



Does digital energy storage technology improve system operation and maintenance? It is also related to previous evidence on the significance of digital energy storage technology in enhancing system operation and maintenance[1,55], which implies the global efforts towards the development of digital and intelligent energy???storage systems.



Why is China promoting energy storage at the 2025 two sessions? The buzzword ???energy storage??? at the 2025 Two Sessions underscores China???s strategic focus on building a resilient, sustainable, and diverse energy system, contributing new efforts to a sustainable global future. The country???s progress in new-type energy storage highlights how innovation can drive both economic and environmental progress worldwide.



Does digital transformation affect energy storage innovation? Baseline analysis Table 3 shows the impact of digital transformation on energy storage innovation estimated by a negative binomial model. Our findings show that digitalization strategies have a significant positive impacton technological innovation in energy storage after controlling for years and industry fixed effects.



What is the relationship between energy storage and digitalization? The internal coordinationbetween energy storage and digitalization is advocated. Booming digital technologies have brought profound changes to the energy sector. Digitalization in energy storage technology facilitate new opportunities toward modernized low-carbon energy systems.



Does digital strategy influence energy storage innovation? Our findings suggest that firms??? digital strategies,especially digitization and IoT strategy,have a positive impacton energy storage innovation,indicating a promising coordinated development between digital and energy storage technologies.





What are emerging digital technologies in energy storage? Under a global wave of digital transformation, a growing body of research has recognized and introduced the significance of emerging digital technologies embedded in energy storage [16, 17], particularly on the blockchain [18, 19], energy big data and cloud computing [20, 21] and the energy Internet of Things (IoT) [18, 22].



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The global industrial chain and energy supply chain are being reconfigured at an accelerated pace, and the uncertainty of China's energy supply security is growing significantly. Empowering energy supply chains through ???





As China's economy enters the stage of high-quality development, an innovative economy and a green economy have become the main themes []. The Fifth Plenary Session of the 19th Central Committee of the Communist???







The integration of traditional and digital energy enterprises can greatly improve the operational efficiency of oil and gas companies, and utilize the latest information technology to ???





MERICS comment: New energy storage ??? which differs from traditional energy storage by excluding pumped hydro systems ??? is already a booming industry. China added 20 gigawatts (GW) in battery energy storage ???



MERICS TOP 5 1. Unveiling China's new materials big data system strategy At a glance: The Ministry of Industry and Information Technology (MIIT), the Ministry of Finance (MOF) and the National Data Bureau released a plan ???



In November 2014, the State Council of China issued the Strategic Action Plan for energy development (2014???2020), confirming energy storage as one of the 9 key innovation ???





The evolution of energy conservation management in public institutions has generally progressed from behavioral energy conservation and policy-driven energy conservation to digital and intelligent energy ???





As the engine of the new era, digital economy (DE) may be a potential catalyst to overcome this dilemma (Fang et al., 2022) is a set of economic activities in which data ???





Building on its leadership in electric vehicles, lithium batteries and solar panels, China is now poised to unlock a new economic growth frontier in new-type energy storage. The rapid expansion of clean energy capacity in ???





Digital technologies are set to transform the global energy system in the coming decades, making it more connected, reliable and sustainable. That is expected to have a profound and lasting impact on both energy demand and ???





On the power generation side, energy storage technology can play the function of fluctuation smoothing, primary frequency regulation, reduction of idle power, improvement of ???





The Potential of Digital Business Models in the New Energy Economy Speeding efficiency gains and increasing demand-side flexibility The pace of digitalisation in the energy sector has accelerated rapidly in recent ???