

Special Issue

State of the Art of Wind Farm Optimization

Message from the Guest Editor

The objective of this Special Issue is to find the combination of certain parameters—like turbine position for the design of a wind-farm layout or real-time torque applied to each turbine for wind-farm operation—so that it would maximize one or more variables (e.g., the wind-power generation of the farm over a certain time horizon) while minimizing others (e.g., wake losses induced by upstream turbines on downstream turbines), subject to a series of constraints (e.g., safety or environmental requirements). Examples of topics are

- Algorithms for optimal turbine placement;
- Regular vs. irregular layouts;
- Non-traditional wind farms;
- Wake loss models;
- The effect of the wind-farm shape;
- Safety or visual or environmental constraints;
- Including interference from neighboring wind-farms in layout design;
- Layouts that minimize bird or bat fatalities;
- Yaw control;
- Torque control;
- Wake steering;
- Use of advanced, real-time observations for forecasting; and
- Optimal shut-down scheduling.

Guest Editor

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Message from the Editor-in-Chief

Energies is an international, open access journal in energy engineering and research. The journal publishes original papers, review articles, technical notes, and letters. Authors are encouraged to submit manuscripts which bridge the gaps between research, development and implementation. The journal provides a forum for information on research, innovation, and demonstration in the areas of energy conversion and conservation, the optimal use of energy resources, optimization of energy processes, mitigation of environmental pollutants, and sustainable energy systems.

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