

UAE President witnesses launch of world's first 24/7 Solar PV, Battery Storage gigascale project to be built in Abu Dhabi

◆ 14 January 2025 | 📍 Abu Dhabi

In the presence of President His Highness Sheikh Mohamed bin Zayed Al Nahyan, Abu Dhabi Future Energy Company PJSC – Masdar and Emirates Water and Electricity Company (EWEC) today announced the launch of the world's first large-scale 'round the clock' gigascale project, combining solar power and battery storage in Abu Dhabi.

The launch was announced by His Excellency Dr. Sultan Al Jaber, Minister of Industry and Advanced Technology and Chairman of Masdar, and His Excellency Mohamed Hassan Alsuwaidi, Minister of Investment and Managing Director and Group Chief Executive Officer of ADQ.

The launch marks a pivotal moment in the clean energy transformation, allowing renewable energy to be dispatched 24 hours a day, seven days a week, reaffirming the UAE's position as a global pioneer in renewable energy deployment.

Delivering up to 1 gigawatt (GW) of baseload power every day generated from renewable energy, it will be the largest combined solar and battery energy storage system (BESS) in the world.

Located in Abu Dhabi, the project will feature a 5.2GW (DC) solar photovoltaic (PV) plant, coupled with a 19 gigawatt-hour (GWh) BESS, setting a global benchmark in clean energy innovation.

His Excellency Dr. Sultan Al Jaber, Minister of Industry and Advanced Technology and Chairman of Masdar, said, "For decades, the biggest barrier facing renewable energy has been intermittency—to be able to source uninterrupted clean power day and night. This has been the moonshot challenge of our time, and now, thanks to the resolute support of President His Highness Sheikh Mohamed bin Zayed Al Nahyan, with this groundbreaking project we have found the solution. In collaboration with EWEC and our partners, we will develop a renewable energy facility capable of providing clean energy round the clock. For the first time ever, this will transform renewable energy into a world-leading 1GW of reliable baseload energy every day on an unprecedented scale – a first step that could become a giant leap for the world."

This initiative demonstrates the remarkable scale and ambition of the UAE's energy transformation, delivering clean energy to power advancements in emerging technologies. The world-leading project reflects the vision and commitment of the UAE leadership in driving socioeconomic and environmental progress.

His Excellency Mohamed Hassan Alsuwaidi, Minister of Investment and Managing Director and Group Chief Executive Officer of ADQ, said, "The accelerated integration of solar power and advanced battery energy storage sets a new benchmark in clean energy, driving sustainability and reducing carbon emissions. By advancing energy infrastructure, we are leading the way in developing cost-effective, scalable renewable

energy, solidifying Abu Dhabi's position as a key player in shaping the future of global energy. Guided by the UAE leadership, this united effort within the energy sector powers the nation's technological advancement, ushering in a new era of intelligence, resilience, flexibility, and commercial opportunity while ensuring sustainable and uninterrupted energy for exponential growth."

Othman Al Ali, Chief Executive Officer of EWEK, said, "By launching the world's largest solar PV and Battery Energy Storage System, Abu Dhabi is setting a new global standard for sustainable energy development and innovation. This landmark project embodies EWEK's unwavering commitment to decarbonising the energy sector while driving the UAE's socioeconomic growth. As the backbone of the nation's clean energy transition, this facility supports critical industries such as AI and advanced technologies, ensuring their power needs are met sustainably and reliably.

"This project not only underscores Abu Dhabi's growing reputation as a leader in utility-scale renewable energy innovation but also cements EWEK's role in ensuring energy security for future generations. Collaborating with partners like Masdar and TAQA Transmission to facilitate the development of network infrastructure enables the achievement of our transformational milestones that accelerate the UAE's journey to achieving its Net Zero by 2050 strategic initiative."

Mohamed Jameel Al Ramahi, Chief Executive Officer of Masdar, said, "Developed in the UAE by Masdar, this record-breaking project will create over 10,000 new jobs, driving innovation and economic growth. As Masdar's largest and most ambitious project to date, combining an incredible 5.2GW of solar PV with 19GW hours of battery storage – the largest ever for a power utility project – this is truly clean energy on an unprecedented scale. Masdar, EWEK, and its valued project partners are setting a new global benchmark in technological innovation to address the challenge of renewable energy intermittency to generate 1GW of clean, uninterrupted power 24 hours a day, round the clock."

The solar PV and BESS facility will provide unparalleled stability and efficiency by overcoming the intermittency challenges of renewable energy. The 19GWh battery storage facility will enable seamless integration of solar power into the grid.

By integrating state-of-the-art renewable technologies with energy storage solutions, this landmark project exemplifies the UAE's commitment to scaling innovative clean energy solutions to meet evolving energy demands. This initiative also supports the UAE Energy Strategy 2050, and the facility will play a transformative role in energy systems, ensuring the UAE continues to lead by example in delivering towards the historic UAE Consensus agreed at COP28.