



Al Dhafra Solar PV Plant

Abu Dhabi, UAE

Abu Dhabi Future Energy Company – Masdar and TAQA – alongside partners EDF and JinkoPower – developed the Al Dhafra Solar Photovoltaic (PV) Independent Power Producer (IPP) project.

Al Dhafra Solar PV is 40 percent owned by TAQA, Masdar owns 20 percent, while the remaining 40 percent is equally shared by EDF and JinkoPower. Financial close of the project was achieved in December 2020 and the site became fully operational in June 2023.

The record-breaking project, located approximately 35 kilometers from Abu Dhabi city, has a capacity of 2 gigawatts (GW) and supplies power to the plant's off-taker, Emirates Water and Electricity Company (EWEC). The Al Dhafra Solar PV project is the world's largest single-site solar power plant, using almost 4 million bifacial solar panels to generate enough electricity for approximately 200,000 homes across the UAE, displacing 2.4 million tonnes of carbon emissions annually.

The plant deploys the latest in crystalline, bifacial solar technology, which delivers electricity to the highest efficiency enabling the plant to provide more power by using both the front and back of the panels.

QUICK FACTS

- Capacity of 2GW
- Displacing 2.4 million tonnes of carbon dioxide
- Powering approximately 200,000 homes
- Upon completion, the largest single-site solar power plant in the world
- Deploys the latest in crystalline, bifacial solar technology
- The project achieved one of the most competitive tariffs for solar power in the world at USD 1.32 cents/kWh
- During development, a record-breaking 10MW of solar panels were installed on average per day