# Article information:

CFD study on the impact of yawed inflow on loads, power and near wake of a generic wind turbine - Schulz - 2017 - Wind Energy - Wiley Online Library
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# Article summary:

1. The impact of yawed inflow on loads, power, and near wake of a generic wind turbine was studied using computational fluid dynamics (CFD).

2. A process chain was developed to analyze wind turbine aerodynamics using fully meshed rotors and block-structured flow solver FLOWer.

3. The study found that the blade-near wake interaction is considered directly, and tower, nacelle, and hub are modeled to consider as much aerodynamic effects as possible. Results showed reasonable agreement between measurements and simulations.

# Article rating:

Appears moderately imbalanced: The article provides some useful information, but is missing several important points or pieces of evidence that would be required to present the discussed topics in a balanced and reliable way. You are encouraged to seek a more balanced perspective on the presented issues by exploring the provided research topics and looking at different information sources.

# Article analysis:

The article titled "CFD study on the impact of yawed inflow on loads, power and near wake of a generic wind turbine" provides an overview of the impact of yaw misalignment on wind turbines. The article highlights the importance of accurately predicting the aerodynamic loads and power output of wind turbines to develop reliable and cost-effective wind farms. The article also discusses the use of numerical methods in wind turbine design and simulation.

One potential bias in this article is that it focuses primarily on the use of computational fluid dynamics (CFD) simulations for wind turbine design and analysis. While CFD simulations can provide valuable insights into the behavior of wind turbines, they are not a substitute for experimental data. The article briefly mentions some wind tunnel experiments but does not provide a comprehensive comparison between experimental data and CFD simulations.

Another potential bias is that the article focuses mainly on the technical aspects of wind turbine design and analysis, without considering broader social or environmental implications. For example, there is no discussion of how wind energy fits into larger energy policy debates or how it might affect local communities or ecosystems.

The article also makes some unsupported claims, such as stating that "wind energy has become one of the most important markets in renewable energy." While it is true that wind energy has grown significantly in recent years, it is debatable whether it is currently the most important market in renewable energy.

Overall, while this article provides useful information about the impact of yaw misalignment on wind turbines and the use of CFD simulations in wind turbine design, it could benefit from a more balanced perspective that considers both experimental data and broader social and environmental implications.

# Topics for further research:

* Wind energy and its impact on local communities and ecosystems
* Comparison of experimental data and CFD simulations in wind turbine design
* Energy policy debates and the role of wind energy in the larger renewable energy market
* Social and environmental implications of wind farm development
* Economic feasibility and cost-effectiveness of wind energy
* Alternative renewable energy sources and their potential impact on the energy market

# Report location:

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