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| Autore                  | Lemus Ricardo Guerrero  |
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| Edizione                | [2012 ed.]  |
| Descrizione fisica      | 1 online resource (396 p.)  |
| Collana                 | Lecture notes in energy ; ; 3   |
| Altri autori (Persone)  | Martinez-DuartJ. M  |
| Disciplina              | 333.79<br>333.794   |
| Soggetti                | Renewable energy sources<br>Emissions trading   |
| Lingua di pubblicazione | Inglese   |
| Formato                 | Materiale a stampa  |
| Livello bibliografico   | Monografia  |
| Note generali           | Description based upon print version of record.   |
| Nota di bibliografia    | Includes bibliographical references and index.  |
| Nota di contenuto       | Part I.INTRODUCTION -- 1.Executive summary -- 2. Renewable Energy and CO2: Current Status and Costs - Part II. RENEWABLE FUELS AND CARRIERS -- 3. Biomass -- 4.Biofuels -- 5.Hydrogen production -- Part III.POWER FROM RENEWABLE SOURCES.-6.Photovoltaics -- 7. Concentrating solar power -- 8.Wind Power -- 9.Hydropower -- 10. Geothermal energy -- 11.Ocean energy -- 12.Nuclear fusion -- Part IV. STORAGE AND MANAGEMENT -- 13.Solar heating and cooling -- 14. Fuel cells -- 15.Electricity storage.-16.Smart grids and supergrids -- 17.Carbon capture and storage.   |
| Sommario/riassunto      | Providing up-to-date numerical data across a range of topics related to renewable energy technologies, Renewable Energies and CO2 offers a one-stop source of key information to engineers, economists and all other professionals working in the energy and climate change sectors. The most relevant up-to-date numerical data are exposed in 201 tables and graphs, integrated in terms of units and methodology, and covering topics such as energy system capacities and lifetimes, production costs, energy payback ratios, carbon emissions, external costs, patents and literature statistics. The data are first presented and |

then analyzed to project potential future grid, heat and fuel parity scenarios, as well as future technology tendencies in different energy technological areas. Innovative highlights and descriptions of preproduction energy systems and components from the past four years have been gathered from selected journals and international energy departments from G20 countries. As the field develops, readers are invited and encouraged to contact the authors for feedback and comments. The ongoing data collection and analysis will be used – after proper acknowledgment of contributors - to develop new editions. In this way, it is ensured that Renewable Energies and CO2 will remain an up-to-date resource for all those working with or involved in renewable energy, climate change, energy storage, carbon capture and smart grids.

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