

Call for Papers

Special Issue on “Peer-to-Peer Transactive Energy Management in Power Distribution Systems”

Important Dates

Full Paper Submission: November 30, 2020

Final Decision Notification: February 28, 2021

Publication of Special Issue: March 31, 2021

Distributed energy resources (DERs) have manifested great potentials in promoting the power system performance in terms of economy, efficiency, operational flexibility, resilience, sustainability, and reliability. With the proliferation of DERs, market-based peer-to-peer (P2P) energy exchanges become more common among energy providers and consumers. P2P transactive energy systems will improve the efficient utilization of DERs through active market interactions. The massive adoption of communication, computation, and control infrastructures will turn traditional, one-way electricity delivery into a two-way transactive information-packed power systems. As a two-way grid management approach, transactive energy can accommodate more grid-forming flexibility and reliability by allowing real-time exchanges via economic signals, as opposed to traditional demand response resources. Meanwhile, blockchain techniques, big data management, and artificial intelligence applications will provide a powerful and trustworthy path for creating service-oriented P2P transactive energy systems that are fundamentally more secure, auditable, accountable, and automated.

In order to promote the theoretical and practical studies in the control and operation of transactive energy systems, the editorial board of the CSEE Journal of Power and Energy Systems (CSEE JPES) invites potential authors to submit articles for review and publication in the special issue of CSEE on P2P transactive energy management in power distribution systems.

Topics of interest include, but are not limited to:

- Optimization Methods in Peer-to-Peer Transactive Energy Systems
- Blockchain Applications in Transactive Energy Systems
- Big Data Management and Artificial Intelligence Applications in Transactive Energy Systems
- Economic and Sustainable Operation of Peer-to-Peer Transactive Energy Systems
- Distributed Control Methods for Transactive Power Distribution Network Management
- Dynamic Balancing of Supply and Demand in Transactive Energy Systems
- Cybersecurity and Privacy Management in Transactive Energy Systems
- Market Mechanisms for Peer-to-Peer Transactive Energy Systems
- Distributed Energy Resource Management and Optimization in Transactive Energy Systems
- Power System Applications of Blockchain and Internet of Things

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