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Book Review

Understanding Energy, From Both Sides

Review of Benjamin K. Sovacool, Marilyn A. Brown, and Scott V. Valentine, Fact and Fiction in Global Energy Policy: 15 Contentious Questions (Baltimore: Johns Hopkins University Press, 2016).

Abstract: In *Fact and Fiction in Global Energy Policy*, Sovacool, Brown and Valentine provide a thoughtfully balanced, well researched summary of the arguments on both sides of 15 difficult, timely questions about energy. It will be valuable for introducing students to the issues, and for bringing anyone up to speed on current energy controversies.

Two cautions could be raised about this otherwise excellent book. Some of the information (particularly on the costs and prospects for renewable energy) is already dated, due to delays in publishing. And some issues do not have two sides deserving balanced treatment. Nonetheless, this book is informative, interesting, and well worth reading.

Energy policy is both technically complex and politically crucial. The stakes, in getting energy right, are nothing less than the fate of the earth's climate, the prosperity of countries and communities, and the integrity of local environments everywhere. These all-important outcomes seem to depend on obscure but controversial questions of the physics, engineering and economics of rival energy strategies. Does an informed citizen have to become an expert in these complex subjects?

In *Fact and Fiction in Global Energy Policy*, Benjamin Sovacool, Marilyn Brown and Scott Valentine (hereafter, SBV) offer a readers' guide to 15 difficult, timely questions about energy. It will be valuable for introducing students to the breadth of current energy controversies, and for informing researchers in related fields, policy advocates, and others who are curious about, for example, the pros and cons of nuclear power, shale gas, geoengineering, or electric vehicles. Energy experts will likely be familiar with the material in their own areas, but almost all will learn something new from this wide-ranging, well-researched book.

The authors present a uniquely balanced approach to each of their questions, which they attribute to Hegel: thesis and antithesis are spelled out at length, followed by a brief synthesis drawing on the strengths of each side. This structure, consistently followed throughout the discussion of all 15 questions, could inspire a standing joke: three Hegelians walked into a bar, again, still talking about the energy crisis. Except that SBV reach astonishingly sober conclusions, every time.

Few people who are familiar with energy technology and policy could avoid taking sides on the controversies addressed here. Yet on each question SBV present the best case as made by both sides. For example, proponents of nuclear power claim there is no other way to keep energy costs low, to provide basic energy services to the world's poor, and to produce sufficient quantities of low carbon energy. Opponents claim that future reactors have high costs, requiring large subsidies; there are serious threats involving nuclear waste and weapons proliferation; and there are environmental damages from other stages of the nuclear fuel cycle. The synthesis of these clashing views observes that the costs and lifecycle carbon emissions of nuclear power vary widely, depending on location and technology choices. So, according to SBV, the "common ground" is that "nuclear energy could be promoted where it has a low carbon emissions profile, where its safety record is sound, and where risks can be made transparent and fully subsumed by consumers." (p. 265).

Two questions could be raised about this generally excellent book. One concerns the vintage of its information. Perhaps due to the inevitable delays in publishing, the book arrived in 2016 but is up to date as of 2012–2014. Its research is massive and well-documented, and accurate for its time (although Henry Hub, the central trading point of the U.S. natural gas system, is in Louisiana, not New York). The problem is that some of the facts are already a little out of date, which is more important in some sections than others. This can be ignored in most of the book – the technology and policy questions it addresses generally have a long shelf life – but the chapter on the prospects for renewable energy seems overly cautious and behind the curve by today's standards. Virtually no one anticipated the rate at which wind and solar power would drop in price over the last few years, or the pace at which investment in these technologies would expand.

A second question concerns the limits of the even-handed or Hegelian approach adopted by SBV. The validity of climate science and the urgency of climate policy do not appear among the book's 15 questions. As the authors explain, the scientific analysis of climate change is established beyond meaningful doubt. As they mention only in passing, this means that one side of the continuing American political conflict on the subject is dead wrong. But what distinguishes questions that are settled beyond serious dispute from those where SBV's balanced Hegelian synthesis is appropriate?

The book concludes with an impassioned plea to avoid partisanship and consider the evidence on both sides of the debates. Some partisan-sounding debaters, however, would claim that they have considered the evidence, and have found that one or more of SBV's 15 questions is as settled as the validity of climate science. Could a reasonable observer conclude that the SBV "synthesis" on nuclear power, as quoted above, actually rules out all construction of new reactors?

This book's impressive strengths include its careful and extensive research, relentlessly balanced presentation, thoughtful syntheses, and appeals to move beyond partisanship. At the same time, in a political climate that is strangely tolerant of the denial of science and rationality, there is an unanswered question about the applicability and limits of even-handed, nonpartisan analysis. Perhaps SBV will address this in their next book.

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