Hampshire Energy Strategy

November 2012

Hampshire County Council

www.hants.gov.uk

Foreword

Energy is a necessity, which has an impact on every aspect of life today. As communities we have come to rely on readily available energy to keep us warm in our homes, to make our businesses thrive and support the infrastructure around us.

The cost of energy is a particular concern both for domestic and business users. Lowering the cost base by using less and being more efficient in what is used, can begin to help users insulate themselves against rising prices. By considering alternative fuels, we can decrease our reliance on centralised energy suppliers and reduce our exposure to future price rises

As a local authority we have a responsibility to lead by example and empower behaviours to act on energy issues. There are a variety of ways in which we can do this, and by establishing an energy strategy a focus can be drawn.

Energy is a growing and developing market place. For local authorities to be effective in this arena they need to consider where and how to act, so as to achieve the best for the authority and the communities they serve. New areas of business might also financially support other social services. There are aspects of energy that can be used to drive economic growth, by lowering the cost base to businesses, reducing the risk around continuity of supply or developing markets.

By addressing the challenges and opportunities presented, Hampshire County Council and the communities it serves will continue to be supported by energy in the way we are accustomed to, overcoming the challenges and exploiting the opportunities, in order to maintain and improve current standards.

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1. Introduction: Hampshire County Council and Energy

1.1 The energy landscape is changing rapidly. At a national level, Government is implementing a range of policies designed to transition the UK to a low carbon economy. With fossil fuel reserves declining, the UK is increasingly looking to renewable and low carbon sources of energy to meet an ever-growing demand for electricity. As a result of this, energy costs and environmental taxes are increasing and security of supply is becoming increasingly vulnerable.

1.2 In 2011 the County Council spent in the region of £15.7m on energy in its buildings (£11.5m of this was within the school estate). Of the 670 sites that the County Council owns 178 of them had an energy bill in excess of £20k p.a.. This property portfolio includes schools, residential care homes, museums and libraries as well as offices.

1.3 The County Council's current (2011) pattern of energy consumption is unsustainable. Based on Government price data and combined with estimates of future carbon taxes, County Council expenditure on non-schools' energy could rise from the 2011 figure of £4.2m to nearly £8m by 2020 and £16m by 2030. This cost increase alone represents a real threat to the ability of the County Council to continue to deliver high quality services.

1.4 As a result of the rapidly changing energy landscape, there are a number of risks to the County Council. At a strategic level these risks can be broadly categorised under the following headings:

- Security of supply
- Affordability
- Carbon

2 Key Risk 1: Security of Supply

2.1 "*In recent years Britain was [energy] self-sufficient; today we are net importers of over 25 per cent of our annual demand; and by 2020 this proportion will be considerably higher. Estimates of import dependence by 2020 range from 45 per cent to much higher, 70 percent or more*"[1].

2.2 Being energy secure means having a consistent, reliable, and affordable energy supply. There is an increasing threat to the security of the UK's energy supply which is caused by a number of key factors[2] including:

- Higher levels of global energy consumption;
- Increasing demand for electricity;
- Political instability and conflict in energy producing countries;
- Limits on production; and,
- Inadequate energy infrastructure systems.

2.3 It is estimated that £110 billion investment will be needed in UK energy infrastructure – primarily power stations and the electricity grid – before 2020 if security of supply is to be guaranteed[3].

2.4 The electricity grid is the nation-wide infrastructure that transports power from where it is generated to the end user (typically in the UK this is from the north to the south). This 'centralised' grid has evolved to channel electricity from a small number of big power stations to a large number of final users. The distribution networks in particular have been designed for a one-way flow of electricity.

2.5 To support the transition to a low carbon future – which will bring with it an increase in distributed and intermittent generation, principally from renewables – a modernised electricity grid is needed with greater capacity and the ability to manage greater fluctuations in supply and demand, while maintaining security of supply. Investment in grid infrastructure and new technologies that can efficiently store electrical energy will also be needed.

