®ENERGY CALCULUS

World Energy: Building a Sustainable Future, by Lee Schipper and others. Stockholm Environment Institute, 1992. Price not mentioned.

Down to Earth, November 15, 1992.

What do Gulf War, Greenhouse effect and the Narmada project have in common? They are all related to the issue of energy. The seventies heralded the debut of this new actor on the world stage. With the so called Oil Crisis, the West woke up to the fact that the it could no longer take for granted the supply of cheap oil which had been so essential for maintaining the prevalent, obnoxious levels of consumption. Energy conservation, whether by fuel efficient cars, or by slightly cooler homes became commonplace. The growing awareness towards the environment also played a role in bringing questions related to Energy into developmental and scientific discourse.

The book under review is an important and timely addition to the growing literature on energy studies. It is a well-documented and comprehensive study of a variety of issues related to energy supply and use. Past trends in energy use are anlaysed to get an idea of trends in consumption. For this purpose, they have divided the countries into industrial (OECD), transitional (erstwhile Socialist Bloc) and developing countries. They further give a sectoral breakup into manufacturing, passenger travel, freight transport, residential and services. Analysing data from 1970 to 1990 shows some interesting trends. Energy use in manufacturing in the OECD countries showed a decline of about 30%, indicating not only technological innovation but also a shift towards the service sector in the major economies. The developing countries share of the energy use increased from 20% to 31% (while that of the industrial countries decline from 60 to 48%) in the two decades, primarily due to increase in activity.

If the past looks grim, the future is equally dismal. Modelling the energy use in different sectors, the authors have developed various scenarios for the future energy consumption. The most plausible scenario is that of a growth of 25-35% in the energy use in the next 20 years. This is certainly bad news environmentally and economically, particularly for the developing countries. The good news is that there is a tremendous potential for energy conservation in the industrial and the developing world. In the industrial countries alone, according to the authors, a 22% reduction in energy use is possible if certain measures like higher fuel prices (to reflect the environmental costs) are adopted.

On the supply side, there is an urgent need to alter the energy mix to a more sustainable one. With increasing environmental concern, it is imperative that cleaner supplies are developed and their use encouraged. This is of course as much a political as a technical problem. Whether it is a conversion from coal to gas or a development of renewable sources, the costs involved are high and in most cases advanced technology is required. The question of who pays for it is obviously important. The authors make a strong case for the industrial countries bearing this burden and providing the developing countries with technology, training and capital for bringing about a cleaner and a more equitable tomorrow.

With a lot of data, good analysis and a fairly detailed bibliography, this is a useful book to understand the global and macro issues involved in energy. In some places though, one would have liked a little more discussion about the politics of energy use and supply. Nevertheless, it is a wonderful overview of a subject that is bound to be of great importance in the future.