Policy BCS14

Proposals for the utilisation, distribution and development of renewable and low-carbon sources of energy, including large-scale freestanding installations, will be encouraged. In assessing such proposals the environmental and economic benefits of the proposed development will be afforded significant weight, alongside considerations of public health and safety and impacts on biodiversity, landscape character, the historic environment and the residential amenity of the surrounding area.

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Development in Bristol should include measures to reduce carbon dioxide emissions from energy use in accordance with the following energy hierarchy:

1. Minimising energy requirements;
2. Incorporating renewable energy sources;
3. Incorporating low-carbon energy sources.

Consistent with stage two of the above energy hierarchy, development will be expected to provide sufficient renewable energy generation to reduce carbon dioxide emissions from residual energy use in the buildings by at least 20%. An exception will only be made in the case where a development is appropriate and necessary but where it is demonstrated that meeting the required standard would not be feasible or viable.

The use of combined heat and power (CHP), combined cooling, heat and power (CCHP) and district heating will be encouraged. Within Heat Priority Areas, major development will be expected to incorporate, where feasible, infrastructure for district heating, and will be expected to connect to existing systems where available.

New development will be expected to demonstrate that the heating and cooling systems have been selected according to the following heat hierarchy:

1. Connection to existing CHP/CCHP distribution networks
2. Site-wide renewable CHP/CCHP
3. Site-wide gas-fired CHP/CCHP
4. Site-wide renewable community heating/cooling
5. Site-wide gas-fired community heating/cooling
6. Individual building renewable heating

Explanation

4.14.5 Environmental and economic benefits from the development of large-scale renewable and low-carbon energy installations and supporting infrastructure potentially include:

- Reduction in carbon dioxide (CO_2) emissions and pollution through displacement of energy generated from fossil fuels;
- Contribution to national and international targets for CO_2 reduction and climate change mitigation;
- Contribution to local climate change and CO_2 reduction targets, including those adopted as part of the Sustainable Community Strategy (and as set out in the 20:20 plan);
- Contribution to local and national targets for renewable energy generation and the government's commitment to zero carbon;

- Reduction in dependence on fossil fuels, promoting energy security and reducing vulnerability to peak oil and potential negative impacts on the local economy from rising fuel, food and transport costs;
- Development of a low-carbon economy with the creation of local employment and investment opportunities.

4.14.6 Proposals for development should be accompanied by an energy strategy as part of the Sustainability Statement submitted with the planning application, which should set out measures to reduce CO_2 emissions from energy use in accordance with the energy hierarchy. The energy strategy should:

- Set out the projected annual energy demands for heat and power from the proposed development against the appropriate baseline (2006 Building Regulations Part L standards), along with the associated CO_2 emissions.
- Show how these demands have been reduced via energy efficiency and low carbon energy sources such as CHP and district heating, and set out the CO_2 emissions associated with the residual energy demand.
- Demonstrate how the incorporation of renewable energy sources will offset the CO_2 emissions arising from the residual energy demand.

4.14.7 The energy strategy should integrate sustainable approaches to design and construction such as optimising solar gain and natural light and ventilation to maximise the energy efficiency of the development and minimise its overall energy demand.

4.14.8 All development will be expected to make use of opportunities to incorporate on-site renewable energy sources in order to achieve a 20% reduction in CO_2 emissions from residual energy use in the development.

4.14.9 Where the full requirements of Policy BCS14 cannot feasibly be delivered on-site, an alternative allowable solution will be considered, such as providing the residual emission reduction through a contribution to a relevant citywide low-carbon energy initiative or by agreeing acceptable directly linked or near-site provision.

4.14.10 If meeting the full requirements of Policy BCS14, either through on-site measures or allowable solutions, would render development unviable, careful consideration will be given as to whether the development is appropriate in other respects and sufficiently necessary to justify an exception to the requirements of Policy BCS14.

4.14.11 The development of a citywide CHP/CCHP/district heating network will be encouraged. New development in Heat Priority Areas will be expected to maximise opportunities for the development of a district heating network, which may, in the case of major development, include the incorporation within sites and buildings of infrastructure for district heating in areas where a district heating network has yet to be developed (for the purposes of Policy BCS14, major development is defined as development of 10 or more

dwellings or development exceeding 1,000m² of other floorspace). Where possible the use of renewable biomass fuels to supply this network and the addition of a variety of heat sources such as the waste heat from industrial plant will be encouraged. Diagram 4.14.1 shows the Heat Priority Areas. The Heat Priority Areas are based on those recommended by the Bristol Citywide Sustainable Energy Study, but have regard to changes in the spatial strategy for Bristol since the study's publication in June 2009.