[1] Energy Security: A National Challenge in a Changing World (Department of Energy and Climate Change, 2009)
[2] Digest of United Kingdom Energy Statistics 2011 (Office for National Statistics, 2011)
[3] The government's long term plans to deliver secure, low carbon and affordable electricity (National Audit Office, 2012)

Relevance to Hampshire County Council

2.6 Local authorities are responsible for the provision of vital public services as their primary duty. To deliver these duties effectively, facilities such as schools, care homes, street lighting and housing require a reliable supply of power.

2.7 Twenty one percent (19 gigawatts) of existing generating capacity in the UK is scheduled to close during the next decade[3]. Without significant investment at both a national and local level, this could lead to disruptions in power supply and result in power cuts.

Relevance to Hampshire County Council as a Community Leader

2.8 Approximately forty percent of the UK's electricity comes from gas-fired power stations, and sixty percent of the world's proven gas reserves are in Russia and the Middle East[4]. National investment in energy infrastructure does not take into account local energy requirements and does little to create local resilience to the increasing threat to energy security.

2.9 Increasing pressure from the public for the County Council to demonstrate "responsible procurement" of energy (i.e. secure, non polluting, low carbon, supporting local jobs) could become a significant political issue in the future.

2.10 Rural communities in Hampshire are particularly vulnerable to supply disruptions as a result of two key factors: (1) rural properties tend to be 'off grid' and therefore rely on primary fuels for heat and power, e.g. Liquefied Petroleum Gas (LPG) or fuel oil, rather than the electricity grid; and, (2) because localised fuel delivery networks are particularly vulnerable to extreme weather events, e.g. heavy snow.

[4] Digest of United Kingdom Energy Statistics 2011 (Office for National Statistics, 2011)

3 Key Risk 2: Affordability of Energy

3.1 The affordability of energy is a key component of wellbeing and economic growth. Over the next decade energy prices are likely to rise due to:

- increases in wholesale electricity and gas costs as a result of increasing fossil fuel prices and an increase in the deployment of renewables;
- government policies aimed at reducing carbon emissions, including taxation; and
- the investment in infrastructure that is required.

In addition to this, energy prices are increasingly volatile due to the direct influence of a number of factors including:

- declining indigenous energy production in the UK;
- an increased reliance on international markets;
- increased global demand;
- index links between oil and gas markets; and,
- actions of some energy-supplying countries.

3.2 Domestic energy bills tend to reflect global commodity prices. For energy consumers in the UK, this tends to mean that when wholesale gas and oil prices rise, so does the cost of living. Ofgem – the energy market regulator – has estimated that if the market was left as it is today, annual average household electricity bills could rise by more than fifty percent by 2030[5].

3.3 Government is putting in place a range of energy policies designed to reduce our dependence on fossil fuels and encourage the development and uptake of low carbon energy technologies. The introduction of these policies, whilst supporting the growth of the renewable energy industry, distorts the conventional energy market and drives an increase in the cost of energy.

[5] Project Discovery: Options for delivering secure and sustainable energy supplies (Ofgem, 2010)

Relevance to Hampshire County Council

3.4 The increasing cost and volatility of energy prices will impact on the cost of delivering services, and therefore increase the proportion of the County Council's budget apportioned to energy.

3.5 Over time, as energy prices increase, the County Council could be using a higher percentage of its total budget to pay for energy (particularly if budget pressures remain). This will impact on the available budget for delivering other key service areas.

3.6 Carbon taxes will also have a significant impact on the cost of energy. As Government's energy policy leads to high carbon energy becoming more expensive, the County Council will need to undertake long term financial projections and develop strategies to generate and procure low carbon energy, and reduce energy consumption, to help reduce the impact to the County Council from future price rises.

Relevance to Hampshire County Council as a Community Leader

3.7 *Increased impact on communities (e.g. fuel poverty)*

Household energy bills have increased substantially in recent years, tracking sharp increases in energy tariffs, particularly since 2010. Should energy costs continue to rise as expected, the level of fuel poverty in Hampshire will increase. The County Council will also need to consider how to provide affordable energy for rural communities and businesses who are not connected to the grid and reliant on LPG or fuel oil.

Increasing energy costs will have a significant impact on the viability of many Small and Medium-sized Enterprises (SMEs) in Hampshire.

