IEEE EI² 2024

THE 8TH IEEE CONFERENCE ON ENERGY INTERNET AND ENERGY SYSTEM INTEGRATION

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Special Session 17

Enhancing Distribution Network Operation through Flexible Demand-Side Participation

INTRODUCTION AND TOPICS

As modern distribution networks evolve, the integration of flexible demand-side resources has become increasingly critical for enhancing operational efficiency, stability, and sustainability. The complexity of managing distributed energy resources (DERs), demand response, energy storage, and other flexible assets necessitates advanced strategies to optimize network operations effectively.

This Special Session invites original contributions that explore innovative approaches to enhancing the operation of distribution networks through the strategic utilization of flexible demand-side participation. We seek papers that provide insights into how demand-side resources can be leveraged to improve the planning, real-time management, and overall performance of distribution networks.

Topics of interest include, but are not limited to:

- Techniques and models for optimizing the deployment of flexible demand-side resources to enhance network performance.
- Strategies for effective coordination between distributed energy resources and demand-side management to ensure optimal network operation.
- Techniques for accurate load forecasting and dynamic management in the context of increasing demand-side participation.
- Approaches for effectively integrating demand-side resources into distribution network operation, including coordination with DERs and energy storage systems.
- Evaluations of the economic and operational impacts of demand-side flexibility on distribution network performance.
- Application of artificial intelligence and digital technologies for monitoring, optimizing, and controlling distribution network operations.
- Exploration of policy frameworks and market designs that support the integration of flexible demand-side resources for operational enhancement.

SPECIAL SESSION CHAIRS

Dr. Yunqi Wang
Royal Melbourne Institute of Technology University , Australia

Dr. Ying Du
Hongkong Polytechnic University, China

Prof. Hui Hou
Wuhan University of Technology , China

PUBLICATION & SUBMISSION

Submissions will be reviewed by the conference technical committees, and accepted papers will be published in IEEE EI² 2024 International Conference Proceedings, which will be submitted for inclusion in the **IEEE Xplore Digital Library**, and submitted for indexing by **EI compendex** and **Scopus**.

Scan the QR code on the left or open the submission link to submit your paper.

‣ Submission link: https://easychair.org/conferences/?conf=ei22024

Submission Deadline: 31 October, 2024

ORGANIZATIONS

IEEE PES Power & Energy Society

中国电机工程学会 CHINESE SOCIETY FOR ELECTRICAL ENGINEERING

沈阳工业大学 SHENYANG UNIVERSITY OF TECHNOLOGY

清華大學 Tsinghua University

For any questions, please contact the conference secretary, **Ms. Joyce Zhong**, via **EI2_2024@outlook.com**.