CLACKMANNANSHIRE COUNCIL

THIS PAPER RELATES TO ITEM 6

ON THE AGENDA

Report to: Place Committee

Date of Meeting: 24th January 2019

Subject: Energy Efficiency Scotland Route Map and Local Heat & Energy Efficiency Strategy (LHEES)

Report by: Strategic Director (Place)

1.0 Purpose

1.1. This report informs the Committee of the Scottish Governments new Energy Efficiency Scotland (EES): Route Map and provides information on the development of the Local Heat and Energy Efficiency Strategy (LHEES) for Alloa and Tullibody.

2.0 Recommendations

2.1. It is recommended that Committee notes the content of the report and supports the ongoing development of the LHEES for Alloa and Tullibody which will allow access to Scottish Government funding to deliver a programme of works which will enable energy demand reduction and decarbonisation of the heat supply of buildings in Alloa and Tullibody.

3.0 Background

3.1. Energy Efficient Scotland (EES): Route Map

3.1.1. The Scottish Government have committed to take long-term action to reduce the energy demand of our residential, service and industrial sectors through designating energy efficiency as a national infrastructure priority. Ministers have announced that the cornerstone of this will be the Energy Efficiency Scotland: Route Map

3.1.2. The Route Map sets out the journey our homes, businesses and public buildings will take to become more energy efficient. It is considered that local authorities will have a major role in the delivery of the EES.

3.1.3. The Government has announced a new £54.5 million strategy to improve the energy efficiency of our buildings and to combat fuel poverty through EES, setting out a clear commitment to energy efficiency and low carbon heat with substantial public funding. EES will be an unprecedented large-scale, long-term programme, operating for up to 20 years across all parts of Scotland.

3.1.4. It is intended that EES will tackle the problems of fuel poverty and greenhouse gas emissions. Activities identified within the strategy will continue to drive change by, for example, addressing our energy sourcing and use, waste production and disposal, travel and transport, and the purchasing of goods and services. At a time of intense pressure on resources the expanding green economy also presents an opportunity to set a positive agenda. For example, the use of renewable and low carbon technologies can stimulate jobs, reduce reliance on fossil fuels with associated harmful carbon emissions, reduce energy bills, and create an income to the council through government initiatives such as the Renewable Heat Incentive (income from producing heat from renewable or low carbon sources) and Feed-In-Tariffs (income from producing electricity from renewable sources and feeding it in to the national grid).

3.1.5. The Government consider that the development of Local Heat and Energy Efficiency Strategies (LHEES) will be pivotal to the success of EES. On the 22 Nov. 2018 the Minister for energy provided a statement on the future of Energy Efficiency in Scotland. In this statement he proposed that all local authorities should develop Local Heat & Energy Efficiency Strategies (LHEES) and these should be placed on a statutory basis. Further to this the Scottish Government has agreed with COSLA to set up a short life working group to draft formal LHEES guidance and outline the process for a dedicated consenting regime for district heating. In July 2017, the Energy and Environmental Regulation Team successfully negotiated a £60,000 grant from The Scottish Government to develop a pilot LHEES in Alloa and Tullibody.

3.1.6. To assist in the development of the pilot, the Scottish Government procured ATKINS sustainability and environmental consultancy to support Clackmannanshire deliver the project. Work with the consultants began in October 2017.

4.0 LHEES Pilot

4.1 The output of this project will be the production of a framework and delivery programme which will assist the Council to reduce energy demand and decarbonise the heat supply of buildings in Alloa and Tullibody, which will ensure progress against the national objectives of the EES: Route Map.

4.2 Completion of this pilot project will enable us to prioritise and target work, whether that is supporting owner occupiers and small and medium sized enterprises (SMEs) to install energy efficiency measures or encouraging the development of district heating and other low carbon heat solutions within the district.

4.3 Production of an LHEES will be pivotal to accessing funding from the Scottish Government to deliver local energy efficiency programmes under the EES.

4.4 To deliver the output, the project team will test integrated area based approaches to delivering energy efficiency improvements to domestic and non-domestic buildings by means of fabric measures, renewable heat supply models and advice and support measures.

4.5 It is envisaged that the outcomes of the project will help to reduce fuel poverty and health related issues and have a significant impact on the local economy (job creation, skills and use of local installers).

4.6 The approaches and priorities will be developed and delivered in liaison with local stakeholders (local businesses, registered social landlords, community groups, public bodies, financial investors and regulators) and the final programme presented to Committee for approval.

