

Article Overview

Energy Internet enterprises integrate energy systems with digital technologies to optimize energy management, promote green innovation, and support sustainable industrial development.

Overview of Energy Internet Enterprises

Energy Internet (EI) enterprises operate at the intersection of energy and information technology, aiming to harness, control, and manage energy resources efficiently through smart grids and Internet-based communication systems. The concept involves using energy routers to manage the flow of electricity similarly to how data packets are routed in digital networks, enhancing system reliability and energy utilization. EI enterprises are central to the transformation of traditional energy systems into more intelligent, interconnected, and sustainable networks.

Industrial Development Path

Grid companies and EI enterprises prioritize development based on market potential, competitive advantage, and social value. Key areas of focus include:

- o Integrated energy services and cloud computing services
 - o Industrial smart manufacturing and smart home services
 - o Rural energy services and new retail energy services
- The development path varies regionally, with enterprises leveraging existing infrastructure to expand services efficiently while responding to pressures from energy transformation, digitalization, and market competition. Input-output models and multi-dimensional evaluation frameworks help EI enterprises allocate resources and determine industrial priorities effectively.

Green Technology Innovation

Sustainable growth in EI enterprises is closely linked to green technology innovation (GTI). GTI involves technological advancements that reduce pollution, improve energy efficiency, and support carbon neutrality goals. Factors influencing GTI include:

- o Proximity-level factors: R&D investment and external cooperation directly impact innovation outcomes.
 - o Transition-level factors: Market competition and business models act as key nodes for innovation.
 - o Essential-level factors: Environmental regulations and corporate development strategies form the root causes driving GTI.
- By integrating information technology with energy systems, EI enterprises can promote energy system transformation, achieve dual carbon goals, and enhance their value through sustainable innovation.

Strategic Implications

Energy Internet enterprises are positioned to lead the digital transformation of the energy sector, offering opportunities to:

- o Optimize energy distribution and consumption
 - o Expand smart energy services and industrial applications
 - o Support national and global carbon reduction targets
 - o Enhance competitiveness through technological innovation and strategic partnerships
- Overall, EI enterprises represent a critical component of the future energy landscape, combining digital intelligence with sustainable energy management to address both economic and environmental challenges .

The industrial Internet plays a vital role in promoting the digital transformation of enterprises, especially in the core

As an important state-owned enterprise related to the national economy and people's livelihood, the power company

Our energy information brokerage platform (eibp) enables energy providers to launch disruptive digital business models while

Energy Impact Partners (EIP) is an investment firm focused on the conversion of the energy industry towards a decarbonized,

In Energy Internet, multi-source and heterogeneous data are becoming an essential infrastructure of energy system

With the comprehensive popularization of the Internet and the emergence of the dilemma of traditional energy supply

Gain in-depth insights into Digital Energy Platform Market, projected to surge from USD 20 billion in 2024 to USD 45

Abstract Energy Internet (EI) envisions a future energy system with sustainable concerns of efficiency, economy and

Energy Internet Energy Internet (EI), an emerging topic in the field of energy, is devoted to promoting a deep combination between

Energy management platforms can help, offering automation, visibility and a central point for data. With

energy

The development and application of the industrial Internet platform (IIP) has brought enterprises huge benefits, such

In this paper, we present a systemic study of Energy Internet from the business perspective. We first propose the

Industrial users slash their energy consumption, and green energy producers achieve cost parity to accelerate our decarbonization.

Energy management platforms can also support more seamless integration of intermittent renewable energy sources

These systems deliver green electricity and energy at cost parity with today's alternatives, while profitably reducing energy

Abstract. This article studies the priorities of grid companies for the development of the energy Internet industry from the three major

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