



# Warwick District Council NZC DPD Examination Matter 5: Energy sources

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## 1 Question 5.1

### Is the approach of Policy NZC2(B) – Zero or Low Carbon Energy Sources and Zero Carbon Ready Technology reasonable, justified and effective?

- 1.1 NZC2(B) represents the second stage in the energy hierarchy and seeks to deliver the regulated energy demands of the building, or development, through low or zero carbon energy sources.
- 1.2 Put simply, the total % reductions in carbon emissions required by policy NZC1 would be delivered through the carbon savings made at NZC2(A) + NZC2(B), and any residual operational carbon emissions would be met through NZC2(C) offsetting.
- 1.3 For this reason and to ensure that the overall target in NZC1 is met, there is not a target % of a building's energy demand that should be provided by renewable or low carbon energy sources.
- 1.4 The approach to the policy is justified in the Warwick DC Zero Carbon DPD Energy and Sustainability Policy Review (SUB 5, page 8) which highlights the importance of grid decarbonisation in the trajectory towards net zero.
- 1.5 The Policy NZC2 approach recognises the need for flexibility in the requirement for onsite low and zero carbon technologies, and provides a broad definition of allowable solutions – for example inclusion of a heat pump. The approach requires (subsequent to the carbon savings made through energy efficiency targets in Policy NZC2(A)), that as a minimum renewable, zero and low carbon energy technologies are included to allow the building to meet the overall % carbon reductions sought by policy NZC1, and then to achieve on-site net zero operational carbon wherever possible. For clarification and consistency with the definition in DPD 4.1.1 a minor modification [SUB11] is proposed to Policy NZC2(B) to make clear that the net zero definition relates to regulated energy.
- 1.6 The requirement is designed to encourage developers to include enough solar panels (or connection to a renewable electricity scheme) to bring the development's regulated carbon emissions to zero onsite, after having met the energy efficiency requirements of NZC2(A) and most likely added low-carbon heat to fulfil the minimum on-site carbon reduction target of NZC1. Flexibility is offered by recognising site-specific constraints and permitting off-site solutions or offsetting, where developments cannot achieve net zero carbon emissions. Bioregional's analysis [SUB 5 page 9] estimated that, for a typical home that has already met the targets of Policy NZC2(A) and NZC1, the costs of additional on-site solar panels to match that home's regulated energy use would be comparable to the cost to offset a typical home's carbon over 30 years (if the offset amount is calculated without taking into account future grid decarbonisation in the 30 year period).

- 1.7 The suite of policies, NZC2(A) and NZC2(B) are effective in reducing the carbon emissions to operational net zero (NZC1) through first employing energy efficiency measures to reduce the overall operational energy demand, and secondly through the provision of renewable energy or low carbon sources to meet this operational energy demand.
- 1.8 Whilst the policy provides flexibility with regard to available technologies, it is recognised that further supplementary guidance on low and zero carbon energy sources would assist with the implementation of the policy. To assist in the examination of the NZC DPD a scope of the Energy Statement and Guidance on low and zero carbon technology is provided in Appendix 1 of Matter 2.
- 1.9 It is clear from supporting text of policy NZC2(B) that fossil fuels are to be avoided (DPD paragraph 7.3), and 'zero carbon ready technology' without a credible and time-bound route to decarbonisation (e.g. hydrogen boilers) are also to be avoided (DPD paragraph 7.6).

### **Minor Modifications**

- 1.10 Further textual clarifications are recommended to NZC2(B), see Schedule of Minor Modifications PMC12 [SUB11].

## 2 Question 5.2

### Does Policy NZC2(B) accord with national policy and does it relate properly to the adopted Warwick Local Plan and its relevant policies?