4.7 Adoption of the Alloa and Tullibody LHEES will provide a template which can be utilised to cover the whole of Clackmannanshire at a later date.

5.0 Progress to date

5.1 A work plan has been drawn up to establish the outputs from the project (see Appendix 1). The overall aim of the initiative is to develop a number of key LHEES elements in Alloa and Tullibody to provide a framework for targeting energy efficiency and heat decarbonisation measures using current funding streams and potential future funding through EES.

5.2 Atkins recently completed a baseline study of existing energy efficiency, heat mapping and fuel poverty data for Clackmannanshire to enable further assessment of energy efficiency/ heat decarbonisation opportunities and to help establish targets for the LHEES pilot areas.

5.3 In July, Atkins invited key Council leaders and Officers to a workshop to review the captured data and to commence work on target setting. The workshop focussed on targeting the energy efficiency and heat decarbonisation options assessment towards options that were in-line with actionable local opportunities and the Council's development plan.

5.4 The focus areas identified were:

- Alloa West development
- Eco Village Forest Mill
- Geothermal(Alloa/Tullibody)
- Targeting of major property owners
- Targeting of public buildings that are either coming towards end of life or are due for major refurbishment

5.5 Following on from the workshop, the Council have provided Atkins with relevant plans and pre-existing studies to help them formulate a report on the options for energy efficiency and heat decarbonisation in the identified areas. The report is scheduled to be completed by mid September. On completion of this report a series of stakeholder engagement events will be held during the autumn to help finalise the LHEES for Alloa and Tullibody.

5.6 The final LHEES will be presented to Committee for approval.

6.0 Conclusion

6.1 The award of funding and completion of the project will create financial and investment opportunities for Clackmannanshire.

6.2 The LHEES will provide a framework and delivery programme to enable energy demand reduction and decarbonisation of the heat supply of buildings in Alloa and Tulllibody

6.3 Implementation of the LHEES will help tackle fuel poverty and health related issues as well as having a significant impact on the local economy by creating jobs, enhancing skills and knowledge and the utilisation of local installers and local business.

6.4 The LHEES will help to reduce Clackmannanshire's dependence on fossil fuels while supporting citizens and businesses to reduce their energy costs.

6.5 Delivery of the Alloa and Tullibody LHEES will permit Clackmannanshire Council to be prepared for the potential introduction of a statutory duty for local authorities to develop a district wide LHEES.

6.6 The development of the LHEES will compliment projects associated with the City Deal, in particular geothermal and poly generation renewable District Heat Networks.

6.7 The work plan for this project is currently on target

7.0 Resource Implications

7.1 *Financial Details*

7.2 Details of the grant award are included within the report Yes ☑

7.3 *Staffing*

7.4 The project will be delivered through a combination of in house Local Authority resources (primarily Energy and Sustainability), government agency support (e.g Zero Waste Scotland, the Energy Savings Trust) and external consultancy (ATKINS)

8.0 Exempt Reports

8.1 Is this report exempt?
Yes ☐ (please detail the reasons for exemption below) No ☑

9.0 Declarations

The recommendations contained within this report support or implement our Corporate Priorities and Council Policies.

(1) **Our Priorities** (Please double click on the check box ☑)

The area has a positive image and attracts people and businesses	☑
Our communities are more cohesive and inclusive	☑
People are better skilled, trained and ready for learning and employment	☑
Our communities are safer	☑
Vulnerable people and families are supported	☑
Substance misuse and its effects are reduced	☐

Health is improving and health inequalities are reducing ☑
The environment is protected and enhanced for all ☑
The Council is effective, efficient and recognised for excellence ☑

(2) **Council Policies** (Please detail)

- Local Development Plan
- Local Housing Strategy
- Fuel Poverty Strategy
- Local Outcome Improvement Plan
- Biodiversity Strategy
- Climate Change Strategy

10.0 Equalities Impact

10.1 Have you undertaken the required equalities impact assessment to ensure that no groups are adversely affected by the recommendations?
Yes ☐ No ☑

11.0 Legality

11.1 It has been confirmed that in adopting the recommendations contained in this report, the Council is acting within its legal powers. Yes ☑

12.0 Appendices

12.1 Appendix 1 – Project Plan

13.0 Background Papers

13.1 Have you used other documents to compile your report? (All documents must be kept available by the author for public inspection for four years from the date of meeting at which the report is considered)
Yes ☐ (please list the documents below) No ☑

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Approved by

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EES LHEES Pilot Work Plan

Background

Clackmannanshire is the smallest mainland authority in Scotland with a population of 49,900 living in a number of towns and villages and covers 159 square kilometres. Geographically, Clackmannanshire has the second smallest land area in Scotland. This project will pilot the development of an LHEES in the Clackmannanshire settlements of Alloa & Tullibody.

