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Sustainable Energy – without the hot air

David JC MacKay

This remarkable book sets out, with enormous clarity and objectivity, the various alternative low-carbon pathways that are open to us.

Sir David King FRS

Chief Scientific Adviser to the UK Government, 2000–08

For anyone with influence on energy policy, whether in government, business or a campaign group, this book should be compulsory reading.

Tony Juniper

Former Executive Director, Friends of the Earth

At last a book that comprehensively reveals the true facts about sustainable energy in a form that is both highly readable and entertaining.

Robert Sansom

Director of Strategy and Sustainable Development EDF Energy

Clear, honest, and striking numbers to help society have a *constructive* discussion of energy.

A new book published by a Cambridge scientist lays out all the numbers required for constructive energy discussions. The energy debate is notorious for generating acrimonious confrontation, but the honest, fact-based approach of “Sustainable Energy - without the hot air,” by physics professor David MacKay, has won remarkable support from across the political parties, from industry, and from environmentalists. Tony Juniper, former Executive Director of Friends of the Earth, said... Lord Oxburgh ... David Howarth said...

How much energy do we use, per person? How much energy could we produce from renewables, per person? How big will renewable facilities need to be, in order for renewables to make a sizeable contribution? What are our other sustainable energy options, apart from renewables, and how much could they produce?

explores current consumption of energy, what could conceivably be generated by renewables in a country like Britain, and the potential of efficiency measures and new technologies to reduce consumption.

All expressed in a single consistent set of user friendly units.

Numbers not adjectives

Discusses All energy-generating technologies that could claim to be called 'sustainable', not only renewables - including 'clean coal' nuclear fission, and nuclear fusion.

Not pro-nuclear - pro-arithmetic

Scale of building required

Possible details:

1) examples of some numbers from the book. Phone charger 0.01 kWh per day Driving a car for one second 0.01 kWh.

2) examples of things that don't come out well under the book's scrutiny, and things that do: a) Hydrogen car / electric car

b) combined heat and power / heat pumps

c)

3) Scale of wind to make a difference; scale of wave to make a difference.

More quotes.

Sustainable Energy – without the hot air.

The author – **David MacKay** is a Professor in the Department of Physics at the University of Cambridge. He studied Natural Sciences at Cambridge then obtained his PhD in Computation and Neural Systems at the California Institute of Technology. He is internationally known for his research in machine learning, information theory, and communication systems, including the invention of Dasher, a software interface that enables efficient communication in any language with any muscle. He has taught Physics in Cambridge since 1995. Since 2005, he has devoted increasing amounts of time to public teaching about energy. He is an alumnus of The Climate Project (Cambridge, 2007). He is a member of the World Economic Forum Global Agenda Council on Climate Change.