



Innovation in Wind Turbine Design

By Peter Jamieson



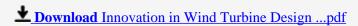
Innovation in Wind Turbine Design By Peter Jamieson

Innovation in Wind Turbine Design addresses the fundamentals of design, the reasons behind design choices, and describes the methodology for evaluating innovative systems and components. Always referencing a state of the art system for comparison, Jamieson discusses the basics of wind turbine theory and design, as well as how to apply existing engineering knowledge to further advance the technology, enabling the reader to gain a thorough understanding of current technology before assessing where it can go in the future.

Innovation in Wind Turbine Design is divided into four main sections covering design background, technology evaluation, design themes and innovative technology examples:

- **Section 1** reviews aerodynamic theory and the optimization of rotor design, discusses wind energy conversion systems, drive trains, scaling issues, offshore wind turbines, and concludes with an overview of technology trends with a glimpse of possible future technology
- Section 2 comprises a global view of the multitude of design options for wind turbine systems and develops evaluation methodology, including cost of energy assessment with some specific examples
- **Section 3** discusses recurrent design themes such as blade number, pitch or stall, horizontal or vertical axis
- **Section 4** considers examples of innovative technology with case studies from real-life commercial clients.

This groundbreaking synopsis of the state of the art in wind turbine design is must-have reading for professional wind engineers, power engineers and turbine designers, as well as consultants, researchers and academics working in renewable energy.



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Innovation in Wind Turbine Design By Peter Jamieson Bibliography

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Editorial Review

Review

"I highly recommend the landmark and rigorous book Innovation in Wind Turbine Design by Peter Jamieson, to anyone in engineering, studying in engineering schools, wind turbine design, innovation and evaluation, business leadership, and policy making seeking a strong, engineering principles based book on design and innovation. This book, while containing some advanced mathematics, is also approachable as a guide to developing wind turbine innovations, and for evaluating the resulting designs from an economic and market perspective as well." (Blog Business World, 31 October 2011)

From the Back Cover

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About the Author

Peter Jamieson, Principal Engineer, Special Projects Department, Garrad Hassan & Partners Ltd., Edinburgh, Scotland

Peter Jamieson has been in the wind industry since 1980, and with Garrad Hassan since 1991 as a founding founder member of their Scottish office. He was previously with James Howden of Glasgow who manufactured wind turbines from 1980 - 1988.

He currently heads the "Special Projects" department in Garrad Hassan with involvement in innovative designs of wind turbine and component developments. He is also involved in technology review for government, wind industry and commercial organisations. He has authored circa 30 published papers on wind energy topics, as well as magazine articles, and authored much of the technological content for the EWEA (European Wind Energy Association) publication *Wind Energy: The Facts*. He holds a number of patents on wind turbine rotor technology.

Users Review

From reader reviews:

Lucia Morrone:

Spent a free a chance to be fun activity to accomplish! A lot of people spent their down time with their family, or their friends. Usually they carrying out activity like watching television, about to beach, or picnic inside park. They actually doing ditto every week. Do you feel it? Would you like to something different to fill your own free time/ holiday? May be reading a book can be option to fill your totally free time/ holiday. The first thing you ask may be what kinds of publication that you should read. If you want to test look for book, may be the book untitled Innovation in Wind Turbine Design can be good book to read. May be it might be best activity to you.

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