

Smart Power and Internet of Energy



Overview

This review synthesizes a decade of research spanning AI-based forecasting and optimization, IoT-enabled monitoring, blockchain architectures, digital twins, interoperability standards, cybersecurity frameworks, and emerging models in the energy market. Department of Electrical and Computer Engineering, The University of Memphis, Memphis, TN, United States 2. Dominion Energy, Henrico, VA, United States Internet-of-things (IoT)-enabled smart grids modernize electricity infrastructure by integrating. The rapid digitalization of power systems has transformed smart grids into complex cyber-physical energy networks driven by intelligence, interoperability, and innovation. The journal focuses on the transformation of conventional power systems into intelligent, digitalized, and resilient infrastructures. The relationship between digitalisation and energy transition took prominence during the IRENA Innovation Week 2025, where discussions centred on the principle that there is no digitalisation without energy and no energy transition without digitalisation.



Article Content

Jun 14, 2026

Energy Internet, the Future Electricity System: Overview, Concept ...

Energy Internet, a futuristic evolution of electricity system, is conceptualized as an energy sharing network. Its

Dec 13, 2025

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Smart Power is an open-access, peer-reviewed journal dedicated to advancing the science, engineering, and operation of next

Dec 12, 2025

Smart Energy | Journal | ScienceDirect by Elsevier

Research is welcome on the role of smart energy technologies and energy infrastructures into an energy systems context such as

Oct 23, 2025

The Internet of Energy (IoE): A Guide to Efficiency and Automation

The Internet of Energy (IoE) is the upgrade and automation of electricity infrastructures, allowing energy producers to

Oct 08, 2025

Energy experts on building the power systems of the future

Power systems are being transformed by innovation across energy technology, markets, and financing, reshaping

Apr 13, 2026

What is IoT (Internet of Things)? | Definition from TechTarget

What is IIoT and how is it transforming industries? IIoT, or the industrial internet of things, is a narrower application of

Nov 25, 2025

Internet of Things Applications as Energy Internet in Smart ...

Energy Internet (EI) has been recently introduced as a new concept, which aims to evolve smart grids by integrating

Apr 26, 2026

Internet of Energy: Opportunities, applications, architectures and ...

Highlights • This paper aims to provide an overview of the Internet of Energy concept in the Industrial Internet of Things

Sep 27, 2025

Internet-of-Things (IoT) applications in modern power grids

Internet-of-things (IoT)-enabled smart grids modernize electricity infrastructure by integrating sensors, smart meters,

Oct 09, 2025

A review of IoT-enabled smart energy hub systems: Rising,

The internet of things (IoT) can drastically improve how we manage different parts of SEH systems, like power plants,

Mar 31, 2026

Digital innovations for sustainable energy: A review of AI and IoT in ...

The existing manuscript presents a comprehensive and methodical review of the smart green energy systems,

Oct 07, 2025

IoT-Enabled Smart Energy Grid: Applications and Challenges

The Internet of Things (IoT) is a rapidly emerging field of technologies that delivers numerous cutting-edge solutions in

Aug 21, 2025

Intelligent energy management with IoT framework in smart cities

This study addresses the growing challenges of energy consumption and the depletion of energy resources,

Feb 19, 2026

Using the internet of things in smart energy systems and networks

Four main areas of smart energy systems have been chosen, including: i) the use of IoT in business; (ii) the use of IoT

May 08, 2026

Internet of Energy in Microgrids and Smart Grids: State-of-the-Art

The Internet of Energy (IoE) represents a transformative paradigm that integrates internet technologies into energy systems,

Jan 13, 2026

SPIES 2026 | Sunshine Coast, Australia

Welcome to SPIES 2026! 2026 8th International Conference on Smart Power & Internet Energy Systems will be held in Sunshine

Aug 10, 2025

Beyond the grid: a decade of intelligence, interoperability, and ...

ABSTRACT The rapid digitalization of power systems has transformed smart grids into complex cyber-physical energy networks

Nov 26, 2025

What is the Internet of Things (IoT)?

What is the IoT? The Internet of Things (IoT) refers to a network of physical devices, vehicles, appliances,

Sep 22, 2025

IoT in energy: a comprehensive review of technologies, applications ...

The integration of IoT (Internet of Things) in the energy sector has the potential to transform the way it generates,

Jul 23, 2026

Smart Power & Internet Energy Systems

Smart Power & Internet Energy Systems Special Issue Editors Special Issue
Information Keywords Benefits of

Apr 23, 2026

Smart Devices and Internet of Things for Sustainable Energy

Smart devices and the Internet of Things (IoT) have emerged as promising technologies to achieve sustainable energy

Sep 21, 2025

Full article: Beyond the grid: a decade of intelligence ...

The rapid digitalization of power systems has transformed smart grids into complex cyber-physical energy networks

Aug 10, 2025

Internet of Energy (IoE) in Smart Power Systems

The accelerated trend of development in the areas of information and communications technology (ICT), as well as

Sep 13, 2025

The Emerging Energy Internet: Architecture, Benefits, Challenges, and ...

Energy Internet is a concept proposed to harness, control, and manage energy resources effectively, with the help of

Apr 20, 2026

Using the internet of things in smart energy systems and networks

Energy forecasting, state monitoring and estimation, anomaly detection, data mining and visualization are among the

Nov 26, 2025

Unlocking the Potential of High-Renewable Power Systems with

From demand and pricing forecasting, flexibility and smart grid management, to informing predictive maintenance of

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For more information, pricing, or custom solutions, please contact us:

Website: <https://khanimamboguesthouse.co.za>

Email: sales@khanimamboguesthouse.co.za

Phone: +27 64 852 1973

Address: Unit 7, Greenway Business Park, 8 Innovation Drive, Centurion, 0157, South Africa

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