

Abu Dhabi Energy Valley Energy Storage Project





Overview

Located in Abu Dhabi and slated for completion in 2027, the project will integrate a 5.2-GW solar PV plant with a 19-GWh battery energy storage system (BESS) to deliver 1 GW of baseload renewable energy around the clock, avoiding an estimated 5.7 million tonnes per year of carbon dioxide emissions. What is a solar-plus-storage project in Abu Dhabi?

Abu Dhabi Future Energy Co. (Masdar) and Emirates Water and Electricity Co. (EWEC) have started building a solar-plus-storage project in Abu Dhabi that will deliver 1 GW of continuous baseload energy from a 5.2 GW solar plant paired with a 19 GWh battery system.

Why is UAE launching a solar power and battery storage project?

The launch of the solar power and battery storage project 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.

Will a 100 GW solar power plant be built in Oman?

Masdar, which has storage projects in several countries, said it is targeting 100 GW of total clean energy capacity by 2030. In September, a consortium led by Abu Dhabi Future Energy Co. (Masdar) was awarded the contract to develop a 500 MW solar-plus-storage project in Oman, integrating a 100 MWh battery system.

What is the largest combined solar and battery energy storage system?

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.



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[Abu Dhabi Department of Energy's Low ...](#)

Aug 22, 2022 · Abu Dhabi Department of Energy (DoE) today announced that the development of its hydrogen policy and regulatory framework ...

[Masdar Launches Major Solar and Energy Storage Project in Abu Dhabi](#)

Oct 25, 2025 · Masdar, the Saudi state-owned renewable energy company, has officially commenced construction on an ambitious solar and energy storage initiative in Abu Dhabi. ...



[World's first 24/7 solar PV, battery storage gigascale project ...](#)

Jan 14, 2025 · Abu Dhabi Future Energy Company PJSC - Masdar and Emirates Water and Electricity Company (EWEC) announced today the launch of the world's first large-scale 'round ...



UAE breaks ground on record-breaking solar and battery storage project

ABU DHABI, October 27, 2025 - Masdar and Emirates Water and Electricity Company (EWEC) have broken ground on the world's largest combined solar and battery storage project, the ...



[The UAE launches the world's largest solar energy storage project ...](#)

Oct 24, 2025 · and largest renewable energy project of its kind, combining solar power with a battery storage system. This is to provide continuous baseload power of 1 GW, 24/7. Sheikh ...



[Abu Dhabi's 5.2 GW Solar + 19 GWh Storage Project Powers ...](#)

Nov 24, 2025 · Credit: Canva Abu Dhabi is set to redefine the role of solar energy with the launch of the world's first gigascale renewable energy facility capable of providing continuous ...



[Abu Dhabi seeks developers for greenfield power storage project](#)

Jul 26, 2024 · State-owned Emirates Water and Electricity Company has requested proposals from 27 qualified companies and consortiums to develop a greenfield 400-megawatt battery ...





[Masdar, EWEC world-biggest solar-battery ...](#)

Jan 15, 2025 · Masdar-EWEC project combining solar and batteries to provide 'round-the-clock' renewables unveiled at Abu Dhabi Sustainability ...

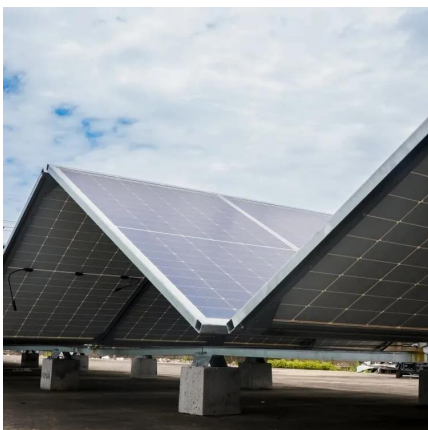


[Abu Dhabi Breaks Ground on World's Largest \\$6bn Solar and ...](#)

Oct 26, 2025 · Abu Dhabi -- Abu Dhabi has officially broken ground on the world's largest renewable energy project integrating solar power and battery storage, marking a historic ...

[Masdar, EWEC break ground on 1 GW baseload solar-plus-storage project](#)

Oct 24, 2025 · Abu Dhabi Future Energy Co. (Masdar) and Emirates Water and Electricity Co. (EWEC) have started building a solar-plus-storage project in Abu Dhabi that will deliver 1 GW ...



[UAE President witnesses launch of world's first 24/7 Solar PV, ...](#)

Jan 13, 2025 · 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 ...



