

Article Overview

The 14th Five-Year Plan emphasizes the development of a modern, digitalized Energy Internet to enhance energy efficiency, integrate renewable sources, and support low-carbon transformation.

Overview of Energy Internet Goals

China's 14th Five-Year Plan (2021-2025) outlines a strategic push toward a modern energy system that leverages digital technologies to improve energy security, efficiency, and sustainability . The Energy Internet concept integrates smart grids, energy storage, renewable energy, and digital infrastructure to create a flexible, reliable, and low-carbon energy network. Key objectives include:

- o Enhancing energy network security and emergency management to ensure stable supply .
- o Promoting low-carbon transformation by increasing the share of non-fossil energy and electrification of end-use sectors .
- o Integrating digital technologies such as big data, AI, and IoT to optimize energy production, distribution, and consumption .

Technological and Infrastructure Initiatives

The plan emphasizes the Industrial Internet and Internet of Vehicles (IoV) as part of the Energy Internet framework, enabling real-time monitoring, intelligent dispatching, and efficient energy management . Specific initiatives include:

- o Smart grid expansion with flexible power supply reaching 24% and demand-side response capacity of 3-5% of maximum load .
- o Energy storage and hydrogen energy development to support renewable integration and grid stability .
- o National integrated big data centers and supercomputing facilities to enhance energy system modeling, forecasting, and operational efficiency .
- o Digital upgrades of traditional infrastructure including power, transportation, and utilities to enable ubiquitous sensing and intelligent dispatching .

Strategic and Policy Implications

The Energy Internet is positioned as a key enabler of China's carbon peaking by 2030 and carbon neutrality by 2060 goals . The plan also emphasizes:

- o Market-driven development to encourage private sector participation and innovation in energy digitalization

Energy Internet during the 14th Five-Year Plan Period

- o Support for green energy in developing countries while avoiding new overseas coal projects .
- o Integration of renewable energy sources into the national grid to increase non-fossil energy consumption to about 20% and non-fossil power generation to 39% by 2025 .

Conclusion

China's 14th Five-Year Plan envisions the Energy Internet as a digitally integrated, low-carbon, and resilient energy system. By combining smart grids, energy storage, renewable energy, and advanced digital infrastructure, the plan aims to modernize energy production and consumption, enhance national energy security, and accelerate the transition to a sustainable, low-carbon economy .

Chinese authorities have released a plan for developing a modern energy system during the 14th Five-Year Plan

In short, the five year plan"s outline sets a 18% reduction target for "CO2 intensity" and 13.5% target for "energy

This policy note outlines recommendations on the 14th Five-Year Plan (2021-2025) for National Economic and Social Development

CHN | Policy | This plan explicitly mentions global climate governance and the ongoing low-carbon transformation of the energy and

The plan includes five main parts: general requirements, main objects, key energy conservation and emission

Is China"s environmental target achievable in the forthcoming 14th and 15th five-year periods (2021-2030)?
Widespread

Emerging strategic industries outlined in the 14th Five-Year Plan such as new energy vehicles went from playing

BEIJING, Dec. 5 -- During the 14th Five-Year Plan period (2021-2025), China has seen its green and low-carbon energy transition

China released a plan for a modern energy system during the 14th Five-Year Plan period, setting targets for securing

Energy Internet during the 14th Five-Year Plan Period

During the 14th Five-Year Plan period, China has achieved groundbreaking progress, transformative breakthroughs,

To improve the modernization level of the industrial chain, the investment in energy research and development will

The theme of RE development in the 14th Five-Year Plan period is high-quality leap-forward development, including

The year 2025 marks the final lap for implementing China's 14th Five-Year Plan (2021-2025). Successfully meeting its

The plan decided to promote construction of smart cities and digital villages, as smart parking lots, smart charging

On 22 March 2022, China released the 14th Five-Year Plan (FYP) for the energy sector, covering development plan through 2025.

In terms of existing capacity, the share of benchmark-level energy-efficient production capacity in major energy

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