

HAMPSHIRE COUNTY COUNCIL**Report**

Committee/Panel:	Buildings, Land and Procurement Panel
Date:	18 December 2012
Title:	Energy Performance Programme
Reference:	4425
Report From:	Director of Economy, Transport and Environment Director of Culture, Communities and Business Services

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1. Summary

1.1. The purpose of this paper is to propose an Energy Performance Programme to improve energy efficiency and therefore significantly reduce energy consumption for the County Council.

1.2. This paper seeks to:

- set out the background to the project; and
- outline the delivery models available to deliver this project and the impact any chosen delivery model will have on the long term viability of the scheme.

2. Contextual information

2.1. In February 2012, Cabinet agreed an interim energy strategy that allowed for several pilot projects and feasibility studies to be undertaken. The energy performance programme was one of these projects. Cabinet agreed that business cases for these projects would be developed and presented in due course.

2.2. The Energy Strategy considered at Cabinet on 29 October 2012 is aimed at enabling the County Council to take a leadership role on energy, both as a large employer and purchaser of goods and services but also as a community leader. This is becoming increasingly important as current trends such as increasing energy use and rising energy costs (and associated carbon and other taxes), combined with increased threats to security of energy supply,

present both individual and accumulative risks to the effective and efficient running of the County Council.

2.3. To counter this the energy strategy has the following objectives:

- To reduce energy consumption and increase the efficiency of energy use in the County Council and in the community of Hampshire.
- To invest in local energy projects which collectively support the key principles behind the Energy Strategy.
- To integrate energy generation and infrastructure into place shaping.
- To facilitate community access to secure, affordable and/or low-carbon/renewable energy and energy services.

The Energy Performance Programme addresses all of these priorities.

2.4. The County Council currently manages buildings and installs energy efficiency measures on a case by case basis. An Energy Performance Programme seeks to deliver numerous energy reduction and improvement measures in combination and simultaneously. This will reduce energy bills with least cost and disruption, and will thus achieve maximum impact. Whilst the technologies being considered as part of this project are tried and tested by the County Council, the simultaneous estate-wide, whole buildings integrated retrofit approach is a new way of working.

2.5. Since January 2012, Investment Grade Audits (IGA) have been undertaken on twenty-seven of the County Council's highest energy consuming buildings within the corporate estate with a view to improving their energy efficiency. The twenty-seven sites make up approximately £1.2million of the £4.2million Hampshire County Council corporate energy spend. The IGAs were undertaken by two appointed expert contractors, British Gas and CarbonPlan over a period of 6 months from January 2012.

2.6. The contractors were asked to undertake detailed survey work and assess the suitability of over one-hundred different energy efficiency measures and technologies that could be delivered in combination. Previous County Council work has examined new measures and technologies on a case by case basis. The measures were assessed on their ability to reduce energy consumption and the subsequent impact this would have on energy bills. To calculate the effect of measures, the contractors examined the existing energy data for each building over a five-year period to determine the historic usage, and therefore, the potential effect of installed measures.

2.7. The outcomes of the IGAs have been modelled to develop a package of measures tailored to each building to maximise energy reduction. The advantage of undertaking this work via an Energy Performance Programme is that the measures can be aggregated allowing for significant economies of scale and installing numerous measures into a building at once, minimising disruption.

2.8. A twenty-five year business case has been produced based on the outcomes of the IGAs and the modelling of options that has taken place. The contents of the business case support the proposals within this paper.

- 2.9. The feasibility work to date suggests delivery of the energy performance programme should focus on twenty-six of the twenty-seven buildings surveyed during the IGA stage. One of the buildings surveyed was removed from the project as none of the proposed measures were perceived to be viable.
- 2.10. The above approach, focussing on twenty six buildings, would be a learning opportunity for the County Council to enhance skills, expertise and understanding for this type of programme. It would enable the County Council to consider installing energy efficiency measures on the remainder of the County Council's corporate estate and consider extending the knowledge to Energy Performance Programme for schools and other external organisations in the future.
- 2.11. There are two broad delivery options for the energy performance programme:
- a) **OPTION A:** An Energy Performance Contract (EPC) which would see Hampshire County Council appoint a private contractor to deliver an energy efficiency programme on the first twenty six buildings. The EPC would guarantee savings for the County Council and would cover its costs by taking a percentage of the County Council savings, typically between 80 – 95% for the first 10 years of the project.
 - b) **OPTION B:** In-house managed scheme which could consist of either;
 - **OPTION B1:** Creating the capacity for a County Council employed team to deliver the Energy Performance Programme, relying solely on in house expertise.
 - **OPTION B2:** A joint venture from the outset of the project between the County Council and a private sector partner which improves the capacity for a County Council employed team and uses private sector knowledge and experience where appropriate. The County Council will take the lead role in any joint venture arrangement.

