

Chapter 11: Energy

Background

- 11.1 The DSIS provided an overview of the way the electricity and gas networks operate, the operating companies and the extent of the network coverage within Dacorum. Much of this report remains valid.
- 11.2 Energy infrastructure planning is undertaken over a much wider basis than just Dacorum and as such it is difficult to make any clear conclusions about the impact of development planned within the area.
- 11.3 Officers have attempted to contact UK Power Networks, National Grid and Southern Gas Network to update this section of the IDP. Limited information has been made available to them for this update.

Policy Drivers

Electricity

- 11.4 UK Power Networks (UKPN) manages the operation of the network previously operated by EDF Energy and providing much of the electricity infrastructure within the Borough. Dacorum falls within their Eastern Power Network (EPN).
- 11.5 UK Power Networks published their final business plan for the regulatory period entitled RIIO-ED1 on the 1st July 2013. The business plan covers the period 2015-2023 and covers the network planning process, the outputs they proposed to deliver for their customers and their estimates of costs and revenues.
- 11.6 The business plan utilises information from a variety of sources including comments made in stakeholder forums held between October 2012 and February 2013, the responses on their website, and the views collected from the customer willingness-to-pay surveys.

- 11.7 A full suite of documents that comprise UK Power Networks business plans on their website:

<http://www.ukpowernetworks.co.uk/internet/en/about-us/business-plan/>

- 11.8 The Regional Development Plan for the Elstree – Watford area, which forms part of the supporting information for the RIIO-ED1 Business Plan can be found by the following link. It should be noted that projects and timescales therein are subject to change depending on load growth and/or alternative reinforcement options:

http://library.ukpowernetworks.co.uk/library/en/RIIO/Asset_Management_Documents/Regional_Development_Plans/EPN/EPN_RDP_Elstree_Watford_South_Group.pdf

Gas

- 11.9 The Gas network is supplied by National Grid apart from a small area in Tring provided by Southern Gas Networks (SGN) Under the Gas Act 1986 (as amended) they are required to develop and maintain an efficient and economical pipeline system including providing gas connections to any premises subject to a reasonable request to do so.

Existing and Committed Infrastructure

- 11.10 According to National Grid local reinforcements to the network are likely to be required to serve new developments within the Borough. There are however no strategic issues with the gas network arising from the scale of planned development within the Borough.
- 11.11 UKPN confirmed that planning for future provision is complex and informed by many factors. Local development plans are one factor, but electricity usage trends and economic trends are also key factors. UKPN's planning is a mixture of proactive and reactive.

Estimating Future Demand

- 11.12 Both National Grid and UKPN confirmed that they plan over much wider areas than just Dacorum and therefore do not provide official forecasts of the additional demand arising as a result of growth planned in the Core Strategy. Furthermore, they do not assess the requirements of individual sites until they are approached by a developer who is willing to pay for the assessment. Such assessments for gas provision requirements are not necessarily carried out by National Grid as other specialist companies can often provide the assessment more cheaply.
- 11.13 SGN have confirmed that they would not develop firm extension or reinforcement proposals until they are in receipt of confirmed developer requests and/or sites identified, by the Local Authority, for development.
- 11.14 Neither UKPN or National Grid were prepared to make demand projections for the area for inclusion in the IDP.

Resulting Energy Infrastructure Requirements

- 11.15 The upgrades to the primary and grid substations within the Dacorum area identified as part of the RIIO-ED1 submission include

Hemel East: Installation of 1 x new 33kV circuit from Piccotts End Grid and installation of a new 12/24 transformer. £3.5m – Note major reinforcement at Hemel Hempstead is not currently planned but is expected to be triggered by the level additional development required.

Warners End: Installation of 1 x new 12/24MVA transformer £706k

Frogmore: Load transfers to Warners End (once reinforced). £336K

Berkhamsted: Installation of 2 x new 33kV circuits from Lye Green Grid and replacement of 11kV switchboard. £4.9m

- 11.16 Whilst UKPN are required to connect new developments to the electrical grid they are not necessarily responsible for paying for the provision of the infrastructure necessary to do so. Where a development triggers the need for a piece of infrastructure which is required to serve a much larger area than just the development, the developer would be expected to pay a fair proportion of the cost of provision.
- 11.17 National Grid previously indicated that the additional demands on the gas network arising from planned development can largely be accommodated by the existing network. Local upgrades to the low and medium pressure networks are likely to be required. National grid explained that where an individual development triggers the need for additional off-site infrastructure they (National grid) will usually conduct an economic assessment of whether to provide it based on cost of provision and likely future income generation. It is the norm for this assessment to show that off-site infrastructure is worthwhile and as such National Grid usually pays for the installation of this infrastructure. SGN confirmed this to also be the case in relation to the network around Tring.
- 11.18 Based on the development projections supplied to SGN, SGN have concluded that there would not be a significant impact on gas infrastructure within the locations identified.

Costs and funding

- 11.19 The costs associated with the necessary upgrades to the electricity substations are set out in paragraph 11.15. Additional costs of electricity infrastructure, as set out in the DSIS report are estimated as follows:
- New primary substation: £3m plus land
 - 33kV cabling: £500,000 per km

Similar information about the cost of providing upgrades to the gas network was not available.