4 Key Risk 3: Carbon Emissions

4.1 Since the turn of the century there has been a widespread global agenda to reduce carbon emissions. In the UK, successive Governments have introduced legislation designed to drive the transition from a carbon intensive energy regime towards a low carbon economy. Such legislation includes the Climate Change Act 2008, the Energy Act 2011, and the recent Energy Bill 2012. In parallel, policies have been introduced to incentivise low carbon energy generation and reduce energy consumption from fossil fuels, e.g. environmental taxes linked with carbon emissions such as the Carbon Reduction Commitment (CRC) and Climate Change Levy (CCL).

4.2 In the White Paper for Secure, Affordable and Low-Carbon Electricity (2011), Government set out a pathway to decarbonise electricity generation. It recognised that action needs to be taken if the UK is to successfully transition to a low-carbon economy and meet the legally-binding fifteen percent renewable energy target by 2020 and eighty percent carbon reduction target by 2050. If these targets are to be achieved, emissions from the power sector will need to be largely decarbonised by 2030.

4.3 Electricity Market Reform is intended to put in place the institutional and market arrangements to deliver the scale of change needed in the power sector, but local action will also be needed to meet the UK's carbon budgets and renewable energy targets. It is at the sub-regional and local level that the County Council could work to support renewable energy uptake and decarbonisation.

Relevance to Hampshire County Council

4.4 In 2011, energy consumption for the County Council (including the schools estate) resulted in the County Council purchasing £915,000 of CRC allowances. As the national drive to decarbonise energy gathers pace, the County Council will need to take into account the additional cost of carbon taxes alongside increasing energy prices when budgeting for future energy consumption.

4.5 Higher rates for existing carbon taxes and additional taxes could be introduced in the future to further disincentivise the use of high carbon energy and support the carbon reduction agenda.

Relevance to Hampshire County Council as a Community Leader

4.6 *Reputational risk*

The County Council is seen as "community" leader and can therefore come under scrutiny from pressure groups who support the shift towards a low carbon economy. At a national level, league tables have been used to encourage local authorities to take action on reducing carbon (e.g. National Indicator 186). Similar measures which rank performance could impact on the County Council's reputation both locally and with central Government.

Increasing pressure from the public for the County Council to take action to reduce its carbon emissions could become a significant political issue in the future.

4.7 Role as implementers of national policy

National Government are increasingly requiring local authorities to support the transition to a low carbon economy through new legislation and policy . Examples of this include through the Localism Act 2011 and recent changes to the Local Government Act 1976 which have enabled local authorities to generate and sell electricity from renewable sources.

There are currently no legally binding obligations on local authorities to meet national carbon reduction targets, however this could change in the future.

5 Why Energy? The Key Principles behind the Energy Strategy

5.1 The Energy Strategy has been developed in response to the risks of security of supply, affordability and carbon. It aims to provide an approach that can not only mitigate against and limit the future risks, but also maximise any potential opportunity for the benefit of the County Council and the wider Hampshire community.

5.2 The Strategy is based on 8 key principles:

Leadership

There is an opportunity for the County Council to use its expertise on energy to represent the Hampshire community and influence the national energy agenda. Ultimately, this could lead to a better quality of life for Hampshire residents.

Wellbeing

Energy projects in the community can help to improve wellbeing in Hampshire. This could include reducing fuel poverty and building closer relationships with communities.

Maximising business opportunities

For the County Council, some energy projects will generate enough income to payback the initial investment and could potentially create new sources of income in the longer term. Other business opportunities could include selling expertise on energy to other public bodies.

Sustainable economic development

Energy projects present an opportunity for communities to generate their own energy, stimulate growth and create local jobs. Localised energy networks, such as District Energy schemes, provide valuable infrastructure and can support local, and sustainable, economic development.

Enhancing quality of place

This Strategy represents an opportunity to proactively plan for the energy needs of Hampshire in the future. Community power schemes – where communities invest in renewable energy – can increase energy security and improve wellbeing, particularly in rural 'off-grid' communities, enhancing the quality of place.

Increasing energy security

Being energy secure means having a consistent, reliable, and affordable energy supply. Currently, Hampshire largely relies on imported fossil fuels and national grid infrastructure. This approach is not sustainable in the longer term and leaves rural, 'off-grid' communities particularly vulnerable to oil price volatility.