4.14.12 In selecting the heating and cooling systems in accordance with the heat hierarchy, the lowest carbon heating / cooling solution feasible for the development will be achieved. Energy savings made by the use of CHP/CCHP will contribute to Policy BCS14's requirement to minimise energy requirements, while the use of renewable energy sources to power CHP/CCHP or community heating will contribute to Policy BCS14's requirement to reduce residual CO_2 emissions by 20%.

4.14.13 Where a new heating or cooling distribution network is proposed, it should be designed to be easily extendable to serve neighbouring developments.

Policy Delivery

The criteria for new renewable energy development in this policy will be implemented through the development management process.

The on-site requirements of this policy will be delivered through the development management process, by means of Policy BCS13's requirement for Sustainability Statements and the above requirement for an energy strategy as part of that statement.

The council is exploring setting up an Energy Service Company to facilitate the introduction of on-site renewable and low-carbon energy supplies and spread the associated risks and costs.

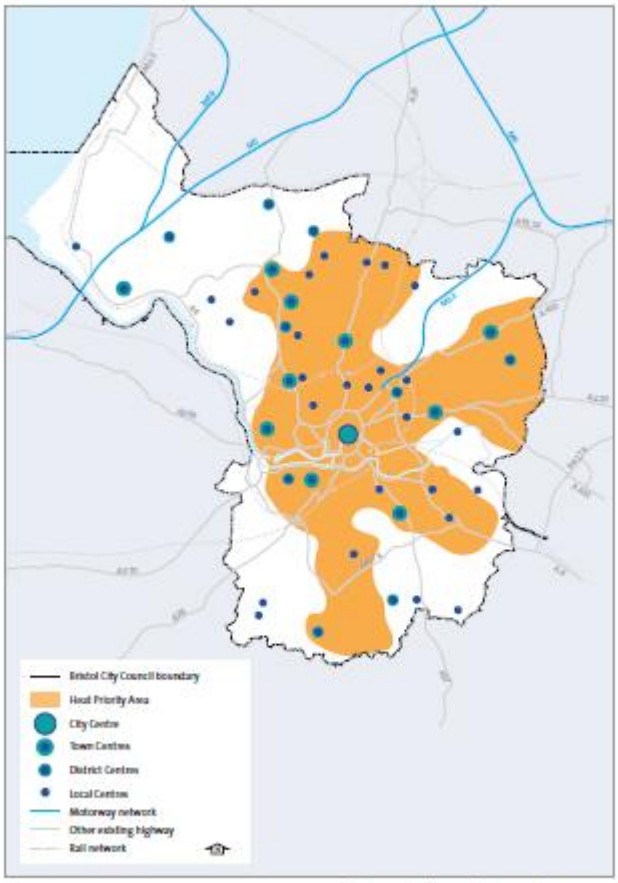
Allowable solutions will ensure that carbon savings are made on small-scale development where the provision of on-site renewable energy may not be technically feasible.

Planning obligations or a Community Infrastructure Levy (CIL) may in some cases be used to contribute towards the delivery of strategic district heating infrastructure.

Further guidance will be offered in a supplementary planning document on mitigating and adapting to climate change.

Indicators
Renewable energy generation by installed capacity and type (Core Output Indicator E3)
No. of residential properties in major development supplied by district heating
Non-residential floorspace in major development supplied by district heating
No. of residential properties in major development supplied by renewable CHP or renewable community heating
Non-residential floorspace in major development supplied by renewable CHP or renewable community heating

Diagram 4.14.1: Heat Priority Areas



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Sustainable Design and Construction

4.15.1 The aim of this policy is to ensure new developments are designed and constructed to minimise their environmental impact, and contribute to meeting targets for reductions in carbon dioxide (CO_2) emissions. The policy sets out broad criteria to be considered in the design and construction of new development and sets out principles for the management of waste in new development. In doing so the policy contributes to meeting objectives 1, 5, 6, 7, 9 and 10 of the Core Strategy and responds to issues 10, 11, 12 and 14.

Context

4.15.2 Sustainable design and construction has a key role to play in mitigating the impact of extensive new building on the environment and climate change.