



**5 June 2014**

**Agenda Item:**

## **REPORT OF THE SERVICE DIRECTOR FOR TRANSPORT, PROPERTY AND ENVIRONMENT**

### **ENERGY MANAGEMENT PRINCIPLES AND OPPORTUNITIES**

#### **Purpose of the Report**

1. This report seeks Committee support for a set of energy management principles and associated actions for the County Council's buildings, and identifies a number of opportunities to protect against predicted energy price rises, generate income, meet strategic plan commitments and further support the local, low carbon economy.

#### **Information and Advice**

2. Although debate still continues around the causes and severity of climate change, the scientific consensus is overwhelming. The latest contribution (Working Group III) to the UN's Intergovernmental Panel on Climate Change's forthcoming Fifth Assessment Report notes that Green House Gas emissions resulting from human activity continue to rise, reaching their highest level in human history during 2000-2010, and that without additional efforts to reduce such emissions beyond those already in place, growth in emissions is highly likely to cause increases in mean global surface temperatures of between 3.7 to 4.8°C by the end of this century. This is significantly over the 2° limit, above which the worst impacts of climate change are considered unavoidable.
3. Nottinghamshire County Council has a long history of commitment and achievement in energy and carbon management, including being awarded Beacon status for sustainable energy in 2005, adopting a carbon management plan in 2007, and having an objective to reduce carbon emissions from its own estate in successive strategic plans. It also led partnership work to develop a local policy framework for sustainable energy policy within local development plans and had significant input into the East Midlands Councils' 2011 regional renewable energy opportunities study.
4. Recent activity in energy management was reported to Finance and Property Committee in January 2014, with a summary of performance for 2012-13 reported to this Committee last October. Such activity helps meet the imperative to be more resource efficient owing to budget pressures, and limits costs from rising energy prices and mandatory participation in the Government's Carbon Reduction Commitment Energy Efficiency Scheme (CRCEES). This report considers both Council buildings and land, and the positive impact the Council

can have on creating a local, low carbon economy. For street lighting, a number of energy saving projects are underway, including dimming high wattage lamps and replacing other lamps with LEDs, which together are looking to save £1.5million in energy costs by April 2017.

5. There is increasing recognition of the role that a local, low carbon economy can play in delivering environmental, economic and social benefits, and local authorities are well placed to contribute to this in the way they manage their own land and property, and through their leadership role. In November 2013, the Council's Economic Development Committee received a report on Nottinghamshire's low carbon and environmental technologies sector and approved a list of prioritised actions for supporting this sector locally, in addition to engaging positively with the Local Enterprise Partnership, D2N2, around its Low Carbon Plan for Nottinghamshire and Derbyshire. One such action was the promotion of low carbon activity within the Council's supply chain and procurement processes.
6. Actions to promote and develop a local, low carbon economy and to reduce the Council's own carbon footprint, also serve to support the Government's legally binding commitment to achieve an 80% reduction in the UK's carbon emissions by 2050, as part of the 2008 Climate Change Act. Hence the contents of this report should be viewed within the context of, and as contributing to, these wider commitments.
7. The energy landscape is rapidly changing, in part as the nation moves to more diverse, decentralised and low carbon generation and distribution. Energy costs continue to rise, with the County Council currently spending around £8million a year on energy for buildings and street lighting, and our schools a further £10million. On the other hand, there are increasing opportunities to raise income from energy generation, with financial incentives available to local authorities for renewable energy production and the power to sell both heat and, in some circumstances, electricity.
8. Increasing the role of community groups in the distribution, production and saving of energy is also being encouraged, not least through the Government's recent Community Energy Strategy, which acts as further mandate for local authorities to support community groups in such activities.

## **An Energy Smart Council**

9. The term 'energy smart' embraces both the aim to drive down energy costs and the desire to make the most of energy opportunities for the benefit of the Council. To become an energy smart council, further reduce the environmental impact of County Council services and limit the impact of increasing energy costs, it is recommended that the Council adopts the following energy management principles:
  - **Avoid needless costs** - by ensuring best value from energy procurement, compliance with energy-related legislation and the inclusion of energy cost considerations in procurement and major decision making.

- **Reduce energy demand** - through engagement with staff to promulgate energy saving behaviours, and through the management, refurbishment and design of Council buildings.
- **Use energy more efficiently** - through continued investment in quick payback energy efficiency measures in Council buildings.
- **Increase the use of renewable energy** - where appropriate opportunities exist for energy cost savings and income generation.

