4. The changing role of planning

In this section we review the potential role of planning in providing the spatial context for low and zero carbon energy, drawing on provisions within national and regional planning policy guidance, and recommendations going forward from policy consultations.

4.1 The interim position

Planning policy on climate change and energy is addressed in the most detail in PPS22: Renewable Energy (2004) [33] and the supplement to PPS1 on Planning and Climate Change (2007) [34] and their accompanying good practice guides.

The PPS1 supplement is clear in shifting the emphasis from guidance to policy. It states that '*any policy relating to local requirements for decentralised energy supply to new development… should be set out in a Development Plan Document, not a Supplementary Planning Document*.' [35] It is intended that this study begins the process of developing the evidence base to inform planning policies as the basis for DPD's.

In the interim the PPS1 supplement provides guidance on the principles to be used in determining planning applications. The PPS has the status of being a material consideration that '*may supersede the policies in the development plan'*. It also states that any refusal on the grounds of prematurity '*should be consistent with Government policy*' [36].

4.2 District-wide target setting

Target setting to require planning applicants to obtain a stated proportion of their energy, or to achieve a stated reduction in CO_2 emissions against a specified baseline, has become the mainstay of recent energy planning policies. The PPS1 supplement, together with PPS22, is clear on the approach to target setting to be taken by local planning authorities:

- They should be expressed as a percentage of energy or reduction in CO_2 in new developments to come from decentralised renewable or low carbon energy, and should apply to the whole local authority area;
- They should avoid prescription on technologies and should be flexible enough to accommodate changes in technology, approach, economic circumstances and energy demands;

[33] *See footnote 14*
[34] *See footnote 12*
[35] See paragraph 33, page 18
[36] See paragraph 11, page 11

- That as a minimum, and as set out in the North West RSS, a 10% contribution to total predicted energy demand from on-site decentralised renewable or low carbon energy technologies should be required;

Whilst there was already legal precedent for Councils to set targets, Royal assent of the Planning and Energy Act in 2008 has now formalised their legalability to set targets.

Elsewhere in the PPS1 supplement the message on prescription is caveated, particularly where the evidence base may suggest that a specific technology is well suited to a particular location or form of development, or where economies of scale could be achieved. The London Plan demonstrates how a more sophisticated approach could work taking this into account, with overall targets supported by an emphasis on specific infrastructure solutions [37].

4.3 Area or site-specific target setting

In support of this approach, local planning authorities can set area or site-specific decentralised or renewable energy targets where the potential exists to go beyond district-wide targets [38]. These may reflect particular opportunities, and might most appropriately be expressed through Area Action Plans (AAP's) as they emerge to complement Core Strategies and Development Plan Documents. This provision could apply in a number of different development contexts:

- Proximity to renewable or low carbon energy resources and/or generation projects;
- Proximity to sites where free standing wind turbines are feasible or other renewable resources can be utilised;
- Proximity to existing or potential sources of waste heat, such as incinerators, landfill and sewage gas generators;
- Development earmarked as anchor phases of wider district energy network plans and proposals;
- Large, mixed use sites where new district heating infrastructure may be appropriate;
- Where the energy demand from a specific mix of uses is well matched to on-site micro-generation;

A practical example of what this approach might look like in practice, and how it would contribution to an overall CO_2 reduction strategy, is the Kronsberg development in Hannover, Germany (see precedent study below) [39].

The PPS1 supplement goes further in seeking to define how developments might be required to link to, or contribute towards, energy networks:

> *'Decentralised energy systems should be used to supply proposed and existing developments, which could include the co-location of potential heat customers and suppliers. Planning policy can require connections where fair and reasonable to existing*

[37] Greater London Authority and the Mayor of London, Draft further alterations to the London Plan, www.london.gov.uk/mayor/strategies/sds/further-alts
[38] See footnote 12, pages 16-17
[39] City of Hannover (2004) *Hannover Kronsberg Handbook – Planning and realisation*

decentralised energy networks. Where these networks do not exist, policy can seek developer contributions to create or expand such a network.'

As we go on to explore, the latter is an important provision because it helps provide certainty to investors. Targets or requirements relating to area or site specific opportunities will need to be to be justified through the evidence base in terms of their feasibility and viability.

