

United arab emirates solar installation

,?,2009,, 40.31, 2050, 44% ?38% ?12% 6% ?

In the past four years, the prices of solar PV systems in the United Arab Emirates have been dropping by more than 76%. Moreover, UAE is also one of the countries that offer the lowest tariff and PPA prices. In fact, almost every year UAE manages to hit the breaking record when it comes to lower solar purchase power agreements. The latest solar PV award in the country, The Al Dhafra project has recently announced that they will permit a tariff of \$13.50 per megawatt-hour. So far, it is one of the lowest solar PPA costs across the globe.

With these solar benefits, the annual solar power growth in the country is continuously improving and is expected to gain more potential in the solar energy industry. Last 2020, the solar energy market of UAE obtained a 2.35% compound annual growth rate (CAGR) but is expected to hit more than 15% CAGR between 2020-2025 periods.

Between the forecast period 2020 to 2025, UAE's solar energy market is assumed to hit a record of more than 15% compound annual growth rate. The main drivers of this growth are government policies, incentives and tax credits. Even the advocacy to achieve high power demand from renewable energy resources to minimize the country's resiliency on fossils and to eliminate Carbon footprints also serves as one of the significant drivers to the growth of the UAE's solar market.

In addition to that, the constant dropping of solar system costs also helps in encouraging people to switch to solar power for either residential or commercial purposes. The lower prices of solar technologies are becoming more efficient in beating fossil fuel sources. Getting additional assistance and support from different solar energy organizations all over the world is also contributing to the growth of the United Arab Emirates solar energy market. However, according to the forecast, the high cost of solar installation, equipment maintenance such as the cleaning cost of solar panels and the limited power supply may affect and restrain the solar market growth.

According to the Rystad Energy report, the total capacity of installed renewable resources in the United Arab Emirates in 2020 reached 2.3 gigawatts (GW) and the solar photovoltaic (PV) projects comprised 91% of the total installed renewable capacity. This huge share of solar power is expected to soar high in 2022.

Also, Rystad Energy has forecasted that by the end of 2025, the total renewable capacity of UAE will reach 9 GW, whereas solar PV capacity is expected to gain 8.5 GW by the end of 2025. This impressive increase in capacity will help in diversifying UAE's energy mix. On the other hand, the total energy share of the United Arab Emirates in its power generation mix is expected to increase from 7% in 2020 to 21% in 2030, and to 44% by 2050.

Gaurav Metkar, senior analyst at Rystad Energy said in the report that the main priority of UAE as of the moment is to increase the growth of the country's renewable energy. Even if the pandemic causes a negative impact on the development of ongoing solar projects, they assure that the government will a lot a reasonable amount of investment. Besides, the country already caught the attention of significant global players in the renewable energy sector, which will alleviate the growth of their solar energy market in the next coming years.

Moreover, since some of the goals and targets for the solar energy market have already been achieved in 2020, it is expected that a massive project development pipeline in 2030 is already achievable. It might be too early to assume the milestone that will be achieved by the country in the 2050 target, but the current huge growth and big potential achieved by the UAE's renewable sector even during the pandemic will surely attract more solar investors and developers. This advantage together with the country's lowest power purchase agreement (PPA) cost, generous government policies towards solar power generation suggests that 2050 targets are almost within reach.

Based on the UAE's current project pipeline, its renewable capacity is expected to gain a significant CAGR of more than 31% in 2025. When it comes to renewable shares, among the seven emirates of UAE, the huge portion of the renewable activity is expected to take place in Abu Dhabi and Dubai, which when combined together will allot more than 90%, 8.2 GW of total capacity.

The major drivers of this huge growth include four solar farms, the Al Dhafra (2GW), Abu Dhabi PV3 (1500MW), MBR Phase IVa and IVb (950MW) and MBR Phase V (900MW), all of which are in various stages of development. The remaining 0.9 GW solar capacity will be generated from other solar projects in Umm Al Quwain, Ras Al Khaimah and Sharjah.

Currently, Abu Dhabi has installed a solar capacity of 1.3 GW. The major capacity shares of the total capacity come from the Noor Abu Dhabi (Sweihan) project with 1.17 GW capacity, whereas, the Shams solar CSP project gives its fair share of 100 MW. In addition, the Abu Dhabi virtual battery also contributed 108 MW to the region's solar capacity.

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