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The Ethics of Energy Production, Transportation, and Consumption

Benjamin K. Sovacool and Michael H. Dworkin, *Global Energy Justice: Problems, Principles, and Practices* (Cambridge: Cambridge University Press, 2014)

With this book Benjamin K. Sovacool and Michael H. Dworkin have achieved an ambitious goal: they have mapped principles of justice to energy production, transportation, and consumption, and offered the framework for a theory of energy justice. The book is the first at offering a comprehensive account of energy justice and how principled but feasible solution to specific issues regarding energy production could be achieved. For the first time principles of justice are being applied to the problems associated with the production, transportation, and consumption of energy as a unitary system carrying implications in a wide range of theoretical domains. Of particular interest is the authors' successful attempt to tie energy use and production to the problem of climate change, a link that has been until now inadequately theorized. The book is aimed at a wide readership, from philosophers to policy-makers, but also to energy consumers, offering both top-down and bottom-up solutions to the problems of energy justice. The solid structure of each chapter makes it a very accessible read for students as well.

The authors suggest that decisions regarding energy should be primarily concerned with the availability and affordability of the production, transportation, and consumption of a sufficient level of energy resources globally. Energy decisions should then promote the principles of due process and of free access to high-quality information regarding energy and the environment, as well as fair and accountable forms of decision-making. Only when these principles are realized, the principles of sustainability, intragenerational equity, and intergenerational equity should be applied, as well as the principle according to which all nations have a responsibility to protect the environment and minimize energy-related environmental threats.

The book paints a grim picture of the current situation, making a compelling argument in favour of concerted and regulated actions on the basis of a synthetic account of familiar principles of justice and their feasibility. In particular, the authors are skeptical of market based solutions that are

proposed as only one part of the larger solution to the problems of energy justice. They argue that market based solutions left unregulated have the effect of making cleaner and richer places more habitable, while decreasing persons' wellbeing in areas already vexed by poverty, pollution, and violence, effectively reducing energy security for all.

For example, most of the infrastructures needed for energy production are located in remote and undesirable geographical areas that have low market value. The lower-income families that rely on energy-related jobs like coalmines and refineries often live in neighborhoods in closer proximities to power plants, or are incentivized in relocating there, where they are exposed to higher level of pollution and health hazards. These peripheral communities also tend to have less capital to invest in efficient energy products, reducing their chances for emerging from the poverty line, and increasing pollution through their own consumption. As poorer communities suffer from a reduction of their wellbeing and health, those who can afford it benefit from energy at increasingly efficient costs, away from where the effects of energy production externalities are more problematic (p. 202).

However, Sovacool and Dworkin are skeptical also of the existing subsidies and market regulations, which perversely increase consumption, exacerbating environmental issues and the unfair distribution of negative externalities. They note that subsidies on coal production in Europe have discouraged producers in the United Kingdom and Czech Republic from investing in the transition to better and safer mines, and in advanced pollution equipment (p. 266). Ultimately, the authors support the cultivation of technological advancement in favour of energy efficiency, but suggest that a value shift from economic advantage to resource stewardship and global responsibility is needed to ensure that scientific knowledge can support a forward looking approach to energy justice.

The first two chapters introduce the work and lay out the complex terminology and the energy specific issues regarding extraction, transportation, electricity, and agriculture. Each subsequent chapter follows a rigorous structure: first it offers a detailed analysis of the problems regarding the key issue explored in the chapter ('what is reality'), then – drawing from diverse philosophical perspectives – it examines the relevant principles of justice ('what is justice'), and finally it concludes by providing some specific guidelines for policy making ('what can we do about it'). For each issue the most appropriate principle of justice is applied, offering a simple but thorough analysis of the existing philosophical approaches and their application to the separate issues of energy justice.

The authors examine the inefficiencies in the way energy is supplied, converted, distributed, and used (Chapter 3) through the lens of the Aristotelian virtue account of justice. They proceed by offering a utilitarian proposal to meet the challenges posed by externalities associated with the global energy system such as nuclear waste, and air pollution (Chapter 4), and a Kantian solution to the global energy system's support of human rights abuses (Chapter 5). The authors then lead us towards a theory of just process to address the exclusion of minorities and the disenfranchised from energy decision-making (Chapter 6), and suggest that the lack of global equitable or affordable access to electricity should be tackled with a contractarian approach to justice (Chapter 7). Free market solutions are introduced to address the risks associated with the distortion of market signals due to improper subsidies (Chapter 8), and the principles of conservation, equality of resources, and reciprocity are examined to support policies considerate of the interests of future generations (Chapter 9). Finally, a chapter on the effects of the current energy system on climate change offers a corrective justice approach to environmental issues based on the principles of responsibility towards present and future generations, and the protection of their fundamental needs (Chapter 10).

The authors commit to a functional conception of justice, according to which justice is revealed in its effects on actual decisions, and not in an *a priori* definition of the nature of its demands. Consequently, the book focuses on the policy implications of the principles proposed, and does not offer a coherent and robust theory of energy justice. Only at the conclusion of the very last chapter do the authors suggest that the principles proposed throughout the book should be understood in a lexical hierarchical ordering, with the most important principles being those of availability and affordability. The tardiness in explaining the theoretical structure of the suggested framework leaves no space for an analysis of possible conflicts between the proposed principles, and how the priority of affordability and availability can be maintained coherently. For example, it is unclear how the demands of the principle of global affordability are to be reconciled with the concerns for the violation of human rights and the decrease of life expectancy, which are to be included in the cost of energy production and transportation (Chapter 4). Equally, it is not clear whether the availability principle is compatible with encouraging communities' ownership of energy infrastructure to increase local participation to energy production, given the consequent loss of incentive that such collective ownership may have on foreign investments.

Overall, the book offers a comprehensive framework and some thought-provoking proposals for policy and consumer based solutions to the problems associated with the global energy system. The book lacks a coherent theory of energy justice and it offers no unitary solution to the complex picture that it paints. However, this is a complicated world, and we should probably be wary of any one simple solution to the intricate facets of energy justice.

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