10. In pursuit of the above the Council will:

- Monitor the performance of its energy supply arrangements through its appointed central purchasing body.
- Comply with relevant energy-related legislation, including the current requirement to comply with the EU Energy Performance in Buildings Directive and the CRCEES.
- Include energy considerations in property-related design and refurbishment briefs, in property asset management and in procurement and other decisions that will affect energy use in buildings, beyond requirements essential to meet building regulations.
- Target energy audits and efficiency measures in buildings to maximise savings.
- Monitor, record and communicate energy costs and consumption data for Council buildings to appropriate managers and budget holders.
- Encourage service areas, property managers and utility budget holders to pursue improvements in the energy performance of their buildings.
- Encourage all staff to contribute to saving energy in Council buildings.
- Continue to support its revolving loan fund for investment in energy efficiency measures in its buildings and exploit other appropriate funding to become more energy efficient.
- Continue to explore and consider further opportunities to invest in renewable energy generation and use on its buildings and land.
- Set targets to improve the average Display Energy Certificate ratings of its buildings and reduce their combined weather corrected carbon emissions by 3% or more each year.
- Commit to the Council's own developments being in line with the Government's proposed timetable for achieving zero carbon emissions for new non-residential buildings by 2019.
- Consider the whole life costs of major contracts (above £50,000), as part the Council's 2014-17 Procurement Strategy, which will include the implications for energy costs and consumption.
- Consider and review the energy and carbon implications of its decisions as part of the Committee reporting process.

## Options for further action and investment

11. This section of the report sets out a number of options for further action and investment in

key areas. Examples of opportunities being explored and implemented by other local authorities are given in Appendix 1. The main energy investment opportunities that exist for the Council are considered to be:

- Behavioural change programmes and awareness campaigns
  - Energy efficiency measures
  - Renewable electricity
  - Renewable heat, and
  - Energy crops.
12. In general, renewable energy technologies can offer a range of benefits, including:
- Cost savings associated with displacing grid-supplied electricity
  - Income generation
  - Carbon reduction and associated cost savings under the Carbon Reduction Commitment Energy Efficiency Scheme
  - Supporting the local low carbon economy
  - Assisting to meet planning and building regulation requirements
  - Enhancing and supporting the educational experience of schoolchildren
  - Improving local energy security
  - Opportunities for positive PR.

#### **A. Behavioural change programmes and awareness campaigns**

13. Behavioural change programmes and energy awareness campaigns have long been considered to be part of the recognised approach to building energy management, with relatively quick returns for small levels of investment. But momentum can be hard to sustain. Now that the Council has Automated Meter Reading (AMR) installed for most of its electricity supplies, and a number of larger sites with AMR for their gas supplies, it is in a reasonable position to monitor and report on the effectiveness of well-designed programmes and campaigns. Carbon Trust studies have shown that when such initiatives are combined with the use of AMR, energy cost savings of 10-15% can be achieved.
14. As part of the Council's Eureka staff suggestion scheme, staff have recently been challenged to come up with ideas as to how they could best be motivated to help save energy in the workplace. The suggestions will be collated and presented to the Corporate Leadership Team for consideration, with a view to taking forward the best ideas.
15. In addition, the County Council has been invited by the University of Nottingham to participate, at no direct cost, in an EU-funded research project to identify innovative ways of using ICT to engage office staff in adopting and supporting energy saving behaviours. If the bid, to be submitted this month, is successful, the project would commence in January 2015, with the Council providing a test site and assisting with staff engagement and energy monitoring.

#### Options to consider

- a) Develop a longer term, engagement and energy awareness programme, linked to a wider programme of supporting staff in delivering the strategic plan commitment to reduce the environmental impact of providing County Council services. This could be done through cross-service working, linking to Ways of Working, corporate communications and facilities and property management.

## B. Energy efficiency

16. Investment in energy efficiency measures, such as boiler controls, low energy lighting, and insulation is usually easier to quantify than 'softer' behaviour initiatives, with such measures typically giving payback periods of 3 years and upwards. There is a wide range of financing options available, including interest-free loans and energy performance contracts which see the cost of measures being paid from verified savings. The Council has its own revolving Local Authority Energy Finance (LAEF) fund of £1.3million to invest in measures in its own buildings, including schools, which has been in place for a number of years and includes £0.55million of funding from Salix Finance, a body established by the Carbon Trust. Last year this fund invested in projects to the value of £346,652, worth £74,599 in saved annual energy costs and 370 tonnes of carbon saved p.a. In total the scheme has now invested just under £2million, saving annually £465,000 in energy costs and 2,700 tonnes of carbon (currently worth £16.40 per tonne). LAEF scheme measures need to have a payback period of 5 years or less.
17. There are also opportunities to eliminate wasted energy, particularly by better management and control of heating. A pilot project working with Library Services has recently highlighted the benefits of checking and re-setting heating controls across a number of properties.