Precedent study

The London Plan and Mayor's Energy Strategy

The Mayor of London and the Greater London Authority have been groundbreaking in their development of energy planning guidance for the Metropolitan area. A strong framework of policies to stimulate action was incorporated into the London Plan. The Plan advocates a broad-based approach with the aim of developing a decentralised energy system across London, powered by renewable and low carbon energy sources.

This has been revised further in the February 2008 consolidated version, with a strong focus on heat and power networks. The new policies require:

- Developments to make the fullest contribution to minimising CO_2 emissions by following the energy hierarchy: use less energy; supply energy efficiently; and use renewable energy (Policy 4A.1).
- Developments to contribute towards London-wide CO_2 reduction targets of a 15% reduction on 1990 levels by 2010, rising to 30% by 2025 (Policy 4A.2).
- Assessments of energy demand and CO_2 emissions as part of a sustainable design and construction statement (Policy 4A.4).
- Boroughs should identify existing and promote new decentralised (heating, cooling and power) energy networks. (Policy 4A.5).
- To support this, new developments should demonstrate that their heating, cooling and power systems have been selected to minimise CO_2 emissions and be able to connect to an off-site, decentralised network (Policy 4A.6).
- A 20% reduction in CO_2 emissions from on-site renewables. A strategic infrastructure fund is being developed into which developers can pay where it can be shown that achieving 20% is not viable or feasible. Boroughs should identify broad areas where the development of specific renewable energy technologies is appropriate. (Policy 4A.7).

Policies in the London Plan are intended to be used to determine strategic planning applications referred to the Mayor. They should also be adopted as policies by London Boroughs and entered into Development Plan Documents.

Precedent study

60% Energy strategy, Hannover Kronsberg (Germany)

Kronsberg is a masterplanned high-density neighbourhood of over 3,500 homes built to accommodate growth in housing demand. A holistic energy strategy was implemented for the scheme, designed to achieve a 60% reduction in CO_2.

Decentralised energy supply infrastructure played an important role in meeting the target, which was set by the City Council. The energy strategy comprised the following key elements:

Energy efficiency

- 'Low Energy House' standards (17%) All properties regardless of the developer must deliver heating demand of less than 50 KWh/m^2. A smaller number of plots have been sold with a requirement to build 'passive houses' with demand less than 15 kWh/m^2.
- Reducing electricity consumption (13%) A comprehensive programme to encourage a reduction in electricity use, with a focus on providing low energy appliances and lighting, as well as targeted grants and awareness raising campaigns.

Supply infrastructure

- Gas CHP (23%): The municipal utility Stadtwerke Hannoverhas developed a district heating network supplied by natural gas fired CHP units and boilers.
- Solar homes (10%) A demonstration project for solar heat and power has been developed as part of the scheme.
- Near site wind power (20%): Two large wind turbines (1.5 and 1.8 MWe) have also been installed in close proximity to the scheme.

Extensive monitoring has been carried out post-occupancy to establish and verify the actual CO_2 reductions achieved by the energy strategy.

4.4 Using planning to co-ordinate delivery

The PPS1 supplement makes it clear that policies and targets should be used to deliver renewable and low carbon energy generation. It also alludes to the role that tools such as Planning Obligations and Local Development Orders could play in co-ordinating investment in associated infrastructure.

For example, energy infrastructure identified through planning policy is likely to be eligible for contributions to Community Infrastructure Funds through Planning Obligations set out in Section 106 agreements of the proposed Community Infrastructure Levy (CIL). With the recent proposal to allow offsite solutions to be used to meet zero carbon standards the CIL could have a key role by enabling contributions to be pooled in order to invest in sub-regional energy infrastructure.

Provision currently exists to pool contributions towards infrastructure, as long any tariff meets the five tests set out in Government circular 05/2005, including a requirement to be 'directly related to a proposed development'. This provision has already been used by a number of local

authorities to put in place planning policies requiring contributions to low carbon infrastructure, such as regeneration of the Aylesbury Estate in London (see case study below) [40].

As we noted in section 4.2, the Greater London Authority is considering an off-site energy infrastructure fund for those developments unable to meet their 20% on-site renewable energy requirement. Other Local Authorities such as Milton Keynes and Suffolk have also sought to put in place similar funds.

