Reform

5.5 The CCC calculations do take into account population growth and transport considerations. The reduction targets set by the Climate Change Act 2008 will need to be met regardless of population growth or the increase in emissions from the transport sector. The new Strategy aims to support the delivery of meeting the UK's carbon and greenhouse gas emissions reduction targets by not only taking action to reduce the emissions emanating directly from the Council's property estate and through our operations and services, but by looking at ways we can support local communities, residents and businesses to take similar action.

5.6 The Government has not yet released a breakdown of Green Deal take up in targeted geographic areas. Therefore, the report is not able to provide the figures for the Borough. Green Deal take up has generally been by more affluent residents who can afford the initial £150 cost for the Green Deal Assessment (GDA). Whilst press comment has criticised the Green Deal take up, national survey evidence has shown that 80% of recipients of a GDA have implemented at least one measure but that they have funded these themselves. The Council will seek to increase the opportunities for less well off residents to access the Green Deal.

5.7 An important element of the new Strategy is how the low carbon and energy efficiency agenda can be utilised to help deliver key local authority objectives around transport, education, air quality, housing and economic development. This is particularly relevant to addressing fuel poverty and helping to improve the health and well-being for residents throughout the Borough.

5.8 Research has shown that fuel poverty can lead to reduced weight gain in infants, an impeded ability to learn in older children, increased incidence of cold and flu, mental health problems and chronic lung diseases, heart attacks

and strokes in older people. Cold homes can also lead to excess mortality rates over the winter period. Although we do not have the figures for Southend Borough, in London, an average of 3,710 Londoners die every year as a result of living in a cold home, there are over 23,000 additional emergency hospital admissions and just under 93,000 additional outpatient attendances.

- 5.9 This is an urgent issue, which the Council are directly addressing through the new Strategy. For example, in June 2014 the Council secured £40 million through the Big Lottery Fund, which will be used to improve the lives of 13,000 vulnerable children in the six most deprived wards of the Borough. The work will include undertaking work to address fuel poverty and reducing the negative health and well-being implications and make sure that we are able to provide Southend on Sea's young people with a better start in life.
- 5.10 The Council are also undertaking work to increase levels of active travel and reduce vehicle usage, which will also have health benefits, for instance, lead to a reduced risk of obesity, diabetes, heart disease, and mild mental illness, as well as reducing road traffic injuries and deaths, and improving air quality.
- 5.11 The Council will also consider how other incentives could be introduced to local businesses to encourage them to invest in energy efficiency and renewables generation. Options may include setting up or partnering with a Non-Domestic Green Deal Provider or extending any potential Rent-a-Roof opportunities to include businesses.
- 5.12 The project finances are constructed on an 'invest to save' approach using revenue from 3 sources (listed below) to generate a cashflow over 20 years. The cashflow will be used to cover all implementation costs, funding costs and maintenance costs within the project leaving a surplus which is either retained by the Council or shared with the operator of the building as appropriate:
- Reductions in energy bills from direct reductions in energy usage and free generation from electricity generation.
  - Feed in Tariffs (FiTs) paid for electricity generation from renewables including export to the grid
  - Renewable Heat Incentive payments paid for heat generated from renewable sources
- 5.13 The proportion of these revenues that are paid for by the public through energy bills will vary from project to project but generally will be between 70-100%. It should be noted that the total funding available for renewables incentives is fixed in each year and therefore any increase or reduction of the level of energy projects pursued by the Council will not change the amount raised centrally from energy bill payers.
- 5.14 Where the project is to be implemented in a school or other building operated by an organisation other than the Council, the project will be constructed to allow all revenues to flow to the building operator. The purpose of this arrangement will be to ensure the maximum revenue for the project through

then structure of the FiT regime. The operator will be required to enter into a revenue sharing arrangement with the Council through which the Council will generate the revenue to repay the loan, funding costs and to generate a surplus. This process will apply equally to Academy Schools and well as Council operated schools.

5.15 Funding for the projects is assumed to be borrowed with the following sources being available:

- Public Works Loan Board (PWLB) – currently provides loans at around 4.25% fixed for the period of the loan at the point of drawdown (current assumption in all calculations). Loans are taken on a fixed basis with the Council accruing capital to repay the loan at the end of the term which is assumed to be 20 years to match the period of FiTs and RHI. Investment income on the accrued capital is assumed within the projects at 1%.
- Green Investment Bank (GIB) – discussions have commenced with GIB over a facility to provide loan finance for mixed energy efficiency and renewable projects. GIB facilities cannot be used for projects which only use solar PV and the proportion of solar within any portfolio funded by GIB must not exceed 20%. GIB funding will be at interest rates fixed for the period of the loan but on a reducing balance basis with repayments suited to smoothing the benefits to the Council from the projects. The overall effective interest rate is likely to be lower than the equivalent PWLB loan and the interest rate from the facility may be able to be fixed at the start which will provide a hedge against increasing interest rates in the next few years.
- Private Sector. Some private sector finance may be available but it is generally not available for mixed projects and is expected to be more expensive. Where the solution is procured through an ESCO (Energy Service Company) arrangement, private sector finance may be available as may be guarantees on energy savings and revenue generation. The Council has entered the Blue Sky Peterborough framework to investigate this approach but it is likely that the arrangement will be more expensive than internal delivery which may reduce the opportunity available.

