Grant unveils a dark secret of our perceived

Chapter two imparts a sustainable and rational

need to grow the economy: Faster rates of depletion

framework to comprehend the extent of remaining

energy reserves. The United States has a rich

endowment of coal. To harness energy from coal,

however, is to inflict severe environmental penalties.

Coal creates electricity, and, at one-half the energy,

can be liquefied into a gasoline substitute. Coal

mercilessly ravages the land, spews particulates,

will hasten the day of palpable energy shortages.

Striking a Balance

BOOK REVIEW BY JOHN F. ROHE

f explorers discovered a vacant continent teeming with vast resources, cleansed by Lfresh flowing waters, and brimming in rich energy reserves, the migrating settlers may fashion a relaxed immigration policy consistent with available resources. The policy could be modified as population pressures bore on the resource base. Policies and procedures are time dependent.

Settlers expanding into virgin territory could

strike equilibrium with resources. waters, and energy reserves. They could also, implicitly or explicitly, choose breach

The Collapsing Bubble: Growth and Fossil Energy by Lindsey Grant Seven Locks Press, 2005 74 pp., \$9.95

imposes health hazards, and aggressively adds to global warming. Will our uncritical allegiance growth empower

us to ignore the risks? Or, will we identify nonpolluting renewable alternate energy?

Chapter three analyzes renewable energy alternatives. The fossil fuel era will appear as a brief spike in the history of human affairs. Aggressive rates of depletion began in the 1940s, and we are now already on the threshold of peak oil. Grant addresses the era beyond petroleum, coal, and fossil fuels. He observes that future alternatives may enable us to be more responsible stewards, but only at a lower population level, with less consumptive habits.

Throughout this book, Grant keeps an eye on the multiplier of resource depletion: Human numbers. He often asks the reader to identify an optimum population, amid an elusive host of variables.

In closing, Grant is sensitive to the nation by nation challenge to manage population size and to maximize human well being. The research causes the era of optimism to draw to a close for Grant. When pondering whether the human experiment is prepared to responsibly confront this daunting challenge, Grant states: "I would not bet that the human race can manage this most difficult of transitions—this retreat from overshoot—without turmoil, but we have an opportunity to try."

carrying capacity. Their relative relationship with life supporting systems offers a rational basis for reaching a responsible balance.

Lindsey Grant has authored countless essays and several books on the delicate balance between people and resources. His latest book assesses the prospects for energy reserves to meet the aspirations of U.S. inhabitants.

In three chapters contained within 74 pages, this is a quick read in plain English. In chapter one, Grant draws on the wisdom of economist Kenneth Boulding: "Anyone who believes exponential growth can go on forever in a finite world is either a madman or an economist." For the remainder of this century, we will draw on oil, coal, tar sands, nuclear, gas, and hydrogen/biomass. The most salient question is not when each reserve will be depleted, but rather when the rate of depletion will peak. Thereafter, on the down side of the depletion curve, incongruities between supply and demand can be expected to inspire bitter competition (think of Iraq as a test case).

John F. Rohe is an attorney in Petoskey, Michigan with a long-standing concern for the environment.