The domestic housing profile for Alloa/Tullibody is detailed in the table below:

Area	Homeless accommodation	Housing Association Housing	Local Authority Housing	Other	Private Rented/ Owner Occupiers	Total
Alloa	4	620	1855	25	4,018	6522
%	0.1%	9.5%	28.4%	0.4%	61.6%	100%
Tullibody	0	690	498	3	1966	3157
%	0%	21.8%	15.8%	0.1%	62.13%	100%

SIMD data shows that Alloa South and East remain the most deprived area in Clackmannanshire with two datazones found in the 5% most deprived areas in Scotland. Tullibody South is found to be in one of the 15% most deprived areas in Scotland. Alloa South and East also suffer from high rates of unemployment. Tullibody South has the highest level of health deprivation and falls in the 10% most health deprived areas in Scotland.

The town of Alloa contains over half of the top 20 buildings with the highest heat demand in Clackmannanshire. These “anchor loads” present opportunities to underpin the “zoning” of areas for heat decarbonisation. The town centre (Bank Street/ Mill Street) and surrounding streets represent the area with the highest heat demand density. Many of the properties in this area are small/medium sized private sector commercial buildings.

Tullibody contains two major non-domestic heat loads in the form of GlenOchil Prison and Lornshill Academy. In addition to this, a small developing business park is showing increasing demand for heat.

The local economy is vulnerable with higher than average unemployment rates and a lack of skilled labour. There are fewer jobs in professional, scientific & technical and business & financial service sectors than in other parts of Scotland. Clackmannanshire Council are interested in understanding how the implementation of heat decarbonisation solutions can have a positive socio-economic impact on the local area.

Overall Project Aims

To develop a number of key LHEES elements in Alloa and Tullibody to provide a framework for targeting energy efficiency and heat decarbonisation measures using current funding streams and potential future funding through EES.

Consultancy Requirements

Clackmannanshire Council will work closely with Atkins throughout the duration of the contract. The Council's requirements for consultancy support are as follows:

1. *Assessment of building energy performance and heat demand for the pilot area*

   Atkins will produce a report and dataset which sets out the energy efficiency and heat demand of all buildings across the pilot area. The output dataset should be compatible with data held in the Scotland Heat Map. This baseline study should also consider:

   - The influence of long term development and regeneration on the future energy efficiency and heat demand in the pilot area.

   - The potential influence of National policy on future energy efficiency, for example, proposed minimum standards for energy efficiency across social, private rented and owner occupied housing.

   The following existing data and information will be made available to the consultant:

   - Heat Mapping Data
   - Home Analytics
   - Public Buildings Energy data
   - Clacks Social Housing information held in the Local Housing Strategy
   - SIMD
   - Local Fuel Poverty Data capture
   - Clacks Planning data
   - Local Development Plan

   The council anticipate that a lack of data in the non-domestic/commercial sector will preclude a complete assessment of energy efficiency and heat demand across the building stock. As such, Atkins is required to address this gap through an appropriate data collection methodology, possible approaches may include but not be limited to:

   - Non-domestic building archetype study & sample energy efficiency surveys
   - Simplified building energy modelling applied on an area wide basis

2. *Supporting Clackmannanshire Council to set area based fuel poverty, energy efficiency and heat decarbonisation targets.*

   Clackmannanshire council will lead on the internal decision making process for energy efficiency and heat decarbonisation target setting. This will consist of a workshop attended by internal decision makers at which Atkins will be invited to present the baseline study and answer questions.

3. *Conduct an options appraisal to identify potential energy efficiency programs and heat decarbonisation solutions*

   Atkins will use the baseline dataset to identify potential long term energy efficiency and heat decarbonisation solutions for the pilot area. This should consider opportunities for area based fabric energy efficiency programs offering economies of scale through implementation of measures on an area wide basis.

