Options for progressing carbon reduction at UDC

Council meeting 15 December 2009, Item 9

Committee:	**Full Council**	**Agenda Item**
Date:	15 December 2009	**9**
Title:	Options for progressing carbon reduction at UDC	
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Summary

- At our current rate of progress, the Council will fail to meet our carbon reduction target of 25% by 2011-12
- Energy costs are expected to increase by average of 10-20% per year, placing increasing strain on revenue budgets
- Boilers in sheltered accommodation are at risk of failure and need replacing. Heating controls need to be improved for the safety and comfort of residents
- The Audit Commission inspection will focus in large part on reducing the Council's efforts to reduce its carbon footprint. They will examine our future plans as part of this.
- Jake Roos is leaving and staff capacity is the main issue restricting progress. There is an opportunity to tackle this in a different way.

The solution to these pressures is to accelerate the implementation of energy efficiency projects, principally heating plant renewal and installation of modern controls. To achieve this acceleration, investment is required with increased staff capacity devoted to develop and implement the project. This extra capacity could be provided in-house, be obtained via outsourcing, or be a mixture of both options. SMB's recommended option is to fully outsource on a performance contract, as this is most likely to fully achieve the Council's desired outcomes with least risk of all options.

Recommendations

- That the Council commit to accelerate its carbon management programme with respect to the buildings it operates.
- That councillors indicate their preferred option for achieving this (manage in-house, partially outsource, fully outsource on a performance contract)
- If the preferred option is to fully outsource, that the Council initiate a procurement process to appoint a service provider.

Background Papers

TAC pre-study report on Uttlesford District Council.

Impact

Communication/Consultation	Key staff including the Director of Operations, the Head of Housing Management, Chief Finance Officer and the Housing Repairs

	Manager have been involved throughout the development of this project.
Community Safety	None
Equalities	None at this stage.
Finance	The Chief Finance Officer has been involved in the development of these proposals and financial implications are dealt with in the body of the report.
Human Rights	None
Legal implications	The Essex Procurement Hub has been consulted regarding the procurement issues.
Sustainability	Positive impact – progress with energy conservation and carbon reduction from council buildings would be accelerated. The sustainability of prospective service providers would be assessed as part of the procurement process.
Ward-specific impacts	None
Workforce/Workplace	Outsourcing this work would lead to a review of the Energy Efficiency Surveyor post

Situation

Carbon reduction target

1 Carbon reduction is a corporate priority. The Council is committed to a target of 25% reduction in 2011-12 compared to 2006-07 baseline and Members reaffirmed this commitment at the last Full Council. We have made good progress, however, analysis of progress to date (including the first half of 2009-10) shows we are going to miss the target if we continue as we are. The main limitation on the rate of progress is current staff capacity (0.4 FTE, which includes monitoring and reporting of the Council's energy use and carbon footprint)

	2007/08	2008/09	2009/10	2010/11	2011/12
Target	5%	10%	15%	20%	25%
Actual	5%	8%	10%*	12%*	15%*
Shortfall	0%	2%	5%	8%	10%
In-year shortfall (Tons of CO2)	0	69	167	280	350
Cumulative shortfall (Tons of CO2)	0	69	236	516	866

