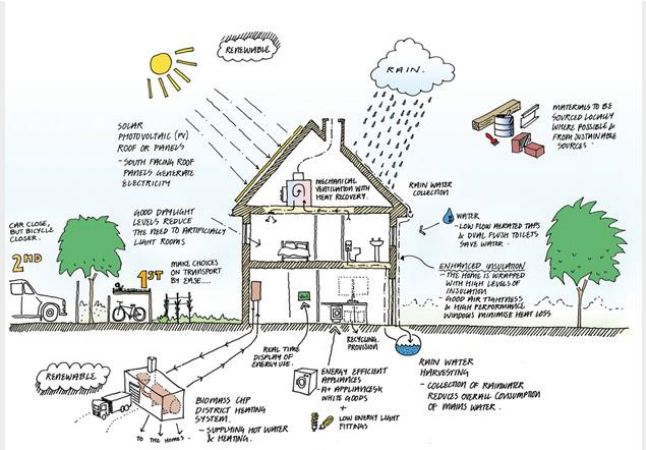
Policy ESD 4: Decentralised Energy Systems

B.193 This policy sets out the Council's support for decentralised energy systems, the second step of the energy hierarchy in 'Policy ESD 2: Energy Hierarchy'.



B.194 The national Heat Strategy aims to ensure there is affordable, secure and low carbon heating in a nation where 70% of all heat currently comes from natural gas, a fossil fuel. Nearly half the energy we use in the UK is used for heating of one sort or another and 52% of natural gas consumed in the UK in 2011 was used to provide heat for buildings and industry (Heat Strategy, DECC, 2013). Our 'Renewable Energy and Sustainable Construction Study' (see Appendix 3: Evidence Base) found that District Heating and Combined Heat and Power (CHP) will have an important role in delivering low carbon and renewable power and heat in the District. The Heat Strategy and the Carbon Plan (2011) both emphasise the urgent national need to decarbonise our heat supply in order to meet commitments to reduce carbon emissions (Climate Change Act 2008). The Local Plan seeks to tackle this by increasing thermal efficiency through better insulation of buildings ('Policy ESD 3: Sustainable Construction') and through Policy, ESD 4, by encouraging efficient heat delivery systems.

B.195 Briefly, District Heating involves the distribution of heat (for space heating and hot water) from a decentralised energy centre connected to local customers via a private heat distribution network, meaning that systems can be more efficient, avoiding losses over larger transmission and distribution networks. CHP systems involve the utilisation of 'waste' heat produced when fuel is burnt to generate electricity. Trigeneration, supplying chilled water for cooling, is also possible).

B.196 The fuel source in both DH and CHP systems can be either non renewable or renewable (renewable heat installations will of course contribute to meeting national renewable energy targets). In the UK most DH networks are linked to a gas fired CHP system or use waste heat generated from industrial processes. Some parts of rural Cherwell are without mains gas ('off-gas areas') and here biomass powered DH/CHP could be appropriate. The Renewable Energy and Low Carbon Map at Appendix 5 ' Thematic Maps' shows the broad potential for decentralised heat supply in the District, illustrating any potential waste heat sources, the existing DH/CHP schemes in the District that could be extended, the off-gas areas in the District, and the typical major users of heat that could anchor a district heating system. This map should be used in combination with the DECC's mapping of areas of high heat demand density to inform more detailed feasibility assessments of the

potential for DH/CHP in new developments in Cherwell. The Council will produce guidance and a template for use in preparing feasibility assessments.

Policy ESD 4: Decentralised Energy Systems

The use of decentralised energy systems, providing either heating (District Heating (DH)) or heating and power (Combined Heat and Power (CHP)) will be encouraged in all new developments.

A feasibility assessment for DH/CHP, including consideration of biomass fuelled CHP, will be required for:

- **All residential developments for 100 dwellings or more**
- **All residential developments in off-gas areas for 50 dwellings or more**
- **All applications for non-domestic developments above 1000m2 floorspace.**

The feasibility assessment should be informed by the renewable energy map at Appendix 5 'Maps' and the national mapping of heat demand densities undertaken by the Department for Energy and Climate Change (DECC) (see Appendix 3: Evidence Base).

Where feasibility assessments demonstrate that decentralised energy systems are deliverable and viable, such systems will be required as part of the development unless an alternative solution would deliver the same or increased benefit.