

# Energy Security, Equality, and Justice

Benjamin K. Sovacool,  
Roman V. Sidortsov, and  
Benjamin R. Jones

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# Energy Security, Equality, and Justice

This book applies concepts from ethics, justice, and political philosophy to five sets of contemporary energy problems cutting across time, economics, politics, geography, and technology.

In doing so, the authors derive two key energy justice principles from modern theories of distributive justice, procedural justice, and cosmopolitan justice. The *prohibitive principle* states that “Energy systems must be designed and constructed in such a way that they do not unduly interfere with the ability of people to acquire those basic goods to which they are justly entitled.” The *affirmative principle* states that “If any of the basic goods to which people are justly entitled can only be secured by means of energy services, then in that case there is also a derivative entitlement to the energy services.” In laying out and employing these principles, the book details a long list of current energy injustices ranging from human rights abuses and energy-related civil conflict, to energy poverty and pervasive and growing negative externalities.

The book illustrates the significance of energy justice by combining the most up-to-date data on global energy security and climate change, including case studies and examples from the electricity supply, transport, and heating and cooking sectors, with appraisals based on centuries of thought about the meaning of justice in social decisions.

**Benjamin K. Sovacool** is Director of the Danish Center for Energy Technology at AU-Herning and a Professor of Business and Social Sciences at Aarhus University in Denmark. He is also Associate Professor of Law at Vermont Law School and Director of the Energy Security and Justice Program at their Institute for Energy and the Environment.

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**Benjamin R. Jones** is currently a Senior Global Energy Fellow at the Institute for Energy and the Environment of Vermont Law School, as well as a Doctoral Candidate in the Faculty of Law at the University of Victoria, Canada.

“Many aspects of growing worldwide energy consumption have sparked debate and discussion, but very little attention has been paid to the social and ethical dimensions of this issue – despite the fact that these aspects are certain to play an increasingly critical role as doubts arise over the adequacy and desirability of existing supplies. Now, thanks to Messrs. Sovacool, Sidortsov, and Jones, we have a thoughtful, comprehensive assessment of this important topic.”

*Michael Klare, Five College Professor of Peace &  
World Security Studies, Hampshire College, USA*

“A brilliant and much-needed contribution to one of the most pressing issues of our time: meeting global energy needs in ethically defensible ways. Sovacool and his co-authors have distinguished themselves yet again. A must-read for anyone interested in energy.”

*Kristin Shrader-Frechette, O'Neill Family Endowed  
Professor, University of Notre Dame, USA*

“This book's perspective is a vital one in the age of climate change; it will become more vital as the impacts of our energy choices harm more people in the future, especially the world's poor. It will be essential reading for anyone interested in the role of energy in the modern world, especially those concerned about the resulting injustices and how to reduce them.”

*Paul G. Harris, Chair Professor of Global and  
Environmental Studies, Hong Kong Institute of Education*

“*Energy Security, Equality and Justice* proposes the novel and important idea that energy security should be construed widely to encompass principles derived from modern theories of distributive justice, procedural justice, and cosmopolitan justice. This is a provocative and pathbreaking book that permits us to think about the debate over the transition to a low-carbon energy system in terms of current energy injustices whether human rights abuses and energy-related civil conflicts or the social and class character of energy poverty. A timely and important book.”

*Michael Watts, Class of 63 Professor at the  
University of California, Berkeley, USA*

# Acronyms and abbreviations

\$	refers to United States dollars unless otherwise noted
AEC	U.S. Atomic Energy Commission
BTC	Baku-Tbilisi-Ceyhan oil pipeline
BTUs	British Thermal Units
CBDR	common but differentiated responsibilities
CIA	U.S. Central Intelligence Agency
CNPC	Chinese National Petroleum Corporation
CO <sub>2</sub>	carbon dioxide
DECC	U.K. Department of Energy and Climate Change
DOE	U.S. Department of Energy
EIA	environmental impact assessment
EITI	Extractive Industries Transparency Initiative
EPA	U.S. Environmental Protection Agency
EJ	exajoules
EU	European Union
FPIC	free, prior, and informed consent
GDP	gross domestic product
GRP	gross regional product
GJ	gigajoules
GHG	greenhouse gas
GW	gigawatt
GWh	gigawatt-hours
IAEA	International Atomic Energy Agency
IAP	indoor air pollution
IEA	International Energy Agency
IMF	International Monetary Fund
ITDB	IAEA's Incident and Trafficking Database
kW	kilowatts
kWh	kilowatt-hour
LNG	Liquefied Natural Gas
MIT	Massachusetts Institute of Technology
MTVF	mountaintop mining with valley fill operations
MW	megawatt

MWh	megawatt-hours
NASA	U.S. National Aeronautics and Space Administration
NERSA	National Energy Regulator of South Africa
NGO	nongovernmental organization
NO <sub>x</sub>	nitrogen oxides
OECD	Organization of Economic Cooperation and Development
OPEC	Organization of Petroleum Exporting Countries
PLN	Perusahaan Listrik Negara
PM	particulate matter
PSI	Paul Scherrer Institute
PUCHA	Public Utility Holding Company Act
SO <sub>2</sub>	sulfur dioxide
T&D	electric transmission and distribution
UK	United Kingdom
UN	United Nations
US	United States
USGS	U.S. Geological Survey
WHO	World Health Organization

*One that merely knows right principles is not equal to one that loves them.*

– Confucius



## Acknowledgments

The Energy Security and Justice Program at Vermont Law School's Institute for Energy and the Environment investigates how to provide ethical access to energy services and minimize the injustice of current patterns of energy production and use. It explores how to equitably provide available, affordable, reliable, efficient, environmentally benign, proactively governed, and socially acceptable energy services to households and consumers. One track of the program focuses on lack of access to electricity and reliance on traditional biomass fuels for cooking in the developing world. Another track analyzes the moral implications of existing energy policies and proposals, with an emphasis on the production and distribution of negative energy externalities and the impacts of energy use on the environment and social welfare.

This book is one of three produced by the Program. The first, *Energy Security, Equality, and Justice*, maps a series of prominent global inequalities and injustices associated with modern energy use, and presents the affirmative and prohibitive justice principles. The second, *Energy and Ethics: Justice and the Global Energy Challenge*, presents a preliminary energy justice conceptual framework and examines eight case studies illustrating countries and communities that have overcome energy injustices. The third, *Global Energy Justice: Principles, Problems, and Practices*, matches eight philosophical justice ideas with eight energy problems, and examines how these ideals can be applied in contemporary decision making.

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