

# Annual Conference of the IEEE Industrial Electronics Society (IECON 2021)

**Special Session on**

## **Active Consumers in Energy Communities**

**Organized by**

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### **Call for Paper**

A pressing task for future smart energy systems is the design and operation of systems that integrate large share of renewable sources while empowering the consumers for the green transition. With the availability of cheaper technology and the rise of digitalisation, consumers can actively participate in energy markets and also offer their own services. Moreover, active consumers play a key role in promoting competition, ensuring affordable energy prices and security of supply, as well as contributing to the environmental and climate goals of different energy communities. This special session aims to highlight the active role of consumers in operation management and control of energy communities and their impact on regulation of energy markets. It also discusses necessary steps toward development and implementation of user centric business models, including a detailed discussion of required data and computational methods as well as psychological aspects of consumer participation.

Topics of interest include, but are not limited to:

- Advanced integrated demand response (DR) programs
- Lessons learned from the employed DR programs

- Local energy communities
- Peer-to-Peer trading in energy communities
- Transactive energy for active consumers
- Emerging household-level energy storage technologies and markets
- Self-consumption and local energy communities
- Centralized and decentralized controls for active consumers
- Aggregated modeling and disaggregation techniques for active consumers
- Online local energy marketplaces
- Energy-as-a-Service (EaaS)
- Multi-agent approaches to the coordination of active consumers
- Cooperative/Non-Cooperative game-theoretic approach for modeling active consumers interactions

**IES Technical Committee Sponsoring the Special Session:**

- IEEE IES Smart Grid Technical Committee
- IEEE IES Energy Storage Technical Committee

**Submissions Procedure:** All the instructions for paper submission are included in the conference website: <https://attend.ieee.org/iecon-2021/>

**Deadlines:**

Full paper submission:	June 25, 2021
Paper acceptance notification:	July 30, 2021
Camera-ready paper submission:	Aug. 27, 2021