Reducing consumption and increasing energy efficiency

For the County Council, reducing our energy consumption could lead to a lower cost base, increased energy security and lower environmental impact. Improving energy efficiency is one way of reducing consumption and is therefore an important topic for both the County Council and the wider community.

Reducing carbon liabilities

A combination of national legislation and policy is driving an increase in environmental and carbon taxes. Reducing the amount of energy we consume from fossil fuels can reduce carbon emissions and therefore carbon tax bills.

6 The Strategy

6.1. Hampshire County Council is a top performing authority that responds to risks proactively by taking challenging decisions and implementing innovative solutions. It is committed to safeguarding the wellbeing of its community.

6.2. It is accepted that the key risks outlined in this Strategy are significant and as such, in the longer term, the lack of a coherent Strategy on energy would be unsustainable. The issues of security of supply, affordability and other costs associated with using fossil/carbon-based fuels (e.g. the CRC) are strategically important and require some level of response.

6.3. This Strategy sets out the response that the County Council will be taking to minimise the energy risks of security of supply, affordability and carbon emissions, and to take advantage of the opportunities to support the development of a low carbon economy in Hampshire.

6.4. The response in this Strategy lies between the parameters of a basic response limited to good housekeeping of the County Council's corporate (non-schools) estate and a fully-integrated and ambitious response delivering a low carbon energy Hampshire.

6.5. The Strategy will be delivered through 4-yearly Action Plans. Each Action Plan will be monitored and reviewed on an annual basis to ensure that the aims of the Strategy are being met.

6.6. Each Action Plan will contain:

a) A phased programme of actions to achieve the objectives of the Energy Strategy;
b) Qualitative and quantitative targets to measure the effectiveness of actions; and,
c) A suggested programme of actions to build on current projects and carry forward into the next Action Plan period.

6.7. As part of the Energy Strategy, the County Council will need to consider how it maximises energy opportunities across its estate, including using its freehold, tenanted and leased buildings in innovative ways, for example, using land and buildings to house energy centres that would otherwise be disposed of or remain vacant.

6.8. The County Council will need to consider the opportunity to establish and utilise innovative legal and financial structures such as Energy Services Companies (ESCos) to deliver energy projects. This will include investigating how such structures could help to mitigate risk and maximise project specific-opportunities such as investing in energy infrastructure.

7. Aim and Objectives

For Hampshire County Council to provide community leadership for resilience to the risks of energy security, affordability and carbon emissions and, contribute to a sustainable low carbon economy in Hampshire.

Objectives:

1. **To reduce energy consumption and increase the efficiency of energy use in the County Council and in the community of Hampshire by:**
   - (a) Delivering energy reduction and efficiency programmes for the County Council's corporate estate;
   - (b) Developing and supporting energy efficiency programmes for the community of Hampshire including partners and schools; and,
   - (c) Leading the development of and supporting initiatives which help improve the way Hampshire uses energy.
   - (d) Working in partnership with the public and private sector.

2. **To invest in local energy projects which collectively support the key principles behind the Energy Strategy, including initiatives which:**
   - (a) Safeguard the health and wellbeing of Hampshire residents;
   - (b) Foster economic development through sustainable local energy generation;
   - (c) Increase energy security, improve local resilience, reduce Hampshire's reliance on imported fossil fuels; and/or,
   - (d) Reduce the County Council's exposure to carbon tax liabilities.
   - (e) Maximise business opportunities for the County Council and increase revenue;

3. **To integrate energy generation and infrastructure into place shaping by:**
   (a) Supporting the development of common Local Plans approaches and interpretation of these policies across Hampshire local planning authorities.
   (b) Recognising the importance of local energy generation in future decisions on waste management.
   (c) Considering the role of Hampshire County Council-owned land in energy generation.

4. **To facilitate community access to secure, affordable and/or low-carbon/renewable energy and energy services by:**
   (a) Developing and supporting initiatives which could reduce the cost of energy to domestic and non-domestic consumers; and,
   (b) Increasing the energy options available to urban and rural communities, recognising specific issues, such as, reducing dependence on high-cost, high carbon fuels such as LPG and fuel oil.
   (c) Providing an information hub to support private and community initiatives on energy.