Whether it is the Keystone pipeline, shale gas "fracking", or the long-term implications of the nuclear failure of Fukushima, energy issues have increasingly been pushed to the fore, giving geographers an abundance of opportunities to apply their skills to critical questions of the day. For a broad grounding in global energy trends, one could scarcely do better than "The Quest". Mammoth in scope, the book covers the global geopolitics of energy supply and demand, the technical challenges of meeting growing needs, and the array of possibilities drawing interest from public and private interests. Additionally, the book devotes an entire section to the scientific foundations of, and international policy responses to, climate change.

Part One "The New World of Oil" highlights shifting production interests, including the resurgence of Russia, the aggregation of corporate units, and the increasingly international focus of China. Chinese self-sufficiency in energy, once a bedrock policy, could not ultimately co-exist with market reforms and the resulting industrial demand. The country's strategy of using development assistance to secure oil supplies has extended Chinese influence broadly in Africa and elsewhere.

Part Two examines the availability of oil and natural gas and the growing importance of "unconventionals" such as deep offshore deposits, tar sands, and shale gas and oil. The concept of "peak oil"—the halfway point in the drawdown of global petroleum stocks which may or may not have been reached, has received substantial attention in recent years from those fearing precipitous and destabilizing production declines that will necessitate a more rapid shift to renewable alternatives. Yergin documents and critiques the basis of peak oil theory arising from the work of geologist M.K. Hubbert, and envisions instead a prolonged production plateau rather than a sharp drop-off. His outlook is less dire than other writers like Michael Klare, whose recent book *The Race for What's Left: The Global Scramble for The World's Last Resources* offers contrasting and complementary insights to Yergin's. (I assign chapters from both works to undergraduates in a geography of energy course.) The two authors both agree that unconventional sources will serve a growing share of the world's demand in the coming decades. Already, shale gas has undermined demand for coal, wind, and nuclear power in the U.S.

In Part Three, Yergin turns his attention to electricity and the development and future directions of power grids. Attention is given primarily to conventional sources including coal and nuclear, and the effects of deregulation in the U.S. His coverage of electricity deregulation highlights challenges and potential benefits from a market standpoint, but he does tend to overlook the physical demands placed on the grid when the transmission and the generation of electricity are decoupled and ownership is fragmented. Electric grids perform best when transmission distances are minimized and lines are run below capacity, but market-driven priorities and lack of coordination can work against these principles. I found the author's historical approach (used throughout the book) particularly useful in this section, which carefully documents the development of electric utilities and nuclear power generation.

In addressing the phenomenon of climate change, Part Four focuses on the scientific institutions which have sounded the alarm, and the policy responses at national and international scales. Once again, Yergin masterfully employs a historical perspective to set up

the issues, starting with a highly readable account of the history of scientific inquiry into the role of atmospheric CO_2. In the U.S., the shifting dynamic between market-based and command and control policy approaches to managing emissions has influenced regulatory frameworks in Europe and elsewhere. Though initially opposed to a trade in pollution credits among industries, a practice first adopted in the U.S. to address acid precipitation, Europeans have begun to lead in the utilization of carbon credits. This section nicely highlights the distinctions among the old industrial, new industrial, and less industrial countries in negotiating international climate agreements.

Parts 5 and 6 explore alternatives to generate electricity and power vehicles, respectively. Yergin is correct in highlighting offshore sites as the next wave in wind energy developments; the Cape Wind project in Massachusetts received approval shortly after the publication of this book. Though technically challenging, offshore sites can accommodate very large turbines and they avoid the land use conflicts and some of the negative public reactions which have stalled growth in “wind farms”, notably in Europe. While he identifies current limitations of wind-sourced energy, such as its intermittent supply, the author overlooks emerging efforts to stabilize output through compressed air energy storage and through the teaming of wind with hydroelectric generation. Despite the more rapid grow of wind generation, solar energy is presented as the holy grail. After President Carter’s solar panels were removed from the White House, U.S. momentum in this area faltered and countries willing to provide strong incentives (e.g., Germany, Spain, Japan) became world leaders. The author’s inclusion of a chapter on conservation is laudable; energy efficiency is “low hanging fruit” with greater potential to offset near-term demand than wind and solar. Competing alternatives to conventional gasoline vehicles—primarily those powered by batteries charged electrically or by ethanol and other “biofuels”—are also reviewed. The author’s account of the early history of the automobile, when alcohol and other energy sources appeared just as likely as petroleum to dominate the industry, serves as an interesting parallel to the current state of engineering.

The sheer number of present and former industry insiders and public officials Yergin quotes is impressive, and the breadth and balance of perspectives is strength of the book. The author is not without biases, however. He clearly admires the industries he writes about, and coverage of failures like the Enron blackouts in California and the BP Deepwater Horizon debacle in the Gulf is fairly restrained. As well, evolving public attitudes and the role of environmental NGOs in pressing the climate cause are discussed, yet no mention is made of industry-funded groups and institutions which promote messages countering the scientific consensus. Throughout the book concerns over energy security, from Middle East tensions to the vulnerability of electric grids to cyberattack, are highlighted. Yergin details the historic adoption of nuclear weapons and proliferation concerns in South and Southwest Asia (India, Pakistan, and Iran), but omits mention of Israel’s undeclared nuclear arsenal. On Iran, he succumbs to alarmist rhetoric in asserting that the country is pursuing a nuclear weapon, a point unsupported by the most recent U.S. National Intelligence Estimates.

Overall, this book is a valuable reference for geographers concerned with the global environment and resource availability. Many of the chapters would work well as reading material for university courses, including regional offerings covering Europe and Asia. Energy

trends of the new millennium have yielded a few surprises, including the current shale gas boom. Comprehensive as it is, one wonders if the seeds of future volatility are all accounted for in *The Quest*, or whether some yet-to-be revealed technology will again reshape the playing field.