Review: Greenhouse Solutions with Sustainable Energy
By Mark Diesendorf

Reviewed by Elery Hamilton-Smith
Charles Sturt University, Australia

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This is indeed a timely book. The proliferation of books on world environmental trends, policies and issues means that there are literally thousands of pages clamoring for the attention of those interested. Many of these are simply advocating specific conceptualizations and solutions to one or more of the many global problems. Too many of them either neglect, or are deficient on, critical assessment of the necessary evidence.

Diesendorf writes with great clarity, explaining complex issues and ideas without over-simplifying or dumbing down. Essentially, after a basic conceptual review, he critically evaluates eight major strategic directions, either already practiced or commonly proposed and advocated in global policy arenas. Each of these strategies is assessed in terms of the potential resources, current status and action, environmental, health and social impacts, economic and future development potential.

Essentially, he concludes that, at least in Australia and probably globally, a combination of efficient energy use, solar hot water, gas, bio-energy, wind power, improved public transport and fuel-efficient vehicles could halve greenhouse emissions within a few decades. But the political will is lacking, and much government policy action serves only to further the production of greenhouse emissions.

The large and wealthy fossil fuel industries, including their infrastructural demands such as power stations, transport, urban structure and building standards, are major determinants of governmental expenditure. The whole situation is compounded by neo-liberalist politics which largely leaves long-term planning in the hands of the market, which in turn is dominated by the same big greenhouse industries.

The first of the strategies examined is efficient use of energy – virtually self-evident, yet outdated and inappropriate practices are allowed to continue unthinkingly. Hand-in-hand, and increasingly accepted, the effective development of wind energy has made immense strides and very significant savings. At the same time, there are constant negative responses to increased wind power often supported by gross untruths and deliberate falsehoods.

Bio-fuels production and utilization again are effective and efficient strategies. The use of solar heat and energy is clearly effective and, in the long run, efficient. Further research and development is under way, and in due course, this will deliver greatly improved systems of technology and management. Other appropriate energy technologies are also being developed – marine and hydropower, geothermal heat and energy, and enhanced energy storage systems.

One of the major problems lies in the urban form and the transport industries. Both are responsible for a large number of other damaging impacts upon human health and the environment. There have been a number of positive innovations by automobile manufacturers, cyclists and others. Again, governmental policies fall far behind the front line of action.

Coal remains the major source of problems, and probably will continue to do so for a very long time. This is discussed in a chapter titled “Coal and Gas: Can we bury the problem?” Although considerable claims have been made in relation to geo-sequestration, and there is considerable investment in research and experiment, the prospects do not appear very strong. Moreover, burying the emissions does nothing about the other widespread impacts which arise from the use of coal.

A regrettable related policy lies in the carbon offset schemes, where many developing countries are paid considerable sums of money which is intended to encourage poor landholders to maintain their natural forests and to focus upon food production. But again, the rich and powerful industries have taken over much of the lands concerned, and this has had a drastic impact upon the poor people of those countries.

Finally, Diesendorf is pessimistic about the prospects for nuclear power, partly because of the immense expense and protracted time delays in development and partly because of the security risks of further nuclear development and the existing failures of non-proliferation schemes.

The remainder of the book examines issues in governmental and inter-governmental policies. As one who greatly values the many achievements of the UN and its specialised agencies, but at the same time has spent too many years awaiting genuine mediation and resolution of disagreements between member nations, I can only be pessimistic about the global problems.

I do very strongly recommend this book by Mark Diesendorf. It is one of the best informed and best balanced analyses of the options which face us in thinking about future strategies.

Elery Hamilton-Smith <elery@alphalink.com.au>, Professor, Charles Sturt University, Australia, P.O. Box 36, Carlton South, Victoria 3053, Australia. TEL: (613)9489.77850.