

Sustainable Energy — without the hot air

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to those who will not have the benefit
of two billion years' accumulated energy reserves

Preface

What's this book about?

I'm concerned about cutting UK emissions of twaddle – twaddle about sustainable energy. Everyone says getting off fossil fuels is important, and we're all encouraged to “make a difference,” but many of the things that allegedly make a difference don't add up.

Twaddle emissions are high at the moment because people get emotional (for example about wind farms or nuclear power) and no-one talks about numbers. Or if they do mention numbers, they select them to sound big, to make an impression, and to score points in arguments, rather than to aid thoughtful discussion.

This is a straight-talking book about the numbers. The aim is to guide the reader around the claptrap to actions that really make a difference and to policies that add up.

This is a free book

I didn't write this book to make money. I wrote it because sustainable energy is important. If you would like to have the book for free for your own use, please help yourself: it's on the internet at www.withouthotair.com.

This is a free book in a second sense: you are free to use *all* the material in this book, *except* for the cartoons and the photos with a named photographer, under the Creative Commons Attribution-Non-Commercial-Share-Alike 2.0 UK: England & Wales Licence. (The cartoons and photos are excepted because the authors have generally given me permission only to include their work, *not* to share it under a Creative Commons license.) You are especially welcome to use my materials for educational purposes. My website includes separate high-quality files for each of the figures in the book.

How to operate this book

Some chapters begin with a quotation. Please don't assume that my quoting someone means that I agree with them; think of these quotes as provocations, as hypotheses to be critically assessed.

Many of the early chapters (numbered 1, 2, 3, ...) have longer technical chapters (A, B, C, ...) associated with them. These technical chapters start on page 254.

At the end of each chapter are further notes and pointers to sources and references. I find footnote marks distracting if they litter the main text of the book, so the book has no footnote marks. If you love footnote marks, you can usefully add them – almost every substantive assertion in the text will have an associated note at the end of its chapter giving sources or further information.

The text also contains pointers to web resources. When a web-pointer is monstrously long, I've used the TinyURL service, and put the tiny code in the text like this – [yh8xse] – and the full pointer at the end of the book on page 344. yh8xse is a shorthand for a tiny URL, in this case: <http://tinyurl.com/yh8xse>. A complete list of all the URLs in this book is provided at <http://tinyurl.com/yh8xse>.

I welcome feedback and corrections. I am aware that I sometimes make booboos, and in earlier drafts of this book some of my numbers were off by a factor of two. While I hope that the errors that remain are smaller than that, I expect to further update some of the numbers in this book as I continue to learn about sustainable energy.

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Contents

I	Numbers, not adjectives	1
1	Motivations	2
2	The balance sheet	22
3	Cars	29
4	Wind	32
5	Planes	35
6	Solar	38
7	Heating and cooling	50
8	Hydroelectricity	55
9	Light	57
10	Offshore wind	60
11	Gadgets	68
12	Wave	73
13	Food and farming	76
14	Tide	81
15	Stuff	88
16	Geothermal	96
17	Public services	100
18	Can we live on renewables?	103
II	Making a difference	113
19	Every BIG helps	114
20	Better transport	118
21	Smarter heating	140
22	Efficient electricity use	155
23	Sustainable fossil fuels?	157
24	Nuclear?	161
25	Living on other countries' renewables?	177
26	Fluctuations and storage	186
27	Five energy plans for Britain	203
28	Putting costs in perspective	214
29	What to do now	222
30	Energy plans for Europe, America, and the World	231
31	The last thing we should talk about	240
32	Saying yes	250

Acknowledgments	251
III Technical chapters	253
A Cars II	254
B Wind II	263
C Planes II	269
D Solar II	283
E Heating II	289
F Waves II	307
G Tide II	311
H Stuff II	322
IV Useful data	327
I Quick reference	328
J Populations and areas	338
K UK energy history	342
List of web links	344
Bibliography	348
Index	355
About the author	367