

Institute member's book on markets for renewable energy technology

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Promoting Sustainable Practices through Energy Engineering and Asset Management

Shortly, a new book will be released by the IGI Global publishing house (www.igi-global.com) called "Promoting Sustainable Practices through Energy Engineering and Asset Management". Highly experienced contributors have collaborated in the completion of this book, where their chapters have deeply analyzed topics related to the development of green techniques, promotion, implementation, and adoption mainly in developing countries. Some of these relevant topics are indicated below:

- ✚ Energy and Sustainability
- ✚ Thermal and Photovoltaic Solar Systems
- ✚ Wind Turbines and Wind Farms
- ✚ Industrial Assets Management
- ✚ Globalization of Environmental Issues
- ✚ Production and Consumption of Renewable Energy
- ✚ Dependability



- ✚ Power Consumption and Management
- ✚ Social Implications of Green Energies
- ✚ Renewable Energies in Developing Countries
- ✚ Industrial management and reliability analysis on renewable energies.

Renewable energies are part of a sector that has been developing greatly towards the end of the 90s, but most of all in the last few years in a practical sense, all over Europe, and right now in most of the emerging countries. In renewable energy, solar, wind, and geo-thermal energy among others have been in a process of increasing industrialization and marketing in recent years. Logically, not until there is a sufficiently consolidated market volume in those emerging countries, these types of energies will not be able to compete in the same conditions with the so-called conventional ones. However, social awareness of these new energy forms, as well as their diffusion and establishment in the energy market is still in full growth. This book will therefore contribute towards the consolidation of the market for renewable energy in the coming years.

Along the last decade, a great number of books, projects and doctoral thesis have been developed regarding aspects on the application of green energy. In particular, some researches set out installations, mathematical approaches and methodologies that represent an important support in the search for solutions to technical problems in the field of sustainable energy. These topics form the base from which this book has been intended to be developed. With that purpose, this publication aims to be an essential reference source, building on the available literature in the field of renewable energies in developing countries while providing for further research opportunities in this dynamic field. It is hoped that this text will provide the resources necessary for managers, technology developers, scientists and engineers to adopt and implement sustainable practices in developing nations across the globe.

The book has been also intended to provide a practical view, trying to promote green techniques from educational point of view and mainly thinking in the development of emerging countries. Engineers, academicians, researchers,



advanced-level students (both postgraduate and doctoral), technology developers, and managers who take decisions on this field will find this text useful in furthering their research exposure to pertinent topics in sustainable energy and assisting in furthering their own research efforts in this field. With that goal, the book is organized into two sections. The first section refers to Wind, Solar and other Renewable Energies and is developed in seven chapters. The second part is related to bordering topics about asset management and green energies and is developed in eight chapters.

These few lines are intended to provide a brief overview of the entire book, trying to describe how these topics regarding energy engineering and asset management fits in the world today, indicating also the target audience to whom this book is mainly focused. To comment how this book impacts the field and contributes to the subject matter, it is important to underline that this work looks to discuss and address the difficulties and challenges that developing countries face in implementing these kinds of green energies, while describing, in a brief manner, methodologies and tools to be applied in accordance with the environmental sustainability. Engineering and educational practices already implemented in developed countries can provide examples (to follow or to avoid) to promote these renewable energies in the emerging economies. The fifteen chapters address different aspects for promotion of sustainable practices as well, as these various engineering, mathematical approaches and/or management tools that may provide a better understanding and awareness of the so-called green energies. Additionally, the book is intended to explore the impact of such practices on emerging countries in which the governments are implementing them.