### Options to consider

- a) Further investment in the LAEF scheme, which may have the potential to attract further match funding from Salix Finance.
- b) Further work focused on heating control and management across the Council's property portfolio, learning from the pilot work with Library Services.

## C. Renewable electricity

18. Electricity generated by **solar energy** through photovoltaic (PV) panels probably provides the largest scope in terms of number of opportunities for utilisation across the Council's portfolio. The Council's SunVolt scheme has so far seen c£600,000 invested in over 1,300 panels on its non-school buildings, which are expected to generate just under 250,000 kWh per year, saving around £15,000 in electricity costs at current prices, and yielding around £55,000 p.a. in Feed in Tariff (FiT) payments. These panels will save over 100 tonnes of CO<sub>2</sub> p.a. and represent an annual return on investment of around 10%. A further £1million has been allocated for PV investment on non-school buildings over the next 4 years.
19. In addition to this, some County schools have had PV panels installed on their roofs, predominantly under a recent scheme offered by British Gas, which enables the schools to benefit from free electricity generated by the panels. To date, 40 or so schools have benefited from this scheme at no cost to themselves, saving between them about £44,000 in energy costs and 140 tonnes of carbon dioxide per year.

#### Options to consider

- a) Investing in PVs on school buildings would provide a source of income to the Council through Feed in Tariff payments and benefit schools through off-setting grid-supplied electricity and providing a useful educational resource. For the Council, such investment would extend the payback period compared to using non-school buildings, as there is no financial benefit to it from the 'free' electricity used by the schools. It would also require some form of agreement with the school to ensure the Council could continue to receive FiT payments should the school change its status at some point.
  - b) The Council could also consider developing large scale land-based PV schemes on its suitable landholdings. Large-scale solar farms can yield returns of 7-9%, depending on installation costs and location. In the UK, most projects of this nature are between 0.5 and 5MW. As a rough guide, each MW of capacity will take up 2-3 hectares of land, produce about 750-950 MWhr per year and require an investment of around £1-1.2 million. Better returns are possible if there are large energy users on site, but projects that feed solely into the grid are also viable. A solar farm can increase land value and utilise space with poor soil quality. For this reason, brownfield sites or those with a land classification of 2b or lower, sited close to a 33kV substation, are often best. Such schemes, wherever located, can be the subject of negative publicity. No detailed feasibility studies have so far been undertaken to explore this opportunity within the Council's estate, although a brief, initial scoping study of the Green Estate only found one suitably-located site, but this had insufficient local grid capacity.
20. Electricity generated by **wind energy** also presents opportunities across the Council's land holdings. So far, use of this technology has been relatively limited with small (5kW) turbines installed by the Council at several sites, including Mapperley Plains Primary School, Redlands Primary School, Worksop, and the Turbine Centre, Worksop. Again, like solar farms but probably more so, large scale wind generation on Council owned land could attract negative publicity and prove unpopular. Different options exist to manage the risks involved, but generally speaking the greater financial benefits are associated with higher levels of risk and Council ownership of such projects.

#### Options to consider

- a) Preliminary scoping studies undertaken some years ago identified a number of Council landholdings as potentially technically suitable for large scale wind power, and it is at this end of the spectrum that the best returns can be made. At that time, the turbines envisaged were 80-125m high to the blade tips, capable of producing 1.5MW. Such scoping work could be revisited and sites assessed for practical and technical feasibility, with the risks and benefits of different models of operation and ownership explored.
- b) Similar consideration could be given to the opportunities afforded by small to medium scale wind power generation on Council landholdings. Although the economics of this are likely to be less favourable than large scale wind power, projects may be easier to deliver and more widely acceptable.

21. The Council's estate presents limited opportunity to exploit the potential for **hydropower**. Like solar and wind power, hydroelectricity can qualify for payments by way of FiTs or Renewables Obligation Certificates, dependent on scale.