5.16 Risk. The financial return from the energy projects is estimated at between 1-3% of installation cost each year for 20 years but this also provides for some revenues and benefits to operators of the buildings be they residents, schools or businesses. There are risks to the arrangements but these should be set against the measures built in to mitigate against the risk:

- Performance. The expected performance of energy saving measures and generation equipment has been estimated with caution. For example, the generation from Solar PV is estimated at 5% less than the performance evidence available on existing installations.
- Costs. Installation costs include fees and are estimated cautiously. Over time some equipment costs are likely to fall slightly which will mitigate against the risks below.

- **Interest Rate Rises.** On any PWLB loan drawn down, the interest rate is fixed for the term of the loan. The Council is exposed to interest rises on future projects but can choose not to proceed if rate rises make the projects not viable. Discussions with GIB may provide a hedge against rate rises as well as providing for lower rate finance which will enhance returns to the Council.
- **FiTs and RHI Award.** Once awarded, the FiTs and RHI revenues are provided for 20 years on a guaranteed basis and inflated based on RPI.
- **Inflation.** Energy inflation is built into the calculations at 5% per year. All fuels including biomass are assumed to inflate at the same rate. RPI is assumed at 2.5% each year. Lower inflation will result in lower revenues and lower savings but will be in an environment where the overall energy usage for the Council will be lower. If inflation is higher, the revenue and savings will be higher but this will be in an environment where the overall energy usage will be higher.
- **FiTs and RHI Degression.** FiTs and RHI are subject to a reduction calculation based on take up of technologies. The rates (introduced by Government) for different technologies and sizes of technologies are reduced at different rates to slow down take up with some rates being increased to encourage take up of these technologies. The energy projects are sized to maximise revenue where possible but at least one quarterly reduction is built into the calculations with longer term projects having more reductions included to account for the likely lowered revenue. As reductions will only affect future installations, the Council can stop the rollout of projects or adjust technologies if the rates are reduced too far and projects become not viable.

- 5.17 One effect of the balance of risks, in particular interest rate risk and FiT/RHI reductions, is that the larger and faster the implementation of the strategy can be undertaken, the higher will be the net positive effect on Council revenues.
- 5.18 **Sensitivity.** The net margin after all costs of 1-3% that can be gained on these projects is an annual return for 20 years and excludes any investment income from the capital accrued. For a mid-range project returning 2% per annum, the net margin is in excess of 40% overall when the investment income is included and over 35% on an NPV basis (2.5%, 20 years). Typically projects have 2-3 revenue streams attached which spreads the risk but even a 5% reduction in all revenue, lowers the NPV to 28% and the annual margin to 1.6%.
- 5.19 Electricity generation projects will be required to be connected to the grid and will be subject to approval from the Distribution Network Operator (DNO) – UK Power Networks. The DNO has the right to refuse any micro-generation project but also has an obligation to facilitate the take up of micro-generation. The Council will seek to work with the DNO to help them to meet their obligations and to maximise the opportunities within the area.
- 5.19 The overall size of the proposed projects needs to be considered and agreed as part of the Council budgeting process.

## **6. Other Options**

- 6.1 The Council has the option not to replace the existing Low Carbon Energy Strategy 2012-2014 and build on the progress that has already been made in addressing rising energy costs, future fuel security and associated costs of climate change.

## **7. Reasons for Recommendations**

- 7.1 The recommendations have been made in order to position the Council as a leading local authority in the East of England with regards to the UK's transition to the low carbon economy. Successful implementation of the new strategy will provide the Council with the opportunity to establish new funding streams (including EU funding bids), efficiency savings and revenue sources (including money generated through renewable energy installations).
- 7.2 The new Strategy provides an excellent opportunity for the Council to make a real contribution in delivering local objectives around health and well-being, housing, fuel poverty, air quality, transport, education, economic development and community cohesion.

## **8. Corporate Implications**

### **8.1 Contribution to Council's Vision & Corporate Priorities**

The measures listed above are in line with the Corporate Priorities and also the Council's vision in terms of becoming an exemplar authority by developing best practice and supporting the Council's vision to become a city and support the regeneration of the Borough.

