

Leicester  
City Council

**WARDS AFFECTED**  
Latimer  
Spinney Hills

## **FORWARD TIMETABLE OF CONSULTATION AND MEETINGS:**

**Cabinet**

**19 January 2004**

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### **Proposed Biomass Plant at St Marks and Extension of the Combined Heat and Power (CHP) Links**

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#### **Report of the Service Director, Environmental Services**

#### **1. Purpose of Report**

- 1.1 This report deals with a proposal to build a new biomass plant at St Marks and to extend CHP network links from St Marks to St Matthews. Approval to proceed with the project is sought subject to funding being available from the East Midlands Development Agency (EMDA)

#### **2. Summary**

- 2.1 The Community Plan and the Leicester Climate Change Strategy both stress the importance of promoting and delivering sustainable use of energy. The possibility of providing a new biomass plant at St Marks and extending the existing CHP links to St Matthews gives the City Council an opportunity to help to meet this objective. £200,000 is available from the Rural Energy Trust to help to fund this and a bid for further funding has been made to EMDA. If EMDA funding becomes available, it is proposed to proceed with the biomass plant and new links. The biomass plant will help to provide energy from a renewal source to help meet future needs. Existing boilers will be retained to provide back-up when necessary.

#### **3. Recommendations**

- 3.1 It is recommended that the proposal to provide a new biomass plant at St Marks and an extension of CHP links to St Matthews as described in this report be approved subject to the capital costs being met by a £200,000 grant from the Rural Energy Trust and the balance being available from EMDA .

#### **4. Headline Financial and Legal Implications**

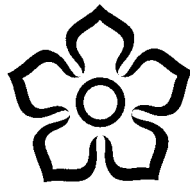
- 4.1 The installation of a biomass plant at St Marks will cost an estimated £380,000 for the biomass boiler and installation and £1,300,000 for the pipework link to St Matthews from St Marks; total cost being £1,680,000. The funding for this is external to the City Council. A grant for £200,000 from the Rural Energy Trust has been approved; a bid for EMDA funds of £1,480,000 has been made in December 2003. The project will proceed only if the EMDA bid is successful.
- 4.2 The revenue costs associated with the project will be contained within the Housing Revenue Account. The existing arrangements for charging the users of the district heating will continue.
- 4.3 A risk assessment is contained in Appendix 1 of the attached report.

#### **Report Author and Officer to contact**

**Don Lack, Head of Service Energy  
Energy Group Ext 5132  
Email: lackd001@leicester.gov.uk**

#### **DECISION STATUS**

<b>Key Decision</b>	<b>Yes</b>
<b>Reason</b>	<b>Capital Expenditure of more than £1million</b>
<b>Appeared in Forward Plan</b>	<b>No</b>
<b>Executive or Council Decision</b>	<b>Executive (Cabinet)</b>



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## **SUPPORTING INFORMATION**

### **1. Background**

- 1.1 The Community Plan includes a goal of promoting and delivering sustainable use of energy and resources. The City Council's EMAS targets include a requirement for more efficient use of energy. The Leicester Climate Change Strategy which was approved by Cabinet in April 2003 proposes an extension of the existing district heating in Leicester, an increase in the amount of Combined Heat and Power (CHP) and a requirement for more energy to come from a renewable source. The proposed new biomass plant and extended CHP links are designed to help to meet these objectives.

### **2. St Marks Biomass Plant**

- 2.1 The St Marks biomass project will provide additional heat generation capacity for the existing station. The new boiler house has already been constructed by the Housing Department. The biomass plant and the link pipework to St Matthews Estate will provide much needed additional heating capacity and be from a renewable source. The Housing Department supports the project and would be responsible for overseeing its implementation. Existing boilers will be retained and can be used to provide back-up when needed.
- 2.2 The proposed source of fuel would be wood in wood chip form. This is based on proven technology that has been used elsewhere in the Country. This has a number of advantages:
- a) It provides heat from a non-fossil fuel source and in doing so reduces climate change levy on the Council non-residential buildings (Estimated value £28,470 per year).