3. Finance

- 3.1. Using the modelling tool developed by the County Council, the financial implications for the first twenty six buildings have been evaluated. Whether the programme is delivered through an EPC or in-house will impact on the financial outcome of the business case and both scenarios have been modelled.
- 3.2. A detailed breakdown of the financial calculations for the first twenty six buildings can be seen in appendix C. These show that an EPC approach is not financially advantageous to the County Council.

4. Other key issues

- 4.1. An energy performance programme in the manner¹ suggested in the business case is not something that has been delivered by the County Council before. The scale and speed of installing the energy efficiency measures is critical to the success of this project to ensure the financial savings outlined can be achieved.
- 4.2. Delivery of an energy performance programme requires the undertaking of a formal measurement and verification process to constantly monitor the energy consumption over the life of the project. Therefore, the long term resource requirements need to be assured for the twenty-five year period of the business case independent of whatever delivery option is chosen.
- 4.3. Considerable research has been undertaken examining the skill set and requirements for an energy performance programme manager and support team. Analysis of the existing skills and capacity of staff at the County Council has shown that these would be insufficient and would require additional investment if the solely in-house option was chosen.

5. Future direction

- 5.1. An Energy Performance Programme will help ensure a long term reduction in energy bills for the County Council. It will also assist in delivering the County Council's carbon reduction targets.
- 5.2. In order to develop delivery options, including a joint venture, work will need to begin on engaging with potential private sector partners.

6. Recommendations

That the Panel make the following recommendations to the Executive Member for Policy and Resources:

- 6.1. That agreement in principle be given to an Energy Performance Programme. This supports the County Council's Energy Strategy considered at Cabinet on 29 October 2012.
- 6.2. That the Energy Performance Programme be delivered in partnership with an appropriate private sector partner through a joint venture or some similar mechanism (option B2), and that options A (Energy Performance Contract) and B1 (solely in-house) be rejected.
- 6.3. That work begins on exploring the options for delivering the energy performance programme with potential private sector partners.

¹ Multiple technologies, simultaneously across multiple buildings.

CORPORATE OR LEGAL INFORMATION:**Links to the Corporate Strategy**

Hampshire safer and more secure for all:	no
Corporate Improvement plan link number (if appropriate):	
Maximising well-being:	yes
Corporate Improvement plan link number (if appropriate):	
Enhancing our quality of place:	yes
Corporate Improvement plan link number (if appropriate):	

Other Significant Links

Links to previous Member decisions:		
<u>Title</u> Interim Energy Strategy	<u>Reference</u> 3548	<u>Date</u> 27.02.2012
Direct links to specific legislation or Government Directives		
<u>Title</u>	<u>Date</u>	

Section 100 D - Local Government Act 1972 - background documents

The following documents discuss facts or matters on which this report, or an important part of it, is based and have been relied upon to a material extent in the preparation of this report. (NB: the list excludes published works and any documents which disclose exempt or confidential information as defined in the Act.)

<u>Document</u>	<u>Location</u>
None	

IMPACT ASSESSMENTS:

1. Equalities Impact Assessment:

- 1.1. The proposals in this report have been developed with due regard to the requirements of the Equality Act 2010, including the Public Sector Equality Duty and the Council's equality objectives. The assessment of the impacts for the Ensuring that Hampshire is Energy and Climate Change Resilient service area can be found at:

<http://www3.hants.gov.uk/equality/equality-impact-assessments/cx-pu-eqimpact-envi.htm>

It is considered that the issues covered by this report will not have impacts requiring further specific actions by the Council above those already established in its existing policies and working procedures.

2. Impact on Crime and Disorder:

- 2.1. None.

3. Climate Change:

- a) How does what is being proposed impact on our carbon footprint / energy consumption?

An energy performance programme will seek to lower the energy consumption of the County Council corporate estate, and will therefore reduce our carbon footprint.

- b) How does what is being proposed consider the need to adapt to climate change, and be resilient to its longer term impacts?