#### **D. Renewable heat**

22. In terms of impacting positively on carbon emissions, supporting local employment and generating a return on investment, biomass heating probably represents the best opportunity for the Council to exploit, which it is continuing to do. The Council has a history of investing in biomass boilers going back to 2003, and is believed to operate more wood-fuelled sites than any other UK local authority. A new programme to install up to 20 biomass boilers on Council sites to replace ageing fossil fuel plant, making use of the Government's Renewable Heat Incentive (RHI), is underway. Switching to biomass represents a highly effective method of reducing carbon emissions, and the RHI payments, which are guaranteed and index-linked for 20 years, will provide a good return to the Council, with payback periods varying from site to site, but generally ranging from 6 to 12 years.
23. In addition to biomass, other forms of renewable heat also qualify for RHI payments, including ground source heat pumps, water source heat pumps, geothermal energy, solar thermal and biomethane. To date, the Council has had limited experience of utilising these technologies, and generally speaking they tend to lend themselves more to new building projects (such as the new bus station at Mansfield, which incorporates ground source heat pumps) than to retrofitting.

##### Options to consider

- a) The Council could consider a more progressive approach to reducing the need for heat in its buildings and maximising renewable heat to meet any remaining need.

#### **E. Combined heat and power**

24. Gas (and other fossil fuels) and renewable energy can be utilised to generate both heat and power at the same time – combined heat and power (CHP), and whilst this approach can work at a smaller scale it tends to be limited to larger installations. Although it appears that CHP is more of an opportunity than it used to be, mainly because of the rapidly changing electricity supply landscape and the opportunities around incentives for renewable heat, there are still considerable challenges and risks associated with such high level and long-term investments. It is also more suited to sites (or areas if part of a district heating scheme) with large year round heat (or cooling) requirements, such as leisure centres with pools, and as such is limited in its application for County Council properties.
25. It is possible for local authorities to own, part own or just help facilitate such plants – which can be small (a shipping container type size), mobile, and could run on gas (e.g. from coal mine methane extraction, landfill, or AD) or be fuelled by biomass. Selling to the grid requires proximity to suitable substations and, to

sell heat, developments would need to be integrated with planning and economic development.

## **F. Energy from waste**

26. Where it is not possible to recycle waste, the next most sustainable option is to recover energy from it. This can also provide a local source of heat or power for other nearby development, helping to meet the Government's aims of decentralising energy supplies and providing alternative forms of renewable or low carbon energy to offset the need for fossil fuels. There are many different forms of energy recovery ranging from thermal methods such as incineration, pyrolysis or gasification, to biological methods, such as anaerobic digestion and Mechanical Biological Treatment.
27. The Council has a long term contract with Fomento de Construcciones y Contratas (FCC) for the use of the existing Eastcroft Energy from Waste (EfW) plant and is keen to use additional EfW capacity to divert waste away from landfill, recognising the importance of such technologies in respect of both waste disposal and energy production. In particular, EfW with Combined Heat and Power (CHP), as employed in Nottingham and Sheffield, can provide excellent opportunities to minimise carbon emission and provide affordable heating, whilst delivering cost effective waste treatment solutions.

## **G. Energy crops**

28. In addition to opportunities for generating and using renewable energy, the Council could increase production of renewable energy crops from its green estate. It has already initiated a pilot exercise by planting Miscanthus (elephant grass) at the former landfill site at Fiskerton, a site that is difficult to let for grazing and unsuitable for growing food or trees. The Miscanthus, now in its fourth year of growth, is grown and harvested under a contract with a specialist company and should generate c. £2k per annum income for up to 10 years before needing replanting. This is in comparison to c. £400 per year from rent for grazing. In addition to Miscanthus, the Council has trialled growing Eucalyptus as a short rotation energy crop at Daneshill. This has met with mixed success, with the trees proving more susceptible to periods of intense cold than envisaged. The crop is still growing but the trial has demonstrated that it is unlikely to be economic to roll out to other sites. There is potential to grow other crops such as willow and other quick growing trees, and other non-woody energy crops, such as hemp, but no wide ranging feasibility work has been undertaken.
29. Further to this, parts of the Council's green estate and its operations produce, or have the potential to produce, timber suitable for converting to wood chips or other biofuels and using in appropriate biomass boilers. The Council could look to explore options for growing and processing its own biomass fuel, which may help to reduce risks, such as security and affordability, associated with any energy supply. The Council will shortly be reviewing its agricultural estate, which presents an opportunity to consider energy crops as part of this process.

30. In light of the above, the Council's Country Parks and Green Estates Service, following a successful expression of interest, has submitted a full application to the innovation charity, Nesta, for funding under their Rethinking Parks project, to develop a tool to assist with the evaluation of such opportunities, in conjunction with the University of Nottingham.