- b) The fuel supply is guaranteed from local woodland and tree management and is in abundant supply with 140 year life availability. Wood crops are grown to absorb the carbon produced by the Heat Station. Because the forest provides the source of the woodchip the availability secures a low energy price.
- c) The biomass boiler wood produces a clean combustion process with flue gases condensation which enables heat recovery and low emissions.
- d) Not dependent on fossil fuel for energy needs and avoids the volatile energy price markets.
- e) Low gas pressure interruptions would not affect the biomass boiler.
- f) The existing gas heat stations have to have stand by oil heat generation to provide protection if the gas network is down. The biomass boiler and the new pipework link gives the City Council additional protection and avoids high oil prices at peak demand periods.
- g) It provides a solution to the City Council's own tree management in the City and deals with waste wood. This gives an estimated saving to the Council of £75,000 a year in tipping charges.
- h) No land filling from our own tree production in the City and no production of methane gas from this wood waste. Production of ash will make a viable product for farmland fertilizer – no waste process.
- i) The biomass boiler will replace heat normally taken from Gas or Oil boiler production at St Marks and St Matthews. This can prolong the life of these boilers by reducing running hours and allow for maintenance programmes in peak heating periods.

There are some disadvantages – fuel has to be brought to the site in lorries (two a day) and ash (approximately 3-8 tonnes per month) has to be removed. There will also be potential disruptions to the highway during the construction of the pipework network. The advantages, however, clearly outweigh the disadvantages and construction disruption would be kept to a minimum.

2.3 £200,000 is available from the Rural Energy Trust to help pay for this – additional funding has been sought from EMDA. It will only be possible to proceed with the project if the additional funding becomes available from EMDA. This should be known by mid January. The money will need to be spent by the end of March and arrangements are being put in place to help to ensure that this happens.

### 3. FINANCIAL, LEGAL AND OTHER IMPLICATIONS

#### 3.1 Financial Implications

The installation of a biomass plant at St Marks will cost an estimated £380,000 for the biomass boiler and installation and £1,300,000 for the pipework link to St Matthews from St Marks: total cost being £1,680,000. The funding for this is external to the City Council. A grant for £200,000 from the Rural Energy Trust has been approved; a bid for EMDA funds of £1,480,000 has been made in December 2003. The project will proceed only if the EMDA bid is successful.

3.2 The revenue costs associated with the project will be contained within the Housing Revenue Account. The existing arrangements for charging the users of the district heating will continue.

3.3 A risk assessment is contained in Appendix 1.

#### 3.4 Legal Implications

The new biomass plant and network extensions will be funded from external sources and implemented by the Housing Department.

#### 3.5 Other Implications

OTHER IMPLICATIONS	YES/NO	Paragraph References Within Supporting information
Equal Opportunities	<b>Yes</b>	<b>The projects will specifically meet a need to raise awareness in all communities to the benefits of affordable warmth through community heating.</b>
Policy	<b>Yes</b>	<b>The project will help work towards the Leicester Energy Strategy, the Fuel Poverty Strategy, and the Climate Change Strategy..</b>
Sustainable and Environmental	<b>Yes</b>	<b>Energy and resource use in buildings accounts for a major proportion of the City's environmental impact. By utilising energy from renewable sources through district heating will reduce the global impact of climate change and provide low emissions.</b>
Crime and Disorder	<b>No</b>	
Human Rights Act	<b>No</b>	
Elderly/People on Low Income	<b>Yes</b>	<b>Energy bills can account for a large proportion of low income households financial commitments. Affordable warmth through heat will help alleviate fuel poverty in new and existing houses. District heating provides a major benefit to the community of Leicester.</b>

**4. Background Papers –**

1. Leicester Energy Policy 1990 and action plan
2. Leicester Energy Strategy 1994
3. EMAS Policy and Targets 1998
4. Local community Plan 2003
5. Leicester Better Building Standards 2003
6. Leicester Climate Change Strategy 2003
7. Dr Gill Owen – ESCO Report April 2003
8. Feasibility Report Leicester Energy Agency (Leicester City Council) ArupEnergy

**5. Consultations**

- a. Leicester Energy Agency Board
- b. The Sustainable Cities Officers Group (SCOG)
- c. The Housing Department
- d. Legal Services: Joanna Bunting
- e. Financial Services: Nick Booth & Kate McGee & David Janes

**8. Report Author –  
Contact Don Lack HoS Energy, Energy Group, x5132**

**9. Appendices  
Appendix 1 - Risk Matrix**