



Committee and Date  
Cabinet  
14<sup>th</sup> September 2011  
  
12.30pm

Item  
**14**  
Public

## Shropshire Council Carbon Management Programme: Revenue from Renewable Heat Incentive

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### 1. Summary

The purpose of this report is to advise the Council that it has a limited window of opportunity to invest in the Renewable Heat Incentive (RHI) to generate a substantial revenue stream over the next 20 years.

The Government has now published the main parameters of the scheme which offer the Council significant financial benefits in revenue generation and removes the uncertainty in the price and provision of oil supplies.

Shropshire is significantly disadvantaged environmentally, socially and economically by the lack of mains gas. This is also reflected in the buildings owned by the Council. Buildings off the gas grid have to rely on oil and electricity, both of which are expensive and high in carbon emissions. The lack of any price control within the heating oil industry contributes to the generally higher energy bills, particularly seen during the last two very cold winters.

Taking the opportunity to use the RHI brings many advantages:

- allows the Council to upgrade the heating systems of its buildings
- to generate renewable heat
- to reduce carbon emissions whilst generating financial gain

### 2. Recommendations

It is recommended that Cabinet:

- A. Approves the use of prudential borrowing to fund the capital expenditure, which will enable utilisation of the Renewable Heat Incentive, noting that the funding will draw in net income on an 'invest to save' basis allowing the Council to benefit from the highest level of payments under the RHI scheme.

## REPORT

### 3. Risk Assessment and Opportunities Appraisal

- i. Any further delay will risk the loss of income by not accessing the higher rate of tariff payments before April 2013.
- ii. It is anticipated that around 50 installations will be undertaken, mainly in schools. However, when the detailed site investigations are undertaken some schemes may not be possible.
- iii. The Council has already been allocated £30k grant funding through the Wyre Forest project for Cleobury Mortimer Primary School which falls within their project area and this needs to be committed by end March 2012.
- iv. The majority of the biomass installations will be in schools and whether they already are, or become academy status, or remain LA controlled there will be a need to protect the Council's investment. To mitigate potential loss legal agreements will be put in place which will include the RHI tariff payments being made to the Council for the repayment of the borrowing. In the case of academies it will be a condition within the 125 year agreement which they sign up to when changing over.
- v. Planning permission would be required for the new flues. However, because oil boilers already have existing flues, we do not perceive this as a major problem.
- vi. Continuity of the wood fuel could be perceived a risk, but it is no greater than the current risks related to fuel supply and security of oil. However, there is a significant supplier of both wood chip and wood pellet within Shropshire, the company has 6 depots around the County, with some smaller suppliers doing either pellet or chip. Staffordshire County Council has recently completed a new head office with biomass boiler and has set up an independent wood fuel company to supply their building and generate income through sales of wood chip to other local authorities in the Region. This is now a well established business. Additionally, the Forestry Commission and Heartwoods (based at the Greenwood Trust, Ironbridge) have several projects underway to help increase the wood fuel supply chain, particularly in Shropshire, which has a significant amount of under-used woodland. Wood pellet and chip that comes from northern Europe can be purchased on the open market. As added security (if really needed), some boiler suppliers offer the facility of pellet supply deliveries for a set period of time, for example 5 years.

- vii. This project has significant opportunities for the Council and the Shropshire economy as a whole. Shropshire Council is some way behind other councils, such as Telford and Wrekin and Worcestershire, both of whom have key wood chip systems in public sector buildings and are planning more, Staffordshire, Norfolk, Suffolk and Nottinghamshire. In switching from oil boilers to wood fuel boilers there is a reduction in carbon emissions, and it helps tackle increasing costs of domestic oil. The Council would be putting its support and leadership into helping further enable the wood fuel supply chain, help the local economy through diversification and, if properly managed, improved biodiversity through increased woodland management. This would be a 'win-win' situation for the Council.
- viii. A further opportunity would be to extend this programme to our all electric buildings. The returns may be lower because of the extra infrastructure required, but the energy savings achievable would be greater. However, they do require more detailed planning because of the alterations within the buildings.

### 3.1 Environmental Appraisal

Wood fuel is regarded as a "zero emission" source of renewable energy particularly when burnt at high temperatures in enclosed systems, as opposed to open fires, and will therefore help the Council in its carbon reduction target of 35% by 2014. The 40-50 sites are mainly school buildings which face increasingly difficult to manage oil fuel bills. Wood is a plentiful and under-used resource in Shropshire. Making use of it will bring environmental, economic and social benefits.

### 3.2 Community / Consultations Appraisal

Consultation so far has been limited to Council Members, however, School Headteachers and Governors will be part of the consultation appraisal both before and at the start of any programme of works.

### 3.3 Human Rights / Equalities Appraisal

The recommendations contained in the report are compatible with the provisions of the Human Rights Act 1998.

## 4. Financial Implications

**The Capital Cost** is £2,627,500 for the capital investment over 25 years which will be funded through prudential borrowing.

**Savings** through energy and RHI payments are approximately £200,000 in the first full year of implementation.

Table 1 below realistically indicates a net return on investment of 12.9% producing a Revenue stream from RHI of £400k per annum by 2018.