*estimated based on current programme

Figure 1. Emissions trajectory under business as usual scenario

Energy costs to rise

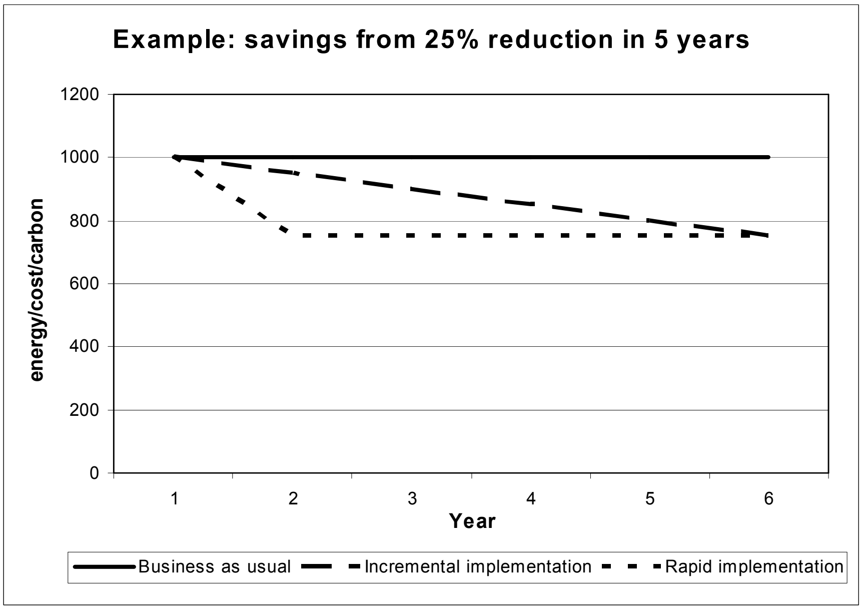
2 Energy prices are expected to increase from the present low in the short, medium and long term. The main driver for this is the depletion of the World's of easy-to-reach oil and gas coupled with surging global demand. Independent advice suggests average annual energy price increases of 10%-20%. (The Council's MTFS assumes 10%). As the unit cost of energy increases, the only means of controlling costs is to reduce the consumption of energy.

3 If net savings on energy costs can be achieved through improved energy efficiency, this will relieve pressure on revenue budgets. In the HRA, heating costs for residents can be reduced or rises limited, protecting their welfare.

Boilers need replacing

4 A large proportion of the Council's carbon footprint and energy costs arises from heating and hot water use at it sheltered housing sites. Much of the heating plant at these sites is close to the end of its useful life - 3 sites have boilers 25-30 years old, 4 have boilers over 30 years old. If these boilers failed and required reactive replacement in the middle of winter it could endanger elderly residents. Similarly, controls on these heating systems are basic and there is a risk of overheating and discomfort for residents, particularly in the summer, which could also affect their health.

5 There is also considerable advantage to taking action to improve energy efficiency sooner rather than later, as this increases net savings of energy, carbon and costs, as the example Figure 2 shows. Additionally, we can expect reactive maintenance costs to reduce if new equipment is installed.



- Total saving from incremental implementation = 750
- Total saving from rapid implementation = 1250
- Benefit of rapid implementation over incremental = 500

Figure 2. The benefit of rapid implementation

Limitations of current programme

6 Presently the Council uses 50% interest-free funding from Salix Finance for its energy efficiency projects. However, projects that use this funding must meet certain criteria, namely that each individual project must have a simple payback of less that 5 years (that is, the investment be recouped from savings in energy costs in less than five years). Also cross-subsidy is prohibited, meaning very fast payback projects cannot be combined with longer payback projects to create a package that meets a 5-year payback. The affect of these criteria is that they encourage ‘easy’ projects to be done first. Such cherry-picking only makes sense if the necessary savings level can be achieved with these projects alone – this is not the case, much deeper cuts in energy and carbon are required.

7 Another limitation of the current approach is that the risk that projects do not deliver the projected savings is borne by the Council. Building a margin of error into the business case for each project effectively reduces the maximum payback time to less than 5 years. The Council is in a position to make longer term investments than 5 years.

Solution

8 If energy efficiency/heating renewal projects can be delivered more rapidly, we meet the demands of achieving our carbon targets, realising savings, bringing equipment up to date and protecting the welfare of residents at our sheltered housing sites. To

do this we need to relieve the constraints on investment (i.e. not using Salix and borrowing to enable a larger initial investment) and staff capacity. There are various options for achieving this.

a. Continue with current programme (presented as a 'baseline' case)
b. Accelerated programme, managed in-house
c. Accelerated programme, partly outsourced
d. Accelerated programme, all outsourced

Option 1 – continue with current programme
This is the "do nothing" baseline option.

PROS
- Risk of outsourcing avoided

CONS
- Risk of boiler failure
- Carbon reduction targets missed; reputation damage
- Pressure on revenue budgets
- Adverse Audit Commission inspection outcome
- Capacity issues pending decision about replacement of Jake

Option 2 – accelerated programme, managed in-house
This will need to have at least 2 FTE staff working on the project for a year or more
PROS
- Gives the Council direct control and accountability.
- Any retained staff will keep experience/knowledge gained within organisation.

CONS
- Recruitment of experienced, skilled staff on short contracts may be difficult.
- Implementation still may not be as rapid as desired.
- Risk that projects don't deliver savings would be taken by the Council (no guarantee).