### **8.2 Financial Implications**

- 8.2.1 A major objective of the Low Carbon and Sustainability Strategy 2015-2020 is to help the Council safeguard against rising energy costs, make efficiency savings and explore new revenue generation models at a time of public sector cutbacks.
- 8.2.2 The new Strategy identifies a pipeline of low carbon and renewable projects that will mostly be 'cash positive' from year one across both the Council's property estate and from utilising assets throughout the Borough. The Council will need to consider funding the projects through private sector suppliers and Energy Service Companies (ESCos), the Public Works Loan Board, existing capital works programmes, a variety of European schemes (Horizon 2020, Life, JESSICA, ELENA), the Euro Energy Efficiency Fund and the Green Investment Bank.
- 8.2.3 The successful implementation of the new Strategy will enhance the Council's prospects of securing EU funding and the Council should establish a cross-departmental group that specifically targets securing EU funding.
- 8.2.4 Currently no council funding is contained within the existing capital or revenue budgets for any new identified projects in this strategy. If any projects require



Council funding they will need to be considered as individual projects as part of the annual budget process in determining annual Revenue and Capital budgets.

- 8.2.5 Projects are expected to deliver a financial return of between 1-3% each year net of all costs.

### **8.3 Legal Implications**

- 8.3.1 The Low Carbon Energy and Sustainability Strategy 2015-2020 complies with the Climate Change Act 2008 and Carbon Reduction Commitment Energy Efficiency Scheme and supports the UK's targets for energy generated from renewable sources.

### **8.4 People Implications**

- 8.4.1. The Council will need to establish a team to deliver the pipeline of low carbon and renewable projects, but this will depend on the scale of the projects that the Council undertake. Most of the costs of staffing projects can be paid from the cost savings and money generated from energy efficiency and renewable generation returns but there will be some pre-project work and costs which will be more difficult to fund in this way.

### **8.5 Property Implications**

- 8.5.1. The Council will need to continue working in a coordinated fashion to ensure that priority projects are delivered.

### **8.6 Consultation**

- 8.6.1. The Council has sought input from a number of organisations based within the low carbon and environmental sector – including Sustainability East, the Energy Saving Trust and Pure Leapfrog - they have also consulted with local groups (e.g. Trustlinks) and with relevant departments from within the Council. The individual sections within the strategy have been drafted by the responsible teams and managers, so already reflects existing Council activities.

### **8.7 Equalities and Diversity Implications**

- 8.7.1. The Council will need to be aware that the groups in the community most vulnerable to increased energy costs will be those in disadvantaged areas and an Equality Impact Assessment is being undertaken.

### **8.8 Risk Assessment**

- 8.8.1 There is a risk that if the Council fails to adopt the Low Carbon Energy and Sustainability Strategy 2015-2020 that it will not adequately safeguard itself against the risks associated with future fuel security, rising energy costs and climate change.
- 8.8.2 There is a risk that the Council could miss out on future funding and grant bids by not approving the new Strategy and becoming a signatory to Climate Local.

- 8.8.3 There is a risk that by failing to act and promote the low-carbon economy sufficiently to local residents and businesses that there will be negative health implications e.g. increased number of properties falling within fuel poverty, winter deaths and negative economic implications.

## **8.9. Value for Money**

- 8.9.1 The vast majority of work proposed in the new Strategy already falls within existing work streams at the Council and although additional staff time will be required to embed low-carbon and sustainable considerations into the Council's decision-making processes the benefits will far outweigh the costs.
- 8.9.2 The Low Carbon Energy and Sustainability Strategy 2015-2020 has been drafted to help the Council deliver local objective around health, congestion, education, housing, air quality, economic development and social inclusion.

## **8.10 Community Safety Implications**

- 8.10.1 Adopting a proactive approach on the transition to a low-carbon economy will help to address poverty and health inequalities.

## **8.11 Environmental Impact**

- 8.11.1 Adoption of the Low Carbon Energy and Sustainability Strategy 2015-2020 will help the Council improve its overall environmental performance and result in a reduction in carbon emissions and the promotion of the sustainable use of resources throughout the Southend on Sea Borough.

## **9. Background Papers**

Climate Change Action Plan and Nottingham Declaration (Economic and Environment Scrutiny – 12<sup>th</sup> June 2008).

Low Carbon Energy Strategy 2012-2014 (Economic and Environment Scrutiny – 12<sup>th</sup> July 2012).

## **10. Appendices**

Appendix 1 - Low Carbon Energy and Sustainability Strategy 2015-2020

Appendix 2 - Climate Local