

Article Overview

The UAE Energy Internet Building refers to DEWA's new headquarters in Dubai, a net-positive, AI-integrated smart building that exemplifies the UAE's renewable energy and digital transformation goals.

Overview

The building, located in Al Jaddaf, Dubai, is the tallest, largest, and smartest net-positive government building in the UAE, designed to generate more energy than it consumes while integrating advanced digital technologies and AI systems for energy management and operational efficiency . It serves as a flagship project demonstrating the UAE's commitment to sustainability, energy efficiency, and smart infrastructure.

Energy and Sustainability Features

- o Net-positive energy design: The building produces surplus energy through renewable sources, aligning with the UAE Energy Strategy 2050, which aims to triple renewable energy contribution and invest AED 150-200 billion by 2030 .
- o Solar integration: Solar energy is a key component, supporting the building's energy self-sufficiency and contributing to Dubai's Clean Energy 2050 Strategy .
- o Energy efficiency: Advanced building management systems optimize energy consumption, reduce waste, and enhance operational performance.
- o AI-driven operations: Artificial intelligence monitors and controls energy usage, predictive maintenance, and smart grid interactions, ensuring optimal performance and sustainability .

Digital and Smart Infrastructure

- o Smart services: The building offers digital services, including smart monitoring for electricity and water consumption, enabling residents and employees to make informed energy decisions .
- o DEWaverse platform: Utilizes Metaverse technology to centralize information and enhance user interaction with energy systems .
- o Integration with UAE's energy goals: Supports the D33 initiative, aiming for 33% clean energy by 2030, and contributes to the broader UAE Energy Strategy 2050 objectives .

Strategic Significance

The UAE Energy Internet Building exemplifies the convergence of renewable energy, AI, and smart building technologies, serving as a model for future government and commercial buildings in the UAE. It demonstrates how digitalization and sustainability can coexist, supporting the country's ambition to become a global leader in clean energy, smart infrastructure, and climate-conscious urban development . This building not only



UAE Energy Internet Building

showcases energy self-sufficiency and net-positive performance but also acts as a hub for innovation, research, and public engagement in sustainable energy practices.

Dubai Clean Energy Strategy aims to produce 100 per cent of its energy requirements from clean sources by 2050. The strategy also

The project is the first of its kind across the UAE and was first developed and implemented in 2025 at the Ministry

Discover the UAE Energy Strategy 2050. Explore the plan's key milestones, innovative initiatives, and the UAE's

For net-zero energy building construction, builders usually use laminated timber instead of concrete and steel. Moreover, the overall

The UAE Energy Strategy 2050 aims to triple the contribution of the renewable energy and invest AED 150 to AED 200 billion by

Ministry of Energy and Infrastructure in UAE To stay in touch with the latest information from the ministry

The UAE identifies clean energy as a broad category encompassing solar, wind, nuclear power, waste to energy, and hydrogen while

In the UAE, initiatives such as DEWA's Smart Grid Strategy are already

Dubai: Abu Dhabi will host the world's largest AI data centre under a landmark deal announced Thursday, marking

Moreover, the paper explores available opportunities to improve energy efficiency of the UAE building sector. In

The UAE energy transition started before the formation of the union in 1971. Building on the country's long-standing

The updated strategy aims to promote the deployment of renewable and nuclear energies, enhance energy efficiency, drive R&D and

Siemens will deploy technology at 60 government buildings in UAE to reach up to 27% energy savings. The program,



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Discover how renewable energy can transform the construction industry to meet UAE's Energy Strategy 2050. Explore key

The current review addresses this need by establishing a comprehensive review of research conducted between 2013

The UAE is pairing traditional and alternative energy sources to sustainably produce the power needed to

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