

1.1 - Introduction

About the Power Technologies Energy Data Book (PTEDB), Fourth Edition.

In 2002, the Energy Analysis Office of the National Renewable Energy Laboratory (NREL) developed the first version of the Power Technologies Energy Data Book for the Office of Power Technologies of the U.S. Department of Energy (DOE).

The main purpose of the data book is to compile, in one central document, a comprehensive set of data about power technologies from diverse sources. The need for policy makers and analysts to be well-informed about power technologies suggests the need for a publication that includes a diverse, yet focused, set of data about power technologies.

New for this fourth edition of the PTEDB is Chapter 13, which features Geographic Information System (GIS) maps. One set of maps shows the natural resource (biomass, geothermal, solar, and wind) overlaid with the national transmission grid and the major electricity load centers. The other set of maps shows the current installed capacity (biomass, geothermal, concentrating solar power, and wind), as well as a bar chart indicating the historic trend of generating capacity for the state.

The PTEDB is organized into 13 chapters:

- Chapter 1 - Introduction
- Chapter 2 – Technology profiles
- Chapter 3 – Electricity restructuring
- Chapter 4 – Forecasts/comparisons
- Chapter 5 – Electricity supply
- Chapter 6 – Electricity capability
- Chapter 7 – Electricity generation
- Chapter 8 – Electricity demand
- Chapter 9 – Prices
- Chapter 10 – Economic indicators
- Chapter 11 – Environmental indicators
- Chapter 12 – Conversion factors
- Chapter 13 – Geographic Information System (GIS) maps.

The sources used for the Power Technologies Energy Data Book represent the latest available data.

This edition updates the same type of information provided in the previous edition. Most of the data in this publication is taken directly from the source materials, although it may be reformatted for presentation. Neither NREL nor DOE endorses the validity of these data.

This fourth edition of the Power Technologies Energy Data Book, as well as previous editions, are available on the Internet at http://www.nrel.gov/analysis/power_databook/. The PTEDB may be downloaded as a single PDF file, individual chapters, or table PDF files – selected data also is available as Excel spreadsheets.

The Web site also features energy-conversion calculators and features links to the Transportation Energy Data Book and Buildings Energy Data Book. Readers are encouraged to suggest improvements to the PTEDB through the feedback form on the Web site.