Options to consider

- a) The Council could consider the opportunities afforded by growing energy crops on its land where it is commercially viable.

## **Supporting community action – energy smart communities**

31. Nottinghamshire County Council currently supports sustainable energy action in the wider community in a number of ways, in line with the aims of the Government's new Community Energy Strategy. These include its long-standing support for the Nottinghamshire and Derbyshire Local Authorities Energy Partnership (LAEP) and its economic development work, mentioned above in paragraph 5. The LAEP works on behalf of its member authorities to promote sustainable energy, particularly through programmes to alleviate fuel poverty, improve home energy efficiency and support community action.
32. The Council also has some influence through the planning system on the impact development can make towards a low carbon economy. It provides comments on major planning applications that are determined by the local district and borough councils; it can influence planning applications that it determines in its role as a waste and minerals planning authority and for its own developments; and it can seek to influence developments associated with the disposal of its land and property assets.

Options to consider

- a) Commit to continuing support for the Nottinghamshire and Derbyshire Local Authorities Energy Partnership.
- b) Seek to maximise the opportunities from D2N2's Low Carbon Plan and support its aspiration to develop local community energy strategies.
- c) Explore how local communities could benefit from energy opportunities on Council land.

## **APSE Energy – energy collaboration for local authorities**

33. To better explore some of the opportunities and share learning and practice from other local authorities, the Council has agreed to participate in a new project, APSE Energy, developed by the Association of Public Service Excellence. This seeks to bring together like minded innovative local authorities to develop:
- Different forms of renewable energy generation, distribution and supply
  - Buying and retailing energy for local economic and social benefits
  - Financial models and investment opportunities
  - Municipalisation of energy

- Development frameworks and supply arrangements
- A pipeline of projects
- Heat networks and electric vehicle fleets
- Legal and procurement expertise.

34. Projects and proposals developed through this collaboration will be brought back to the relevant Committee/s for information and approval.

## **Other Options Considered**

35. The Council could opt to just meet its statutory requirements in respect of energy and carbon management. However there is a clear 'in principle' business case to invest in energy efficiency and renewable energy projects, particularly within the context of rising energy costs and increasing budgetary constraints. The options selected above have been done so with consideration of available resources.

## **Reasons for Recommendations**

36. The recommendations would strengthen the Council's corporate engagement on energy and carbon management and see further investigation of projects that could help limit the impact of rising energy prices and maximise investment opportunities and local benefit from energy projects. To bring some of the investment opportunities to fruition may well require innovative and collaborative approaches with a range of partners from different sectors.

## **Statutory and Policy Implications**

37. This report has been compiled after consideration of implications in respect of finance, equal opportunities, human resources, crime and disorder, human rights, the safeguarding of children, sustainability and the environment and those using the service and where such implications are material they are described below. Appropriate consultation has been undertaken and advice sought on these issues as required.

## **Implications for Service Users**

38. Energy is a significant area of spend for the Council, and as such effective energy and carbon management can protect or enhance budgets available for service delivery, by limiting, or reducing energy spend, generating income, and reducing maintenance costs, as well as contributing to the comfort and well-being of building users and occupiers.

## **Recommendations**

39. That Committee notes the contents of the report and the potential economic and environmental benefits accruing from energy management, and agrees:

- (i) to support the energy management principles and associated actions as set out in paragraphs 9 and 10;
- (ii) to accept the offer from the University of Nottingham to be a partner in the research project described in paragraph 15; and
- (iii) to undertake further appraisals, where funding allows, on the options for action and investment identified in the report, subject to business case justification and funding approval from the relevant Committees of the County Council as required.

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## **Constitutional Comments**

40. Environment and Sustainability Committee has authority to approve the recommendations set out in this report by virtue of its terms of reference. (NAB 22.05.14)

## **Financial Comments**

41. There are no immediate financial implications as a result of this report, however a number of the initiatives detailed have the potential to save money or generate income for the authority. (TMR 22.05.14)

## **Background Papers**

None

## **Electoral Divisions**

All

## **Appendix 1. Examples of energy projects from other Local Authorities**

### **A. Energy efficiency – a whole council approach**

#### **Leicestershire County Council**

Leicestershire's carbon management programme requires staff at all levels to find ways to cut carbon emissions through practical projects or changes to policy and practice as part of a commitment to reduce their 2009 emissions by 34% by 2021. Significant progress has been made in embedding carbon and energy saving in departmental and service plans.

