

ICSCGE 2026

The 6th International Conference on Smart City and Green Energy

Brisbane, Australia | August 6-9, 2026

Special Session 02

Power Systems for Emerging Energy Technologies and Net-Zero Transition

Power systems worldwide are undergoing significant transformation, driven by the urgent need to reduce carbon emissions and the retirement of coal-fired power plants reaching the end of their technical or economic life. At the same time, substantial cost reductions have accelerated the deployment of renewable energy technologies, including utility-scale wind and solar farms, as well as distributed rooftop photovoltaic systems. In addition, the transition toward net zero is fostering the development of emerging energy technologies such as hydrogen energy and electric vehicles.

These developments present both opportunities and challenges for modern power systems. On the one hand, they support decarbonization, enhance renewable energy integration and energy sharing, and promote the electrification of transport and industry. On the other hand, their large-scale deployment introduces significant challenges for system planning, operation, flexibility, resilience, and security. Addressing these challenges requires not only technological innovation but also new approaches to system operation, market design, and policy support. It further calls for closer collaboration among researchers, industry practitioners, and policymakers to enable the transition toward cleaner and more reliable energy systems.

This special session aims to foster a professional network connecting researchers, academics, industry professionals, engineers, and domain experts, while providing a platform to share the latest advancements in power systems driven by emerging energy technologies and the net-zero transition. Contributions are welcome on topics including, but not limited to, hydrogen energy, energy storage technologies, electric vehicles, distributed energy resources, coordinated energy and computing infrastructures, renewable energy integration, low-carbon energy system planning, system resilience under extreme events, and transportation electrification. Both theoretical studies and practical case studies are encouraged to support the development of sustainable, resilient, and low-carbon energy systems.

Special Session Chairs



Assoc. Prof. Jijia Yang

James Cook University, Australia



Dr. Zehua Zhao

James Cook University, Australia



Prof. Hui Hou

Wuhan University of Technology, China



Prof. Li Sun

Southeast University, China

Paper Submission & Publication

Submission Link



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Important Dates

Submission Deadline	June 8, 2026
Notification Deadline	July 8, 2026
Camera-ready Deadline	July 24, 2026
Conference Dates	August 6-9, 2026

Publication



Submissions will be reviewed by the conference technical committees, and accepted papers will be published in **ICSCGE 2026 International Conference Proceedings**, which will be submitted for inclusion in the IEEE Xplore Digital Library, and submitted for indexing by **El Compindex** and **Scopus**.

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