

Renewable Energy & Carbon Savings

The project includes a 1MW wind turbine to the South East of the town, (a planning application for this will be submitted Oct/Nov 2024) and around 500kW of solar PV panels. These will supply most of the electricity to run the heat pumps. We will probably also supply electricity to SpArC. There will be a large thermal store so we can maximise the use of this renewable energy, with heat taken out of the store on cloudy & windless days; this minimises the amount of grid electricity we will need to buy in. The renewable electricity will be cheaper than grid electricity and the turbine and solar panels are required to make the scheme viable. The renewable energy will also reduce reliance on the grid, be a hedge against future electricity price rises and increase the carbon savings from the project.

We will have oil boilers as well, these will provide a top up in the coldest weather and back up in case of any issues with the heat pumps. It is estimated oil will provide around 10% of the overall heat demand, so

the carbon savings will be in the order of 85%

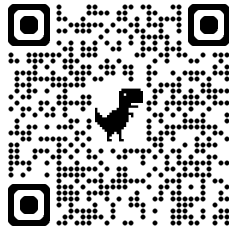
(The oil boilers could be replaced by electric ones in the future, increasing carbon savings further, but that's too expensive an option at the moment.)



An Expression of Interest Form is included with this leaflet. Please fill in & return to Enterprise House or the Town Hall. For more information (inc a full FAQ) or to fill in the form online use the QR code below or see www.lightfootenterprises.org/heat-network

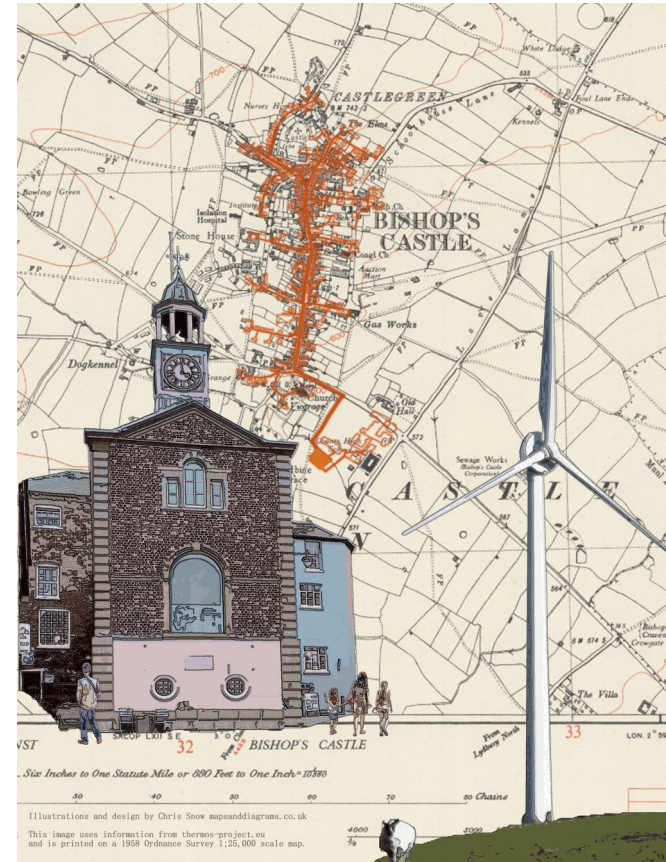
If you have any questions email dave@shareenergy.coop

This work has been funded by a Community Energy Fund grant managed by the Midlands Net Zero Hub through Shropshire & Telford Community Energy.



Cover artwork by Chris Snow, see www.mapsanddiagrams.co.uk/ using a 1958 Ordnance Survey map

Bishop's Castle Heat Network Customer Offer



There will be a Public Meeting on Wed 25th Sept, 7.30 at the 3 Tuns to discuss the Heat Network and Wind Turbine. Please join us to find out where we've got to and to ask any questions.



V1h 4.9.24

Introduction to the Bishop's Castle Community Heat Network

The proposed Community Heat Network will have an energy centre based at SpArC where air source heat pumps will produce hot water that can be piped to SpArC, and the Community College, but also up through the spine of the town. We aim to get around 100 houses or small businesses connected. Each property connected to the network will have a heat interface unit (HIU) which extracts heat from the network and supplies it to the property for heating and hot water. The HIUs will be about the size of a wall hung boiler and existing boilers and oil/lpg tanks can be removed. The heat pumps will deliver water hot enough that existing radiators will not need to be replaced. The map below gives an indication of where the network may reach but this is not final and will depend largely on the level of interest shown in any particular street. We cannot guarantee supplying to any particular property at this point.

What Will It Cost to Connect & To Pay for the Heat?

Anyone joining the heat network at the outset who has a radiator system already will not pay a connection charge. We will fit your HIU and connect it to your existing heating and hot water system, and remove your current boiler for **FREE**.*

All network users will get valuable protection against future price shocks and against significant increases in the price of oil.

(We cannot offer large savings to begin with but the heat will never be more expensive than the price of oil and is likely to become significantly cheaper as oil prices rise.)

In addition everyone on the network will pay an annual standing charge.

This is expected to be up to £400/a but this will be instead of paying to maintain and occasionally replace an oil boiler. Some discounts for those in need may be available.

How Reliable Will the System Be?

As the scheme has back-up boilers it should be more reliable than owning your own boiler where no back-up is available. The HIUs will be maintained & replaced if necessary at the cost of the Society running the project. Replacing these is relatively straightforward.

**BUT, anyone who decides to join the network at a later date will have to pay a connection charge to cover the additional costs. Those with no radiators already may have to contribute to the cost of fitting radiators.*



Heat Network Plan courtesy of Thermos software produced by CSE, see www.lightfootenterprises.org for full credit.

How Will You Connect to the Heat Network?

We've studied 14 properties in Bishop's Castle and suggested how each one could connect to the network. Half of these could connect to the network very easily, either using a basement or a side passage. Any property without either of these will need to be studied carefully to find an acceptable way of bringing the pipes into the property.

The HIUs will most likely be installed where existing boilers are located and radiators will not need to be replaced so disruption will be minimised.

The system will work most efficiently if hot water for taps and showers/baths is supplied directly from the HIU and any hot water cylinders are removed. However if required hot water cylinders can be kept.

Who Will Own the Network?

We aim to set up a new Community Benefit Society to own and run the network, the wind turbine & solar panels. Whilst this will be a new society it will have the support of those with considerable experience in Community Energy and heating, including Sharenergy, Carbon Alternatives and Shropshire & Telford Community Energy. Everyone who connects to the network will become a member of the society alongside investors, on a one member one vote basis. So anyone on the network can be involved in decisions about pricing, maintenance, contractors etc.