- 2.1 NZC2(B) aligns with support provided under NPPF paragraphs 152 and 155 in providing a positive strategy to increase the use and supply of renewable and low carbon energy. Furthermore, paragraph 158 outlines that applicants are not required to demonstrate the overall need for renewable or low carbon energy, recognising the contribution that even small-scale projects can have on cutting greenhouse gas emissions. Notwithstanding this, NZC2(B) also includes flexibility to demonstrable site-specific feasibility and viability challenges, thus aligning with NPPF paragraph 157(a).
- 2.2 To reiterate an earlier point, without the overarching policy NZC1, and policies NZC2(A) and NZC2(B), the local development plan would not be able to contribute to the NPPF requirement to deliver “*radical reductions in greenhouse gas emissions ... in line with the objectives and provisions of the Climate Change Act 2008*” (paragraph 152 and footnote 53), nor the plan’s legal duty to mitigate climate change as per the Planning and Compulsory Purchase Act 2004 Section 19.
- 2.3 As outlined through Matter 1 (paragraphs 1.1-1.3) the Warwick Local Plan includes Objective B to address climate change and a strategic policy DS3 to deliver a low carbon economy and lifestyles. Local Plan policies SC0 and CC2 includes measures and criteria that are supportive of the transition to a low carbon future through the provision of renewable energy.
- 2.4 NZC2(B) focuses on the provision of renewable, zero and low carbon energy to meet onsite carbon reductions. It is related to Warwick Local Plan policy CC2 *Planning for Renewable Energy and Low Carbon Generation*. Policy CC2 includes a number of policy criteria aimed at the assessment of renewable and low carbon energy schemes. The policies are therefore complementary and there is no conflict.
- 2.5 As set out at paragraph 7.1 of the NZC DPD the Council will expect energy statements to address low carbon or renewable energy generation in the specific local context of each development. This therefore aligns with Warwick Local Plan policy CC2 which outlines criteria where renewable energy and low carbon generation would be supported. Should an applicant demonstrate that it was not feasible to provide on-site or near-site low or zero carbon energy in accordance with the criteria (CC2 a-i). then offsetting would be required. The requirement to deliver low or zero carbon energy in new development under NZC2(B) includes sufficient flexibility to enable proposals to address the policy criteria of Policy CC2.
- 2.6 In conclusion, NZC2(B) aligns with the NPPF on the provision of renewable and low carbon energy sources as part of the transition to a low carbon future. The policy further supports



the Warwick Local Plan objectives and includes sufficient flexibility to enable implementation in line with policies in the Warwick Local Plan.

### 3 Question 5.3

## Does Policy NZC2(B) have sufficient flexibility within its application to be effective and have a sound basis?

- 3.1 In addition to the response under paragraphs 2.4 and 2.5 above, Policy NZC2(B) is deliberately not prescriptive with regard the types of technology which may be used so that this can be optimised with regard to a development site and its context, and so that development can be responsive to future evolution of technology types, availability and cost. The policy also allows for circumstances where full compliance is not feasible or viable having regard to the type of development involved. The policy is considered to be deliverable over the plan period and is therefore effective and sound.

## 4 Question 5.4

Does Policy NZC2(B) and the DPD provide sufficient clarification or guidance as to the types of technology or energy sources that would be most appropriate in certain locations and proposals? If not, should this be provided and how would this be most appropriately addressed?

- 4.1 As noted earlier in paragraph 3.1, the DPD is not prescriptive in the types of technology which may be used. However, the Council recognises that supplementary guidance on this matter would assist with the implementation of the policy.
- 4.2 To assist the examiner and provide some clarity on the SPG, a scope of the guidance is provided in Appendix 1 of Matter 2.

### **Modifications**

- 4.3 No modifications are required.



## 5 Question 5.5

### What impact will Policy NZC2(B) have on development delivery, including housing?

- 5.1 Based on the evidence surrounding FHS, one way to achieve the overall % reduction of NZC1 is to moderately upgrade insulation values compared with existing standards, use more thermally efficient glazing and a heat pump instead of gas heating – this is the notional specification of the FHS.
- 5.2 However, NZC1 could be met with an alternate mix of efficiency measures and technologies, all of which exist in the industry today and are widely used. There is no evidence that would robustly show an inadequate supply of these technologies to meet the needs of the very small portion of the UK's development that will take place within Warwick District (even in combination with the share of development in the handful of other local planning areas that are considering similar requirements).
- 5.3 It is considered that grid electricity capacity would not be a significant constraint on the delivery of housing, although upgrades may be required for specific sites, but this will have to happen anyway as soon as the FHS is introduced (which is only 2-3 years after this DPD). It is useful to note however that through the DPD and policy NZC2(A) energy efficiencies are targeted first and so will minimise the overall demand that new homes would put on the electricity grid. Additionally, in many cases there are technological alternatives to grid upgrades, for example on-site energy storage can smooth out the peaks and troughs in energy exchange to/from the grid. It must also be noted that any electricity grid capacity upgrading cost must be set against the avoided cost of gas grid connection/upgrading, which can be significant, especially at major greenfield sites.
- 5.4 Furthermore, the DPD requires that carbon reductions to the greatest extent feasible are demonstrated through the energy statement, and such allows for exceptional circumstances where full compliance with the policy is not feasible or viable.