Special Issue

Terawatt-Scale Grid-Connected Photovoltaic Systems

Message from the Guest Editors

Photovoltaic (PV) systems are rapidly becoming widespread sources of energy supply. Cumulative PV installations surpassed 1.18 TW by the end of 2022 (and are estimated to exceed 1.5 TW, with an addition of 350.6 GW, by the end of 2023). Rapid progress was largely driven by improvements in solar cell and module efficiencies, reductions in manufacturing costs, and the capacity to generate green electricity. This Special Issue is devoted to the collection of state-of-the-art ideas in GCPV power generation system. Topics of interest for this issue include, but are not limited to, the following areas:

- Condition monitoring in GCPV;
- Life cycle analyses;
- Performance monitoring and case studies;
- Economic analyses;
- Energy policies related to GCPV systems;
- Energy management storage;
- Grid interaction;
- New converter topologies;
- Modulation and control techniques;
- PV power plants with energy storage;
- Optimization and MPPT techniques.

We look forward to receiving your contributions.

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Deadline for manuscript submissions

5 August 2025

Energies

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 7.3

mdpi.com/si/190209

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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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