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978-1-107-04195-0 - Global Energy Justice: Problems, Principles, and Practices

Benjamin K. Sovacool and Michael H. Dworkin

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Global Energy Justice

We need new ways of thinking about, and approaching, the world's energy problems. Global energy security and access is one of the central justice issues of our time, with profound implications for happiness, welfare, freedom, equity, and due process. This book combines up-to-date data on global energy security and climate change with fresh perspectives on the meaning of justice in social decision-making. Benjamin K. Sovacool and Michael H. Dworkin address how justice theory can help people to make more meaningful decisions about the production, delivery, use, and effects of energy. Exploring energy dilemmas in real-life situations, they link recent events to eight global energy injustices and employ philosophy and ethics to make sense of justice as a tool in the decision-making process. They go on to provide remedies and policies that planners and individuals can utilize to create a more equitable and just energy future.

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MICHAEL H. DWORKIN is a Professor of Law and Director of the IEE at Vermont Law School.

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Problems, Principles, and Practices

BENJAMIN K. SOVACOOOL

Aarhus University

and

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*The science of political economy, and the distribution of
resources, bears a nearer resemblance to the science of morals
and politics than to mathematics.*

Thomas Malthus, 1820

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*To Ethan and Zachary Sovacool, and Samuel and Alice
Dworkin, so that you might live in a better, more
energy-just world.*

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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. The second, *Energy and Ethics: Justice and the Global Energy Challenge*, presents a preliminary energy justice conceptual framework and examines eight case studies where countries and communities have overcome energy injustices. The third, *Global Energy Justice: Problems, Principles, and Practices*, matches eight philosophical justice ideas with eight energy problems, and examines how these ideals can be applied in contemporary decision-making.

Also, the global energy justice team would like to thank many people along the way who made the completion of this book – which took half a decade to compile and write – possible. At the top of this list are Lilei Chow and Loring Starr, for their endless, much-needed love and support. In the academic world, we are thankful to Maria D'Amico at McGill University, Mark Jaccard from Simon Fraser University, and Thomas Homer-Dixon from the Balsillie School of International Affairs for thoughtful discussions with the authors on some of the topics of this book. Also, we thank Markus Gehring from the University of

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AC	alternating current
ASE	Alliance to Save Energy
BTC	Baku–Tbilisi–Ceyhan
BTU	British Thermal Unit
CAFE	Corporate Average Fuel Economy
CCS	carbon capture and sequestration
CFL	compact fluorescent lamp
CI	Conservation International
COP	Conference of Parties
COP15	Fifteenth Session of the Conference of Parties
CO ₂	carbon dioxide
CRS	Compagnies Républicaines de Sécurité
DOE	Department of the Environment
dwt	deadweight
EIA	Environmental Impact Assessment
EITI	extractive industry transparency initiative
EJ	exajoule
EPA	Environmental Protection Agency
EPR	energy payback ratio
ESCO	energy service company
EU	European Union
FCPA	Foreign Corrupt Practices Act
FIT	feed-in tariff
5P	pro-poor public private partnership
FPIC	free prior informed consent
GAO	Government Accountability Office
GDP	gross domestic product
GDR	greenhouse development rights
GHG	greenhouse gas
GW	gigawatt
GWh	gigawatt-hour

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HVDC	high-voltage direct current
IAEA	International Atomic Energy Agency
IAP	indoor air pollution
IBA	Impact-Benefit Agreement
IEA	International Energy Agency
IEEE	Institute of Electrical and Electronics Engineers
IISD	International Institute for Sustainable Development
IMF	International Monetary Fund
IPCC	Intergovernmental Panel on Climate Change
ITT	Ishpingo Tambococha Tiputini
IUCN	International Union for Conservation of Nature
JDZ	Joint Development Zone
kV	kilovolt
kW	kilowatt
kWh	kilowatt-hour
LED	light-emitting diode
LIHEAP	Low Income Home Energy Assistance Program
LNG	liquefied natural gas
LPG	liquid petroleum gas
MJ	megajoule
MMSD	Mining Minerals and Sustainable Development
mpg	miles per gallon
MTVF	mountaintop mining with valley fill
MW	megawatt
MWh	megawatt-hour
NAPAs	National Adaptation Programs of Action
NASA	National Aeronautics and Space Administration
NEITI	Nigerian Extractive Industries Transparency Initiative
NO _x	nitrogen oxide
NRC	National Research Council
NREL	National Renewable Energy Laboratory
OECD	Organisation for Economic Co-operation and Development
ORML	Oil Revenue Management Law
ORNL	Oak Ridge National Laboratory
PM	particulate matter
ppm	parts per million
PSI	Paul Scherrer Institute

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PTA	participatory technology assessment
PUC	Public Utilities Commission
PV	photovoltaic
RCI	Responsibility and Capacity Indicator
REDD	Reducing Emissions from Deforestation and Degradation
REEEP	Renewable Energy and Energy-Efficiency Partnership
REN21	Renewable Energy Policy Network for the 21st Century
RGGI	Regional Greenhouse Gas Initiative
SCORE	Sarawak Corridor of Renewable Energy
SDG&E	San Diego Gas and Electric
SO ₂	sulfur dioxide
SRRP	Saskatchewan Rate Review Panel
T&D	transmission and distribution
TRI	Toxics Release Inventory
TW	terawatt
TWh	terawatt-hour
ULCC	ultra-large crude carrier
UN	United Nations
UNEP	United Nations Environment Program
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
UNFCCC	United Nations Framework Convention on Climate Change
UNPFII	United Nations Permanent Forum on Indigenous Issues
US EIA	United States Energy Information Administration
VLCC	very large crude carriers
V2G	vehicle-to-grid
W	Watt
WEC	World Energy Council
WHO	World Health Organization
\$	United States dollar unless otherwise noted