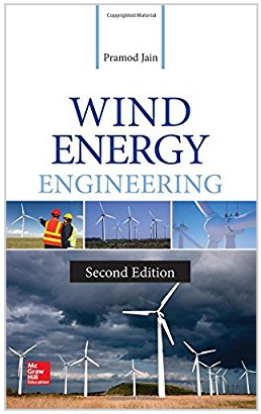

Wind Energy Engineering, Second Edition (Mechanical Engineering)

By Pramod Jain

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A fully up-to-date, comprehensive wind energy engineering resource

This thoroughly updated reference offers complete details on effectively harnessing wind energy as a viable and economical power source. Globally recognized wind expert Pramod Jain clearly explains physics, meteorology, aerodynamics, wind measurement, wind turbines, and electricity. New energy policies and grid integration procedures are covered, including pre-deployment studies and grid modifications. Filled with diagrams, tables, charts, graphs, and statistics, *Wind Energy Engineering*, Second Edition, is a definitive guide to current developments and emerging technologies in wind energy. <?xml:namespace prefix = "o" ns = "urn:schemas-microsoft-com:office:office" />
Wind Energy Engineering, Second Edition covers:

- The worldwide business of wind energy
- Wind energy basics
- Meteorological properties of wind and air
- Wind turbine aerodynamics
- Turbine blade element models and power curves
- Wind measurement and reporting
- Wind resource assessment
- Advanced resource assessment topics, including wake, losses, and uncertainty
- Wind turbine generator components
- Electricity and generator fundamentals
- Grid integration of wind energy
- Environmental impact of wind projects
- Financial modeling, planning, and execution of wind projects
- Wind energy policy and licensing guidelines

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Editorial Review

Review
5 star review for the First Edition: "A must have for project managers (PM) in the wind industry. Book covers the routine to the complex in a clear, organized and well-illustrated manner. Reader/PM will take away a better understanding of what is involved in harnessing wind power and more importantly what is required for a successful wind project. Chapters 9 through 14 are especially helpful; they cover everything from wind turbine components to the planning and execution of a wind project. This book would be an excellent addition to a seasoned PM's resource library, but equally important as a "field manual" for a PM venturing into wind projects for the first time. It covers what every a PM has to be familiar with and deal with on a wind project. As a PM in the wind industry, I highly recommend it. Well done!" (RP Adelhelm *Amazon* 2010-10-11)

5 star review for the First Edition: "Outstanding! If you are in the wind industry, want to be, or are considering a wind project of your own, read this book! While it's not easy to cover the many facets of wind energy development, Mr. Jain has accomplished this with seeming ease. Each piece of the development puzzle is covered with just the right level of detail. The science behind wind energy is fully and very understandably explained; then matched with tools you can use, bridging the gap between theory and practice. Mr. Jain's work is essential for the classroom, job-site, homeowner, small business or community considering a wind project. Once you read it, keep it close by because you will find it an easy and necessary reference tool." (Glenn Mauney *Amazon* 2010-10-13)

Praise for the First Edition: "For those who want a grounding in the physics and basic engineering of wind turbines, this book probably isn't a bad place to start. All sections include useful references." (EET *Power Electronics* 2010-09-01)

From the Author

The impetus of writing this book was a lack of books on the market that targeted engineers. Specifically, I wanted to write a book that would give an engineer from any discipline sufficient knowledge about the multi-disciplinary field of wind energy. This book intends to bring to bear at least five disciplines in order to provide a reasonably comprehensive understanding of the field of wind energy. The five disciplines are Meteorology, Mechanical & Aeronautical engineering, Civil engineering, Electrical engineering and Environmental engineering. In addition, to these core engineering disciplines, the book has chapters on finance, policy and project management, three business related disciplines that are key to wind energy.
I wrote the book with the following audience in mind. First are engineers and scientists that are in the wind industry, but practice in a narrow segment of the industry that covers their specific discipline. Second are engineers and scientists that want to enter the wind industry. Third are undergraduate engineering students and technical college students that want to learn about the various disciplines in wind energy engineering. Finally, the intended audience is business people and project managers that work in the wind energy industry.
As an engineer, you will find sufficient detail about each of the topics. I have kept the level of math to a level that would be comfortable to a practicing engineer. In areas that require sophisticated math, I have attempted to provide insights into the relationships.
Inthe first edition of the book, wind energy policy was not covered; thereforethere was a gaping hole in the book. Also, the exposition on grid integration of wind power did not cover the detailed studies. Thesecond

edition of the book fills these two gaps--wind energy policy and gridintegration studies. --Preface of book

About the Author
Pramod Jain, Ph.D., is founder and president of Innovative Wind Energy, Inc., a wind energy consulting company. He is recognized as a global expert in the planning of wind projects and has worked on projects in the United States, the Caribbean, Latin America and Asia that range from a single 100 kW turbine to a 100-plus MW wind farm. Dr. Jain's clients include Fortune 100 companies, the U.S. government, US Agency for International Development, US Trade and Development Agency, United Nations Development Programme, Asian Development Bank, Inter-American Development Bank, universities, utilities, municipalities, and private developers. He has a Ph.D. in Mechanical Engineering from University of California, Berkeley, and a B. Tech. from Indian Institute of Technology, Bombay.

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John Espitia:

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Edda Allen:

A lot of people always spent their very own free time to vacation or even go to the outside with them family members or their friend. Were you aware? Many a lot of people spent they will free time just watching TV, or playing video games all day long. If you wish to try to find a new activity that is look different you can read a new book. It is really fun to suit your needs. If you enjoy the book you read you can spent the whole day to reading a book. The book Wind Energy Engineering, Second Edition (Mechanical Engineering) it is very good to read. There are a lot of people that recommended this book. These people were enjoying reading this book. In the event you did not have enough space to create this book you can buy the particular e-book. You can m0ore easily to read this book through your smart phone. The price is not very costly but this book possesses high quality.

Amelia Page:

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Diane Wilson:

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