Many of the measures considered as part of the Energy Performance Programme seek to address heating and energy issues both now and in the future. The measures being considered will help ensure that the County Council buildings are able to adapt to future changes in climate.

Appendix C

1.1 The following financial figures refer to the twenty-six buildings suggested to be retrofitted with measures. They assume a low scenario for energy price rises. These scenarios would increase the savings (based on the modelled calculations).

LOW SCENARIO	Figures with fuel inflation at RPI		
		10 year	25 year
	Investment	£4.5m	£5.57m
	Gross financial saving	£7.2m	£17m
CO2 Saving (tonnes)	10,606	27,002	

The figures are based on net present value and include:

- Fuel inflation at current RPI.
- Dilution factors from installing multiple technologies within one building.
- Purchase, installation, investment and replacement costs.

The figures do not include:

- Increased fuel inflation figures.
- The cost of disruption to a building if a measure requires alternative arrangements to be made for the building users. This cost has been estimated at being £500k for the first phase.
- Avoided carbon taxes, such as reduced Carbon Reduction Commitment (CRC) payments from reduced carbon.

1.2 The following resource costs will be required to deliver the programme depending on which in-house route (option B) is decided upon following further detailed work:

- **OPTION B1:** County Council delivery team
 - Staff costs of £0.54m for the first twenty six buildings.
- **OPTION B2:** County Council and private sector joint venture
 - County Council staff costs of £0.27m for the first twenty six buildings together with additional costs by the partner yet to be determined.

1.3 The net effect of these additional costs will still enable payback to be achieved well within 10 years on the low energy price rise scenario.

1.4 As outlined in the interim energy strategy approved by Cabinet in February 2012, the rising cost of energy and the risk of energy security is a key driver for the County Council. The outline business case examines the effect of future fuel rises on the financial returns for an energy performance

programme. The following figures highlight the effect of fuel price increases on the financial figures shown above:

- a) Assuming DECC agreed medium scenario figures of electricity inflation at 1.74% over RPI and Gas at 0.71% over RPI and borrowing costs at 1.86%, potential savings could increase to £7.6m over 10 years and £18.9m over 25 years.
- b) Assuming a DECC high scenario of 2.3% fuel inflation over RPI and borrowing costs at 1.86% could see gross savings increase to £8.5m over 10 years and £23m over 25 years.

1.5 If an Energy Performance Contract were to be entered into to deliver this programme of works the costs would be as follows. These have been calculated using the low scenario financial information above

Assumed Saving	10 year Contract over 10 years			10 year contract over 25 years		
	95% Fee	90% Fee	80% Fee	95% Fee	90% Fee	80% Fee
LOW SCENARIO						
EPC Provider savings	£6.5m	£6.1m	£5.4m	£6.5m	£6.1m	£5.4m
County Council savings	£305k	£610k	£1.22m	£7.3m	£7.8m	£8.8m
MEDIUM SCENARIO						
EPC Provider savings	£7.2m	£6.8m	£6m	£7.2m	£6.8m	£6m
County Council savings	£340k	£680k	£1.36m	£8.1m	£8.6m	£9.7m
HIGH SCENARIO						
EPC Provider savings	£8.7m	£8.3m	£7.3m	£8.7m	£8.3m	£7.3m
County Council savings	£415k	£830k	£1.66m	£9.8m	£10.5m	£11.9m

1.6 Issues to be considered for an Energy Performance Contract

- The County Council would make no upfront investment.
- A 10 year contract would result in the private sector partner taking a high percentage of the savings over the 10 year period and the County Council keeping the remaining savings. (Based on market research², fees can vary and typical rates of 80 – 95% have been used above.) The County Council would then keep all savings beyond the length of the contract.
- In order for the EPC provider to cover the investment costs calculated for this programme, it is likely based upon market analysis³ that a private company would not be satisfied to enter into a 10 year contract as they would not make a large enough return on their investment. It is more likely

² Market research has been undertaken as part of the business case produced for this project. These figures have been taken from averages gathered from numerous organisations.

³ Undertaken by Hampshire County Council during 2011

that a 15 year contract would be suitable which would see Hampshire County Council achieve between £7.3 – 8.8m over a 25 year period.

- There would be no opportunity to extend the Energy Performance Programme beyond the first twenty six buildings without additional procurement.

Conclusion

Detailed work has been undertaken on the financial elements of the pilot project. Further work now needs to be undertaken on detailed delivery requirements for delivering an Energy Performance Programme.