[UAE President witnesses launch of world's ...](#)

Jan 15, 2025 · ABU DHABI, UAE, Jan. 14, 2025 /PRNewswire/ -- In the presence of President His Highness Sheikh Mohamed bin Zayed Al ...

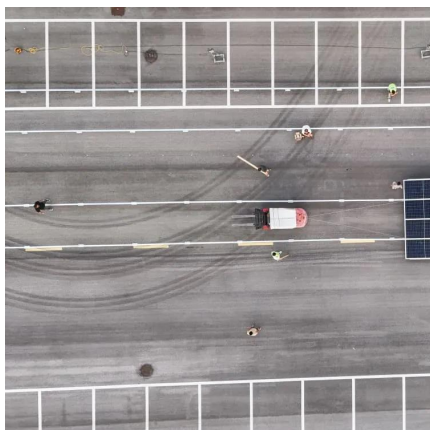


[Masdar , UAE President witnesses launch of world's first 24/7 ...](#)

Jan 14, 2025 · 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 ...

[UAE: Masdar picks suppliers to world biggest ...](#)

Jan 20, 2025 · Masdar and CATL executives at the supply partnership announcement in Abu Dhabi, UAE. Image: Masdar Masdar has ...



[UAE plans \\$6bn solar energy storage plant](#)

Jan 14, 2025 · Masdar-Ewec partnership Capacity of up to 5GW Abu Dhabi desert location The UAE will construct a renewable facility capable of ...



[UAE President witnesses launch of world's first 24/7 Solar PV, ...](#)

Jan 15, 2025 · ABU DHABI, UAE, Jan. 14, 2025 /PRNewswire/ -- In the presence of President His Highness Sheikh Mohamed bin Zayed Al Nahyan, Abu Dhabi Future Energy Company PJSC - ...



Energy Storage

Notable examples include the Gemasolar concentrated solar power (CSP) project in Spain, the first commercial-scale renewable energy project in the world to use molten salt thermal ...



[L& T selected as an EPC contractor for ...](#)

Jan 28, 2025 · The project, being developed by UAE's Masdar in collaboration with Emirates Water and Electricity Company (EWEC), will ...



[Masdar, EWEC world-biggest solar-battery project in Abu Dhabi](#)

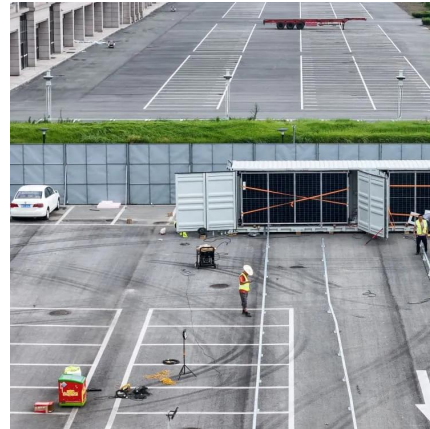
Jan 15, 2025 · Masdar-EWEC project combining solar and batteries to provide 'round-the-clock' renewables unveiled at Abu Dhabi Sustainability Week.





[Masdar breaks ground on 5.2GW/19GWh solar-plus-storage project ...](#)

Oct 24, 2025 · The UAE state-owned renewables developer Masdar has begun construction on a giant solar-plus-storage project in Abu Dhabi.

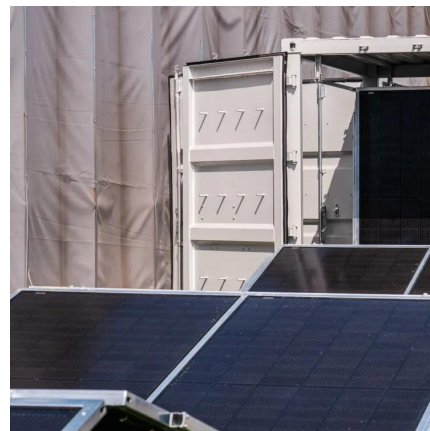


[Abu Dhabi launches world's largest solar and energy storage project](#)

Oct 28, 2025 · Recently, Saudi state-owned renewable energy developer Masdar officially launched a super large solar and energy storage project in Abu Dhabi with a total investment ...

[World's first 24/7 solar PV, battery storage ...](#)

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[Abu Dhabi unveils world's first 24/7 solar and battery storage project](#)

Jan 15, 2025 · The Abu Dhabi solar and battery energy storage system (BESS) facility will combine a 5.2GW solar photovoltaic (PV) plant with a 19GWh battery storage system, making ...



[Masdar gets contractors on board for \\$6bn ...](#)

Jan 19, 2025 · Abu Dhabi Future Energy Company (Masdar) has selected the suppliers and preferred contractors for the \$6 billion renewable facility ...



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