

# UAE'S SOLAR ENERGY FUTURE.



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The United Arab Emirates (UAE) has one of the highest per capita energy consumption rates in the world. This is due to a number of factors, including a hot climate, a growing population, and a rapidly developing economy.

The UAE's energy demand is met primarily through the consumption of fossil fuels, such as oil and gas. This makes the UAE vulnerable to fluctuations in global energy prices and contributes to greenhouse gas emissions.

In addition to its high energy demand, the UAE also faces a number of challenges in the energy sector, including:

- **Water scarcity:** The UAE is a water-scarce country, and energy production is a major water consumer. This creates a trade-off between energy and water security.
- **Environmental concerns:** The burning of fossil fuels contributes to air pollution and climate change. The UAE is committed to reducing its greenhouse gas emissions, but this will require a significant shift to renewable energy sources.
- **Energy subsidies:** The UAE government subsidizes energy prices for consumers. This helps to make energy more affordable, but it also discourages energy efficiency and investment in renewable energy.





# SOLAR ENERGY AS A SOLUTION

Solar energy is a clean and renewable energy source that can help the UAE to address its energy challenges. Solar energy can be used to generate electricity for homes, businesses, and industry. It can also be used to produce hot water and to power desalination plants. Solar energy has a number of advantages over fossil fuels:

- Clean energy: Solar energy does not produce greenhouse gas emissions or other pollutants. This helps to improve air quality and reduce the UAE's carbon footprint.
- Renewable energy: Solar energy is a renewable energy source, which means that it will never run out. This is important for a country like the UAE, which has limited oil and gas reserves.
- Water efficiency: Solar energy production does not require water. This helps to conserve the UAE's scarce water resources.

Solar energy can help the UAE to reduce its carbon footprint in a number of ways:

- Direct emissions reduction: Solar energy generation does not produce any direct greenhouse gas emissions. This means that switching to solar energy can help to reduce the UAE's carbon footprint directly.
- Indirect emissions reduction: Solar energy can also help to reduce indirect greenhouse gas emissions. This is because solar energy can be used to offset the use of fossil fuels in the electricity sector.
- Water-energy nexus: Solar energy can help to reduce the UAE's carbon footprint by reducing its water consumption. This is because solar energy production does not require water, while fossil fuel production and desalination do.

## REDUCING CARBON FOOTPRINT



# MASDAR AND DEWA'S AGREEMENT

In September 2023, Abu Dhabi Future Energy Company (MASDAR) and Dubai Electricity & Water Authority (DEWA) signed a groundbreaking agreement to build and operate the 1,800 megawatt (MW) sixth phase of the landmark Mohammed bin Rashid Al Maktoum Solar Park.

Once completed, the sixth phase of the Mohammed bin Rashid Al Maktoum Solar Park will increase its total production capacity to 4,660 MW, making it one of the largest solar parks in the world. The project is expected to reduce over 6.5 million tonnes of carbon emissions annually.

The agreement between Masdar and DEWA is a significant step forward for the UAE's solar energy sector. It is a further demonstration of the UAE's commitment to developing its renewable energy sector and its efforts to reduce carbon emissions.

Source: <https://www.dewa.gov.ae/en/about-us/media-publications/latest-news/2019/03/mohammed-bin-rashid-al-maktoum-solar-park>



## UAE'S SOLAR ENERGY FUTURE

The UAE has set ambitious targets for renewable energy deployment. The country aims to generate 50% of its electricity from renewable energy by 2050. Solar energy is expected to play a major role in achieving this target.

The UAE has a number of advantages for developing solar energy, including:

- **Abundant sunshine:** The UAE has abundant sunshine, which is essential for solar energy generation.
- **Government support:** The UAE government is supportive of renewable energy development and has introduced a number of policies and incentives to promote solar energy.
- **Investment:** The UAE has attracted significant investment in the solar energy sector.

The UAE is well-positioned to become a global leader in solar energy development. With its abundant sunshine, government support, and investment, the UAE is on track to achieve its ambitious renewable energy targets and reduce its carbon footprint.