

IEEE Journal of IoT Special Issue on Internet-of-Things for Smart Energy Systems

The paradigm of Internet of Things (IoT) is increasingly integrated with real-world applications. There are many critical IoT applications in the energy sector. Worldwide energy systems and infrastructure are experiencing tremendous transformation. There has been a drastic surge in global energy consumption, which has tripled in the past 50 years. As a result, new measures have been introduced to improve the responsiveness and robustness of energy systems, along with the global trends of deregulation and decarbonization. Energy systems, covering energy generation, transmission, distribution, and consumption processes in various energy media (e.g., electricity, gas, heat, fuel cell technology) in diverse sectors such as power grid, buildings, transportation systems, are one of the most important applications of IoT-based solutions. There is a heightened need in energy systems for real-time data analytics, dynamic control, and disruption mitigation, which can be empowered by a variety of IoT technologies.

This special issue (SI) solicits novel solutions and techniques of applying IoT to smart energy systems. This SI aims to create a forum for researchers, developers and practitioners from both academia and industry to disseminate the state-of-the-art results and to advance the applications of IoT for smart energy systems. Topics of interests include (but are not limited to) the following categories:

- System architecture and protocol design of IoT for smart energy systems (e.g., electrical, gas, heat generation, transmission, distribution and consumption systems)
- Reliable, low-latency communication networks in IoT for smart energy systems
- Planning and management of sensors for smart energy systems (e.g., phasor measurement unit, smart metering infrastructure for electrical/gas/heat grids)
- IoT data analytics for smart energy systems
- IoT-based optimization and control for smart energy systems
 - Intelligent software-controlled renewable energy generation (e.g., solar, wind, geothermal, hydro, combined heat and power)
 - IoT-based solutions for energy storage and electric/alternative energy vehicle management
 - IoT-based energy management for data centers, smart homes, smart buildings, and smart cities (e.g., HVAC control, district heating and cooling)
- Cyber security and privacy in IoT for smart energy systems
- Fog computing and mobile edge computing for smart energy systems
- Experiences from IoT testbeds and field-trials for smart energy systems

Important Dates

Submissions Deadline: **September 1, 2018**

First Reviews Due: November 15, 2018

Revision Due: December 15, 2018

Second Reviews Due/Notification: January 15, 2019

Final Manuscript Due: **February 15, 2019**

Publication Date: 2019

Submission

The special issue seeks submission of papers that present novel original results and findings on Internet-of-Things for smart energy systems. Solicited original submissions must not be currently under consideration for publication in other venues. Author guidelines and submission information can be found at

<http://iot.ieee.org/journal>. All manuscripts should be submitted through Manuscript Central:

<http://mc.manuscriptcentral.com/iot>

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