Option 3 – accelerated programme, partly outsourced
The Council separately lets out project development and implementation contracts.
PROS
- Less in-house staff resource needed than Option 2, though more needed than Option 4

CONS
- The company that does the detailed project development work precludes itself from winning the implementation work by having an unfair advantage over other companies.
- The company that does the implementation work is likely to put a large risk premium in due to lack of direct experience with sites that they might have gained through doing the detailed project development.
- Two or more procurement exercises need to be carried out.
- It is unlikely that anyone would agree to a performance contract guaranteeing of savings at reasonable cost, i.e. Council takes this risk
- The complications presented by multiple contracts slows implementation

Option 4 – accelerated programme, all outsourced
One company does project development, implementation, and gives a guarantee of the level of energy savings.

PROS

- In-house staff resource needed is lowest of 3 options – one procurement exercise, plus ongoing contract management.
- The service provider will develop detailed knowledge of our estate during project development which gives confidence to offer guarantee at minimal risk premium.
- The guarantee creates strong incentive for provider not to overstate savings in order to justify higher initial investment – they will be financially liable if savings are not delivered (i.e. have to pay out).
- Experienced providers with large staff resources and existing sub-contractor base can deliver rapid implementation.
- There may be potential savings from the Council establishing a framework contract other local authorities can use.

CONS

- Less expertise is developed and retained in-house

<u>Financial case</u>

9 A pre-study has been carried out by Schneider Electric, a potential service provider, to give an initial indication of the size and savings of an outsourcing project for UDC (Option 4). This study is available as a background paper. Based upon the findings of the study, officers have carried out some indicative high level financial modelling to determine broadly which is the most preferential option in financial terms. The modelling necessarily includes assumptions about the timing of capital expenditure, levels of retained staffing required under each model and trends in energy prices. The modelling assumes that capital expenditure will be financed by borrowing, although in practice borrowing may or may not be required depending upon the availability of capital receipts or other funding sources at the time that the expenditure is incurred.

10 The results of the modelling is summarised below and suggest that option 4, an accelerated, outsourced programme, is more favourable from a financial perspective. These figures are indicative - the exact costs relative to estimated levels of saving would not be known until after the detailed project development has been carried out. Once this work is done, the Council can then decide the exact size and make up of the investment, bearing in mind this will influence the savings level. A detailed financial analysis will be presented to members based upon the results of the project development stage, before the decision to commit to implementation is made. The council would be liable for project development costs (£10 – 15K) if it decided not to proceed at that point.

Figure 3 - Financial case for Housing Revenue Account

Units £,000	Option 1	Option 2	Option 3	Option 4
10 year net saving for residents	88	83	66	122
Annual saving in year 10	41	43	38	42

Break even	Year 4	Year 8	Year 8	Year 7

Figure 4 - Financial case for General Fund

Units £,000	Option 1	Option 2	Option 3	Option 4
10 year net saving	27	15	20	68
Annual saving in year 10	8	8	7	13
Break even	Year 1	Year 8	Year 5	Year 2

Recommended option

11 Accelerating implementation of carbon management projects in council buildings, using Option 4, fully outsourcing on a performance contract is SMB's preferred option as it is likely to meet our needs most fully while having the minimum risks. We recommend that the Council proceed with procurement. The Council can abort at any time throughout the procurement process and negotiations, up until when a final agreement on the implementation phase and guarantee is reached and contracts signed. There is no commitment to expenditure at this stage.

Risk Analysis

Risk	Likelihood	Impact	Mitigating actions
Energy baseline (needed for guarantee) hard to establish	Low - Our baseline is already well established	High	Continuing current practices should ensure this is up to date for any contract start.
Procurement process does not yield suitable service provider	Low - In addition to Schneider Electric SBS, there are other large companies offering services of this kind (e.g. Honeywell, Dalkia), who will be interested	High – success of process depends on a choice of suppliers/ options	.
Council decides not to go ahead with project after appointing a service provider	Low/medium - The Council can stop the procurement process at anytime.	High - we would need to pay the service provider for any detailed survey work.	Should we want to halt following an appointment, we will still be able to use any detailed survey work done ourselves
Energy prices stay	Low - Strong	Medium/high	As the project has considerable

low for 5-10 years	upward pressure in energy prices from the present low is likely.		net savings this should provide a cushion against the low risk that energy prices do not rise as anticipated.