Precedent study

Aylesbury Area Action Plan (AAP), London Borough of Southwark

An Area Action Plan has been adopted setting out the spatial planning policy framework for the regeneration of the Aylesbury Estate, a programme that will see 3,949 new homes constructed by 2028. In addition to Section 106 contributions towards non-physical infrastructure a tariff system has been established for contributions towards the business plan for new infrastructure. This is set out in policy D2 of the AAP which states that:

> *"We will seek financial contributions, in the form of a tariff scheme, to ensure delivery of key infrastructure. In addition to the tariff, we will also seek planning obligations to secure contributions or other works where these relate fairly and reasonably to the development and are necessary for it to proceed."*

The business plan includes funding for a CHP system supplying district heating to all properties. This has been justified in order to affordably meet the London Plan's target that all new development should achieve 20% CO_2 reduction using decentralised energy technology, and Southwark's AAP policy to, as minimum, meet Code level 4.

Local Development Orders could be used to give permitted development rights to specific forms of infrastructure so that, within the scope of a defined set of less contentious infrastructure works or technologies, repeated planning applications would not be required. LDO's could, for example, be used to grant planning for a district heating network across a broad area. This would be necessary because heat mains are not currently defined as permitted development in the same way as for new gas, electricity or water mains.

4.5 The future direction of national policy

The recent consultation on the UK renewable energy strategy highlighted a stronger and more pro-active role for planning in bringing forward renewable energy capacity [41]. This included the following proposals:

[40] Southwark Council, *Aylesbury Area Action Plan: Infrastructure tariff and Section 106 planning obligations*, Background paper, March 2009
[41] *See footnote 17*

- Development of a suite of stronger National Policy Statements for renewables and electricity networks that would set a clear, comprehensive, national policy framework for local planning authorities;
- Agreeing a clear deployment strategy at regional and sub-regional level similar to the approach established for housing. This is likely to entail local authorities responding to more prescriptive national and regional targets;
- Providing clarity on the scope and application of UK and EU environmental regulations – relating in particular to the Birds and Habitats Directives – to enable wind farm proposals to comply with environmental legislation;
- Further extension of Permitted Development Rights for domestic micro-generation to include wind turbines and air source heat pumps, extension to smaller-scale non domestic renewables and use of Local Development Orders to speed up the re-powering of existing wind turbines;
- Community Infrastructure Levy (CIL) design to consider the particular needs and provide support in order to increase the redeployment of low and zero carbon technologies, including renewables;
- Providing mechanisms that will enable communities to benefit financially from the development of community energy assets;

These proposals indicate the broad direction of government thinking, and as such we have taken them into account as part of this study.

4.6 Sub-regional progress to date

Whilst progress has been made to reflect national policy objectives in Greater Manchester's district planning policies, this has not yet achieved significant influence on new development. Local Development Schemes currently in progress create a significant opportunity to improve on this position.

A brief review of saved UDP policies and guidance documents, and proposed new Core Strategy policies was carried out. This showed that whilst the ten districts have broad experience in formulating policies, for the most part they currently lack a formal policy basis, or sufficient in-house capacity, to influence investment decisions. Notable examples of good practice include:

- On-site renewable energy targets: Oldham has adopted the national on-site renewable energy target of 10% for development with which it has early implementation experience, and most districts are seeking to follow this lead with their new Core Strategy policies;
- Broad areas for renewables: Oldham and Stockport have carried out scoping studies to identify broad areas for energy technologies. Oldham has carried out wind mapping in order to inform its policy position;
- Area frameworks: Manchester has sought to require low carbon energy technologies as part of area frameworks for regeneration areas, including Maine Road, Sportcity and Brunswick PFI. NWDA and HCA involvement in strategic housing and employment sites has also been used to drive higher standards, to varying degrees of success;

- Supplementary Planning Guidance: Stockport, Bolton and Rochdale have all adopted SPD's focussing on sustainable design and energy use. Stockport's SPD was informed by an innovative energy scoping study in 2006. Manchester has incorporated a specific CO_2 reduction target for development into its Guide to Development 2;

The implementation of Local Development Schemes across Greater Manchester creates a significant window of opportunity to integrate the new approach called for by PPS1 into Core Strategy policies. Whilst progress has been made by some districts in seeking to respond to PPS1, the picture is by no means consistent. Draft policies reviewed do not currently tend to take a spatial approach, lacking a specific focus on criteria based policies and how planning policy at an area, masterplan and site scale can be used to create a framework for investment.

