



The Biogas Handbook: Science, Production and Applications (Woodhead Publishing Series in Energy)

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With pressure increasing to utilise wastes and residues effectively and sustainably, the production of biogas represents one of the most important routes towards reaching national and international renewable energy targets. The biogas handbook: Science, production and applications provides a comprehensive and systematic guide to the development and deployment of biogas supply chains and technology.

Following a concise overview of biogas as an energy option, part one explores biomass resources and fundamental science and engineering of biogas production, including feedstock characterisation, storage and pre-treatment, and yield optimisation. Plant design, engineering, process optimisation and digestate utilisation are the focus of part two. Topics considered include the engineering and process control of biogas plants, methane emissions in biogas production, and biogas digestate quality, utilisation and land application. Finally, part three discusses international experience and best practice in biogas utilisation. Biogas cleaning and upgrading to biomethane, biomethane use as transport fuel and the generation of heat and power from biogas for stationery applications are all discussed. The book concludes with a review of market development and biomethane certification schemes.

With its distinguished editors and international team of expert contributors, The biogas handbook: Science, production and applications is a practical reference to biogas technology for process engineers, manufacturers, industrial chemists and biochemists, scientists, researchers and academics working in this field.

- Provides a concise overview of biogas as an energy option
- Explores biomass resources for production
- Examines plant design and engineering and process optimisation



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Editorial Review

Review

The extent and depth of knowledge and experience captured in The Biogas Handbook will help the emerging AD and biogas industries construct and operate state-of-the-art (and science) biogas plants., BioCycle As an Editor, I am impressed with the handbook's ability to convey technical and scientific information in a style that can be understood by individuals with varying levels of knowledge about the topics discussed., Nora Goldstein, BioCycle

About the Author

Arthur Wellinger is Managing Director of Triple E&M, an internationally operating research and consulting company located in Switzerland, and President of the European Biogas Association.

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David Baxter is a materials engineer who joined the European Commission Joint Research Centre in 1991 after working in an industrial company supplying components for power generation and transport.

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