### **B. Solar farms**

#### **West Lindsey DC**

Plans have been put forward to create a civic solar farm by West Lindsey District Council in Lincolnshire. Possible sites for the power facility have been identified, which would be placed away from current usage of agricultural land and other residential areas. This follows the installation of solar panels at five sites by East Lindsey District Council which aimed to create near to £1m in revenue against an overall cost of £400,000.

[http://www.solarpowerportal.co.uk/news/west\\_lindsey\\_district\\_council\\_proposes\\_construction\\_of\\_civic\\_solar\\_farm](http://www.solarpowerportal.co.uk/news/west_lindsey_district_council_proposes_construction_of_civic_solar_farm)

#### **Telford and Wrekin Council**

A solar farm is being considered by Telford and Wrekin Council as a method to raise revenue and protect front-line services, the local authority has announced. According to the council, its process would be analysed to the same level of planning and public consultation as normally required of commercial enterprises similar in size. It also said that it had already contacted residents near to the planned site, and would ensure the wider community would be consulted thoroughly prior to any final decision being made.

### **C. Council owned energy companies**

#### **Bristol City Council**

Bristol City Council has recently announced funding to develop its own renewable energy services company (ESCo) to spearhead renewable energy and energy efficiency projects worth up to £140 million and helping to create 1,000 green energy jobs in Bristol.

Although the focus is mainly on solar energy, the Council is also looking to install relatively small Archimedes Screw type turbines on the River Avon. The company will be owned by the City Council on behalf of the citizens of Bristol. It intends to secure half of its funding – around £70 million – from the European Investment Bank, the

rest from private sector investment. It would be an arms-length organisation and generate income through energy savings and energy generation.

Bristol's investment programme will initially be focused on:

- Improving the energy efficiency of over 6,000 homes and public buildings through wall insulation and other measures
- Installing over 7,000 renewable energy generating systems on homes and public buildings such as solar panels and wood fuelled heating
- Developing small district heating networks where several buildings are heated from a single, efficient boiler.

As part of this programme, the city's schools will also be installing energy efficiency works such as energy efficient lighting and insulation and rolling out energy awareness activities with staff and pupils in the school.

<http://www.sustainablebristol.com/2012/02/bristol-first-uk-council-to-become-renewable-energy-company/>

### **Woking Borough Council**

Woking Borough Council was the first Council in the UK to set up an Energy Services Company, Thamesway Energy Ltd, which is now wholly owned by the Council. Thamesway generates income of c. £1million p.a. for Woking from the sale of cogenerated heat and electricity to 1000 households and nearly 200 commercial and public sector customers in Woking and Milton Keynes.

### **D. Combined heat and power**

#### **Hampshire County Council**

Hampshire County Council is a partner in the Ecotec21 project which is funded by the European Commission's INTERREG IVA France (Channel) – England funding programme. The project focuses on the use of Combined Heat and Power (CHP) technology in existing buildings. The County Council is currently undertaking feasibility work for district energy networks across the county.

### **E. Hydropower**

#### **Derby City Council**

Derby City Council has invested c. £1.7million in a hydro-electricity plant that supplies its new Council House next to the River Derwent with electricity and exports surplus power to the grid.

<http://www.utility-exchange.co.uk/hydroelectric-plant-will-reduce-council-energy-bill-16825/>

### **F. Large scale wind**

#### **Preston City Council**

A proposed civic wind energy scheme on council-owned land in Preston would be managed by the council on behalf of the city and local communities, with profits made by selling the energy to the national grid re-invested back into the local area. In August 2012, planning permission was approved to erect an (80m) test wind mast and the Council was to finalise plans for the erection of this test mast by submitting final designs for approval to its Planning Committee at its meeting in January 2014.

<http://www.preston.gov.uk/news/2013/dec/preston-163-250-000-wind-energy-deal/>

### **East Bridgford Community Energy**

Not a local authority project, East Bridgford Community Energy IPS Ltd, has recently had an application to Rushcliffe Borough Council for a community wind turbine refused. But by way of illustration, the cost benefit analysis accompanying the application showed, from an initial £1.2million investment in a 0.8MW (87m high) turbine, a predicted income over 20 years of over £4million, with investors (local people) receiving a rate of return of 7-10%, and around £2million being made available for community projects, 10% of which would be allocated to overseas communities hardest hit by climate change.

**For more ‘local climate actions’ see the appendix of case studies at:**

[http://www.local.gov.uk/climate-change/-/journal\\_content/56/10180/3903379/ARTICLE](http://www.local.gov.uk/climate-change/-/journal_content/56/10180/3903379/ARTICLE)