4.7 What are the strategic planning implications for City Region?

Experience to date in the UK is that whilst site-specific targets on their own can yield results, an emphasis on flexibility, a lack of clarity in how targets are set, and limited recourse if technologies are not implemented by developers has meant that in general planning policies have made only a limited contribution towards renewable energy and CO_2 reduction targets.

The evidence from leading local authorities in the EU is that a truly planned approach is required, with headline targets complemented by spatial and infrastructure planning to guide delivery at appropriate scales. This would reflect the stronger pro-active role being promoted by the Government and the support required to realise the potential benefits of low and zero carbon infrastructure.

Central Government has indicated that it expects energy planning priorities to be reflected in Local Development Documents. In order to underpin this approach the aim should be for districts in the sub-region to adopt a strong set of energy planning policies as part of their Core Strategies. It also looks to planners to evidence how sites and development opportunities might make use of local opportunities for low carbon infrastructure.

Whilst there is a place for targets and requirements they are only a means to an end. Ultimately they should be informed by a broader strategic approach and should not be a substitute for spatial and infrastructure planning at a district, area and site level. This should be linked to both delivery of sub-regional allocations for renewables, as set out in the RSS, and development control policy to support delivery, as a minimum, of Code for Sustainable Homes carbon reduction targets.

Whilst progress has been made by some districts with their draft Core Strategies, our view is that more substantial progress would be needed to provide a firm policy basis for the priorities highlighted by PPS1 and this study. In the interim our view is that the districts already have a firm basis to take forward the approach set out in PPS1 using this study as an initial evidence base, but in the medium to long term new planning policies would be needed in order to strengthen this position.

Below we briefly consider the strengths and weaknesses of three possible options going forward, reflecting the direction that the districts could take, and planning policy precedent from leading local authorities in the UK and the EU:

Option 1: Implement regional policies and targets

Each of the ten districts develop their own basic policies and guidance, supported by a relatively flexible approach relying largely on targets to achieve implementation.

Strengths	Weaknesses
• Flexible approach based on generic targets and negotiation; • Pro-active districts can quickly move ahead;	• Current regional targets are not framed in terms of carbon reduction; • Lacks consistency in order to create a level playing field; • Lacks the clear focus required to build momentum; • Lacks a focus on strategic infrastructure and supply chains;

Option 2: Sub regional target-led approach

Responding to national planning policy guidance the ten districts work together to put in place a sub regional framework of targets and policies, supported by a flexible approach to 'allowable' solutions.

Strengths	Weaknesses
• Firmer basis for requiring developers to invest; • Creates clarity and consistency across the sub-region; • Firmer basis for attracting investment in supply chain;	• Lacks a spatial focus on strategic infrastructure and supply chains, and their overall contribution to decarbonising the energy supply; • Working only within the site edged red of developments may mean that higher targets are not achievable or viable; • Allowable solutions identified by developers may not achieve economies of scale;

Option 3: 'Bottom up' and 'top down' spatial approach

A twin track approach based on a spatial approach linking the 'top down' strategic potential of technologies and renewable energy opportunities, complemented by a 'bottom up' focus on adaptive targets and spatial planning for low carbon infrastructure in major areas of change.

Strengths	Weaknesses
• Systematic implementation of strategic infrastructure, with clearer energy security benefits; • Directed allowable solutions minimise the cost for developers by achieving economies of scale;	• Moves beyond a simple target framework and would therefore require capacity building around energy planning; • The legal position of setting adaptive targets based on site/area specific opportunities is not clear;

• Firmer basis for requiring developers to make contributions; • Firmer basis for attracting investment in supply chain;	• Requires complementary enabling mechanisms to be put in place to achieve scale of change; • May conflict with an emphasis on market-led growth, and in some areas with OFGEM's regulatory aims.