**Table 1 – Predicted Net Cash Flow (Revenue Generation)**

	2012/13	2013/14	2014/2015	2015/2016	2016/2017	2017/2018	2018/19
<b>Principle</b>	-	- 105,100	- 105,100	- 105,100	- 105,100	- 105,100	- 105,100
<b>Interest</b>	0	- 131,375	- 126,120	- 120,865	- 115,610	- 110,355	- 105,100
<b>Totals</b>	<b>0</b>	<b>- 236,475</b>	<b>- 231,220</b>	<b>- 225,965</b>	<b>- 220,710</b>	<b>- 215,455</b>	<b>- 210,200</b>
<b>Energy Savings</b>	88,375	91,026	93,757	96,569	99,466	102,450	105,524
<b>CRC</b>	0	0	0	0	0	0	0
<b>RHI</b>	335,144	345,198	355,554	366,220	377,207	388,523	400,179
<b>Totals</b>	<b>423,519</b>	<b>436,224</b>	<b>449,311</b>	<b>462,789</b>	<b>476,673</b>	<b>490,973</b>	<b>505,703</b>
<b>Net Savings</b>	<b>423,519</b>	<b>199,749</b>	<b>218,091</b>	<b>236,824</b>	<b>255,963</b>	<b>275,518</b>	<b>295,503</b>

## 5. Background

Heating currently accounts for 46% of the UK's energy consumption and 47% of UK carbon dioxide emissions. The UK has adopted an EU target to supply 15% of energy demand from renewables by 2020 (heat, electricity and transport). To achieve this target Government scenarios suggest the UK could generate 12% of its heat from renewables and all sectors of the UK economy are expected to contribute to this. Thus there is an urgent need to increase the amount of heat generated from renewable sources.

The Government has recently overturned a prior Act of Parliament, paving the way for Local Authorities to earn income from generating electricity and producing heat under the Feed-in-Tariff and the Renewable Heat Incentive. Both these programmes have the ability to generate substantial income.

Installations qualifying for the RHI must be in place by March 2013 in order to benefit from the higher level payments for the subsequent 20 years. The payment levels are expected to be reduced from 2013 onwards.

### 5.1 Strategy

- a. The Council completed the Local Authority Carbon Management Programme with the Carbon Trust in March 2010 which resulted in the production of a robust Carbon Management Plan. This included a challenging target of reducing carbon emissions from Council operations by 35% by March 2014.
- b. This Plan was adopted by the Shropshire Council members on 25<sup>th</sup> February 2010.

## **5.2 Schemes to be Developed**

In addition to the projects already in the Capital Programme and the renewable energy paper considered on the 19<sup>th</sup> May 2011, work has been ongoing to evaluate the revenue potential from renewable energy through the Renewable Heat Incentive scheme.

### **5.2.1 Installation of Wood Pellet/Woodchip to replace oil-fired systems**

The Renewable Heat Incentive is the equivalent to the Feed-in-Tariffs for electricity generation. The RHI is a scheme to stimulate a new market in renewable heat, with the first phase starting in October 2011 targeting the non-domestic sector installations i.e. industrial, commercial and public sector. The length of contract term is 20 years index-linked with 'degression' review (reduction in payments levels) for new installations every 4 years but with the intention of supporting new installations until at least 2020.

Our project is based on replacing the use of all oil-fired boilers within the Council buildings, mainly in schools, with wood pellet or wood chip boilers depending on the size of the building concerned. There are approximately 40-50 sites that should be considered.

RHI payments are linked to Consumer Price Index inflation each year so actual savings will rise in line with retail inflation.

This project would need to be procured in one agreement to obtain volume discounts and to ensure as many installations are completed before March 2013 to gain the maximum tariff rate which reduces by approximately 10% per annum from 1<sup>st</sup> April 2013.

## **6. Additional Information**

Biomass, ground source heat pumps and solar thermal installations are all eligible for RHI payments. Air source heat pumps may be eligible after 2012 subject to a cost/benefit analysis by Government.

A good example of an existing project currently under construction using biomass, is the heating for the Council's Parkhall Depot in Oswestry which will qualify for the RHI and will save the Council approximately £4,000/annum.

## **7. Conclusions**

Urgent approval is requested to proceed with installations of wood pellet or wood chip boilers, combined with solar thermal panels, in all Council-owned buildings to benefit from the RHI and generate suitable income for the Council.

A commitment to overall use of renewable technology, both for electricity and heat generation is of significant importance if the Council is to reduce future energy bills and generate revenue.

**List of Background Papers (This MUST be completed for all reports, but does not include items containing exempt or confidential information)**

**Department of Energy and Climate Change Renewable Heat Incentive Guidelines**

[http://www.decc.gov.uk/en/content/cms/meeting\\_energy/Renewable\\_ener/incentive/incentive.aspx](http://www.decc.gov.uk/en/content/cms/meeting_energy/Renewable_ener/incentive/incentive.aspx)

<http://www.decc.gov.uk/assets/decc/What%20we%20do/UK%20energy%20supply/Energy%20mix/Renewable%20energy/policy/renewableheat/1387-renewable-heat-incentive.pdf>

<http://www.parliament.uk/documents/documents/upload/postpn353.pdf>

**Cabinet Member (Portfolio Holder) - Cecilia Motley**

**Local Member - Not applicable**

**Appendices**

Appendix 1 – RHI Table of Tariffs