

Book review

Renewable Energy for Residential Heating and Cooling: Policy Handbook

IEA-RETD, Earthscan, London, UK, 2011, ISBN: 978 1 849 7 1278 1, £49.99, 238 pp.

This book has been edited by IEA-RETD (International Energy Agency – Renewable Energy Technology Deployment) which was established in 2005. The mission of this institution is to work as a catalyst for greater renewable energy technology (RET) deployment. This book is part of this mission as it creates awareness of the potential of using renewable energy sources for residential heating and cooling. Thus it is a book with a mission!

This 224-page book is divided into two parts: the first part deals with best practices in the deployment of RET for heating and cooling in the residential sector; the second is an exciting section containing 32 best practices arranged in such a way as to show the category each falls into, a brief description of the barriers it addresses, additional guidance and finally specific examples of the application of this best practice. In summary this is a quality work with relevant information which cannot be missing from the shelf of anyone involved in making renewable energy for heating and cooling (REHC) a success.

The scope of this book, as far as REHC projects are concerned, covers programme phases: portfolio planning, programme design, implementation and evaluation. It also covers market maturity stages from initial deployment to full market. It considers instruments such as: economic incentives, regulations, information and market activities. As the title mentions, the content is applicable to the residential sector only: new and existing buildings, including single and multi-family dwellings. As far as technology is concerned, it covers active solar thermal systems for air and water heating; biomass (pellets, wood and wood waste); geothermal (ground source and heat-pump) and finally heat-pump technologies based on ambient air heat (air-to-air and air-to-liquid).

The method used by the authors to identify successful programmes was to develop country profiles. It did so for the ten IEA-RETD member countries: Canada, Denmark, France, Germany, Ireland, Italy, Japan, the Netherlands, Norway and the UK. In addition four other countries were profiled namely the USA, Spain, Austria and China. So, if you live and work in any of these countries this book has added relevance for you. Twelve programmes were selected from which best practices were extracted, organised in case studies for the first part and then listed in the best practice guide.

Each of the above countries was included for very good reasons. For example, Austria is a leader in solar thermal per capita installed; Denmark, Germany and Japan were way ahead of the remaining countries as per 2006 and thus have something to tell. It is interesting to note that none of these countries has high annual solar insolation levels and thus it appears that policies have played an instrumental role in fostering REHC. Japan is also an interesting case as solar heating costs exceed those of electricity and natural gas.

While consistent information on solar thermal installation capacity is relatively accessible, energy efficiency, biomass and heat-pump installation information is difficult to find and compare. Therefore, this book comes to

fill a gap in the field of RET and will most certainly play an important role in the strengthening of the sector. Many of the best practices detailed in part two of the book are non-technological but rather linked to programme phase, market stage and/or barrier faced. This is quite insightful as programme failure is almost never linked to technologies, which are in the vast majority of cases off-the-shelf and thus reliable. The problem comes with non-alignment of the full cycle of demand, fuel, technology, application and human factors. Any failure in any of these steps leads to total failure of the programme.

In conclusion, given the holistic approach to the topic, reading of this book will contribute to reduction of programme fund wastage, tax payer's money, and the time and energy of experts in the field when implementing REHC initiatives.

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