Pillai G M (ed.). 2005. **The New Energy Economy**

Pune: World Institute of Sustainable Energy

xviii + 254 pp.

Reviewed by Punam Khaira Sidhu, Indian Revenue Service, Director Tariff Punjab State Electricity Regulatory Commission Chandigarh, India

Resources, Energy, and Development **3**(2): 133–134

The year 2005 will be remembered as the year of natural disasters: the Asian tsunami, floods in Europe followed by unprecedented drought and fires in Portugal, and then hurricane Katrina, Dennis and Rita, which struck the US coast in quick succession wreaking devastation. If there was a textbook illustration for environmentalists and their brief on sustainable development, this was it. Their warnings on global warming were clearly not just the rumblings of Cassandra's but a wake-up call to every denizen of planet earth to take heed.

The raised sea levels, torrential storms, and natural disasters are an outcome of the changing climate due to global warming following an increase in GHG (greenhouse gas) concentration over the past 50 years and environmental pollution arising out of combustion of fossils fuels. Apart from climate change considerations, with adverse consequences on food productivity, water resources, forests, and other eco-systems, the other significant concern is the limited stock of fossil fuels. G M Pillai, Director-General, WISE (World Institute of Sustainable Energy), a Pune-based NGO, refers to Campbell and Laherreres (1998) study, which indicates that by 2010, supply of oil will be unable to keep up with demand. The 'Hubberts Peak' would be reached and the permanent decline in oil production will begin just when the demand for oil by fast-growing BRIC (Brazil, Russia, India, China) countries requires production to increase by 43% by 2010. This is clearly not feasible. Prices of oil will shoot past the 100 dollars per barrel mark. The impact on India, which imports 70% of its energy requirements, will be disastrous, forcing many to ask 'How long before the lights go out?' G M Pillai again succinctly answers it thus, 'The challenge of the 21st Century is to create an energy economy that is compatible with the earth's eco-system.'

Responding to this urgent need for sustainable development choices, the UNFCCC (United Nations Framework Convention on climate change) had served notice on developed countries listed in Annexe 'B' of the Kyoto Protocol to reduce their GHG emissions by an average of 5.2% below the 1990 level. India acceded to the Kyoto Protocol on 26 August. It does not have binding GHG mitigation commitments but can play a significant role in the CDM (clean development mechanism) and Carbon Trading Mechanism of the Kyoto Protocol. Development of renewable energy sources such as water, wind, solar, geo-thermal, municipal solid waste, and other forms of biomass holds the key to sustainable development. Also, a business opportunity offered by renewables – that there is money in renewables – is best illustrated by the entry of the SUZLON group (wind energy turbine

manufacturers) in fourth spot in ETIG's listing of ten richest Indians ranked by promoters wealth.

Hence, there is a need to go behind the argument that renewable energy comes at a high capital cost, which typically is more expensive than conventional energy. Those who understand renewables know that they offer clean energy with no hidden costs. Apart from pollution and damage to the eco-system, the hidden costs of conventional energy include the cost of displacement of the populace due to submerging of land and forests for siting major projects and the costs of depletion of fossil fuels. OFGEM, energy regulator of the UK, in its consultation documents on electricity distribution losses has estimated the hidden cost of CO_2 emissions between 6.7% and 14% of the electricity price in the UK. As a percentage of the Indian electricity tariffs, this would translate to 15–50 paise per unit.

The New Energy Economy, compiled by WISE and edited by G M Pillai, is an expression of this NGO's commitment to sustainable development. It has compiled a comprehensive 'Ready reckoner' for students, policy-makers, regulators, bureaucrats, and those looking for a business opportunity in renewables. It is a readable volume, with essays by bureaucrats, technocrats, IIT-trained scientists, and PhD holders who have done pioneering research. They cover the whole gamut of topics from the potential of renewables (solar, biomass, waste, wind, and hydrogen) to policy initiatives for policy-makers and regulators, and of course innovative financing mechanisms for renewables projects and the profits to be made from CDM and carbon credits. This slim volume packs it all in and the transition to a 'new energy economy' should certainly be facilitated by these experiences.