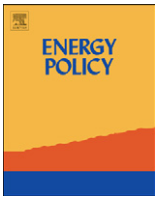
Energy Policy 36 (2008) 4411

Contents lists available at ScienceDirect

Energy Policy

journal homepage: www.elsevier.com/locate/enpol



Introduction to Section 4—Energy demand management

In this section, the emphasis shifts from the production of energy to its use. Here a web of overlapping technologies and motivations must be considered. Owens and Driffill describe how the factors that determine the amount of energy which a society uses are starting to be understood. People do not set out to consume energy. Rather, they want to be warm, to cook meals, to travel, to communicate or be entertained. This means that approaches to managing energy demand need careful consideration. The authors in this section examine a range of issues involved in managing and reducing energy demand in key areas of the economy, including industry (Dyer and colleagues), transport (Smith), buildings (Hinnells) and the home (Steg).

We know that energy-consuming habits change over time in response to economic growth, technological innovation, and social change. A few years ago, many homes had only one well-heated room. Now children have heated bedrooms which are home to energy-using equipment such as televisions, computers and games machines.

One reason for growing energy use is that in the past it has been comparatively affordable. Few households spend a significant amount of their income on energy. This may change if energy prices rise faster than incomes. But we also know that few energy consumers have a clear grasp of how much energy they are using, or of the relative energy demand of the different devices that surround people in the modern world. Our authors show that new technology may make it possible to reduce energy use, or to shift energy demand to times when it can be met less expensively and with less carbon production. New metering concepts could help people to visualise the energy they are using and make them active consumers of heat and power. In addition, metering could become more intelligent, and allow energy use to be optimised and reduced without human intervention.

0301-4215/$ - see front matter
doi:10.1016/j.enpol.2008.10.013