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Titolo	Decarbonizing Power Generation Sectors Using Biomass and Hydrogen-Based Fuels : A Roadmap to Sustainable Energy Transformation // edited by Arif Darmawan, Eniya Listiani Dewi, Hariana Hariana, Muhammad Aziz
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Nota di contenuto	1. Decarbonizing power generation sectors -- 2. Fuels characteristics for thermal power plants -- 3. Cofiring technology concept -- 4. Integrated gasification combined cycle power plants utilizing biomass waste Energy efficient recovery -- 5. Cofiring potential of biomass waste ash behaviour and the effects of additives on deposit formation -- 6. A comprehensive review on hydrogen-based fuel utilization in power generation combining hydrogen, ammonia and methane -- 7. Integration of a natural gas fuelled chemical looping combustion process within an industrial boiler -- 9. Integrating fuel cell technology in microgrid systems for lower carbon emission -- 10. Utilizing hydrogen as energy storage to address electricity grid issues.
Sommario/riassunto	This book presents a comprehensive overview of important issues and topics concerning the combustion and cofiring of biomass and hydrogen-based fuels such as ammonia in the power generation sector. In recent years, the energy sector has been responsible for

around three-quarters of global greenhouse gas (GHG) emissions. Cofiring of coal with agricultural and forestry wastes and low-emissions hydrogen and ammonia could reduce GHG emissions from power plants and may offer a cheaper option to achieve Net Zero Emissions (NZE). This book provides an updated review of combustion and co-combustion technologies, especially for ammonia and hydrogen cofiring, which includes technical issues, emission reduction, and by-product problems. It goes into an in-depth discussion of hydrogen and ammonia "exclusive" combustion for power generation to reduce CO₂ emissions. The content caters to students, academic and industry researchers, and policymakers who are interested in decarbonizing power generation sectors using biomass and hydrogen-based fuels.