   Atkins will consider the cost/benefit of carbon savings through demand side energy efficiency measures in comparison to supply side carbon saving measures. Potential solutions for supply side heat decarbonisation may include, but not be limited to the following:

   - Electrification of Heat
   - District Heating – (considering the most appropriate heat supply technology)
   - Re-purposing gas networks for use with hydrogen

   Proposed solutions may be ubiquitous across the pilot area or may require a sub-division of the pilot area into a number of zones where different solutions are most appropriate. When identifying/justifying solutions, Atkins should consider the following:

   - Fuel Costs and cost of overall heat supply (incorporating any operating/maintenance costs)
   - Heat production efficiency
   - Carbon saving potential of identified solution
   - Capacity for storage or demand side management to address daily/seasonal fluctuations in demand
   - Requirement for the installation of new infrastructure or the reinforcement of existing infrastructure and associated capital costs and timescales
   - Limitations on the implementation rate of identified solutions (e.g. maximum number of properties converted per year)
   - The scale of infrastructure installation works required and capability for such infrastructure to be located alongside existing utilities
   - Level of local disruption arising from infrastructure works and suggested strategies to minimize disruption (with consideration given to specific local

issues such as traffic disruption, tenant displacement, network downtime etc.)

- Outline costing of internal upgrades required for consumers to be compatible with the proposed solution (e.g. internal heating system requirements & conversion or replacement of cooking equipment)

- Visual and noise impact of propose solution(s)

- Identification of barriers to consumer acceptance

- Socio-economic evaluation of proposed measures considering the impact on employment, health, air quality etc.

The output of this activity will be a draft report detailing the options for demand reduction and heat decarbonisation. Atkins will also indicate and justify what they believe is the most suitable option.

4. *Evaluate and prioritise proposed energy efficiency and heat decarbonisation solutions in line with the Local Authority's drivers/priorities.*

   Atkins will be expected to present the options for demand reduction and heat decarbonisation at both a workshop of internal stakeholders and then at an event targeted at local residents and businesses. Clackmannanshire council will lead on the stakeholder engagement process. The purpose of this is to discuss the relative weighting of criteria used to assess the suitability of proposed solutions and to gain feedback to inform the "offers" required to deliver identified measures at a local level.

   Following this, the consultant is expected to revise the draft report to identify the best solution based on weighing given to criteria in the workshop.

5. *Develop costed delivery plans that identify any barriers associated with implementation of the proposed measures and set out existing funding mechanisms and potential EES funding could be used.*

   Following the identification of energy efficiency and heat decarbonisation solutions, Atkins will produce an implementation plan for the pilot area. This should reflect the views of local consumers based on feedback from stakeholder engagement activities undertaken by the council. The implementation plan will consider the following:

   - Identify what regulation or standards would be required, either at a local or national level to support implementation

   - Identify key stakeholders that need to be included in any communication plan to support implementation

   - Highlight the technological barriers to implementation of the proposed solution(s) and comment on the role that the Local Authority could play in facilitating technological development (e.g. demonstration sites, pilot schemes etc.)

   - Provide outline costs for the delivery of the proposed solution(s)

- Identify possible funding sources for the proposed solution. This should consider how best to use future sources of public funding, the potential for private sector investment and, where appropriate, opportunities to encourage investment from existing network owners to meet their own environmental targets.

- Suggest where the local authority can support the implementation of the identified solutions within existing powers (e.g. through planning policies, investment in their own building stock or enforcement of building standards)

- Consider strategies to overcome barriers to consumer acceptance.

- Identify what "offers" would be required for consumers to enable implementation of fabric energy efficiency measures or modification of internal heating systems/equipment to be compatible with identified solution(s)

- Consider how best to phase the implementation of the proposed solutions, considering limitations on the conversion/connection rate of buildings within the pilot area, barriers to implementation and alignment with timescales for the delivery of national programs

- Produce an outline action plan for the near term (e.g. first 5 years) implementation of the LHEES strategy, highlighting the roles and responsibilities of those involved, desired outcomes of actions and quantify the short term benefits/impacts of identified actions.

Expected Consultancy Outputs:

- A report setting out the baseline for the area in a format that can be readily communicated and understood (complete).

- Attendance at a workshop on target setting (July 2018).

- A report presenting the options for area based energy efficiency and heat de-carbonisation solutions. This report should include at least one draft and revision to allow local views to be incorporated. (by 31st August 2018).

- Attendance and support at Local Authority led stakeholder engagement events (by March – April 2019).

- An implementation plan incorporating the information set out above (by April 2019).