حكومة دبي
GOVERNMENT OF DUBAI

هيئة كهرباء ومياه دبي
Dubai Electricity & Water Authority

Solar Energy in Dubai
Mohammed Bin Rashid Al Maktoum Solar Park
United Arab Emirates - Dubai

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“We recognize that preserving our energy resources will be one of the greatest challenges in our drive towards sustainable development.

This, however, will not materialize unless the different facets of our society adopt energy conservation principles in their core values.

The future generations will be the chief beneficiary of our achievements and the best judge of what we accomplish in this field. ”

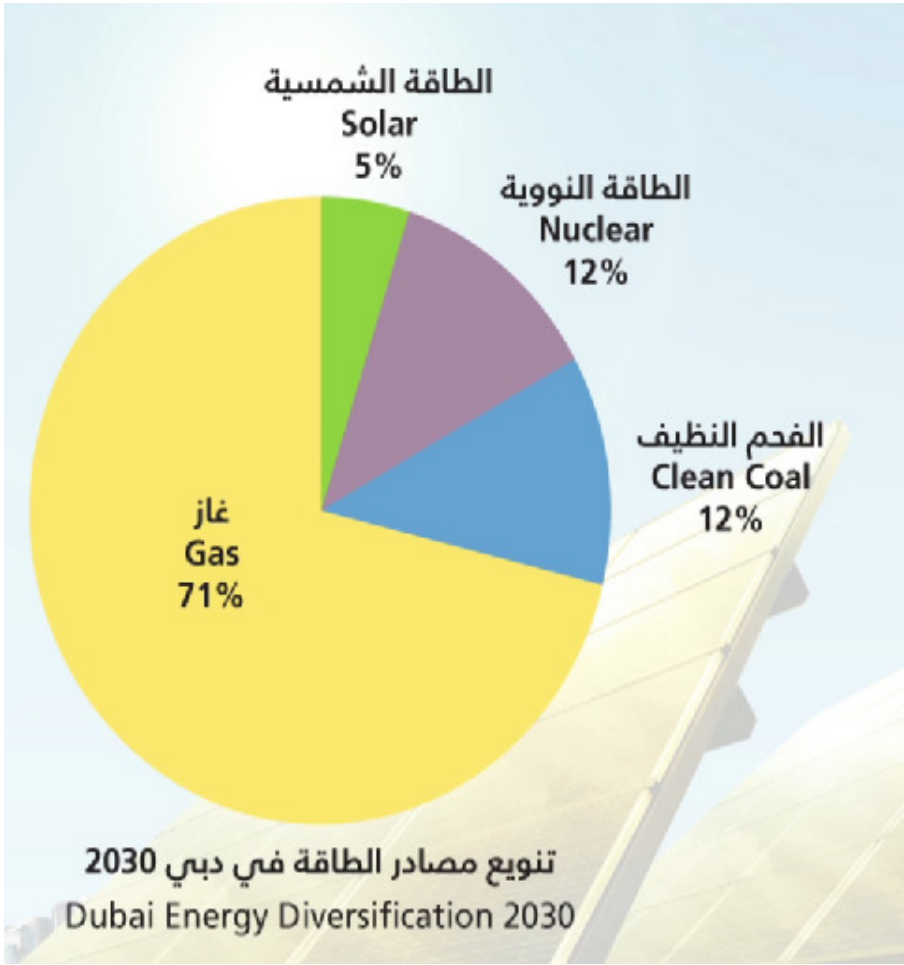
His Highness Sheikh Mohammed bin Rashid Al Maktoum

Vice President and Prime Minister of the UAE and Ruler of Dubai

The Future Starts Here……

Sustainable Energy

- UAE vision 2021 to have sustainable environment.
- Vision of HH Sheikh Mohammed Bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai launches the "Green Economy for Sustainable Development"
- Dubai Integrated Energy Strategy 2030 (DIES) was deployed in 2011 to set the strategic direction of Dubai towards securing sustainable supply of energy and enhancing demand efficiency of water, power and fuel.



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Sheikh Mohammed Bin Rashid Al Maktoum Solar Park

Under the guidance and patronage of HH Sheikh Mohammed bin Rashid Al Maktoum on Monday , 9th January 2012, Dubai launched Mohammed bin Rashid Al Maktoum Solar Park which is a milestone towards a sustainable future.

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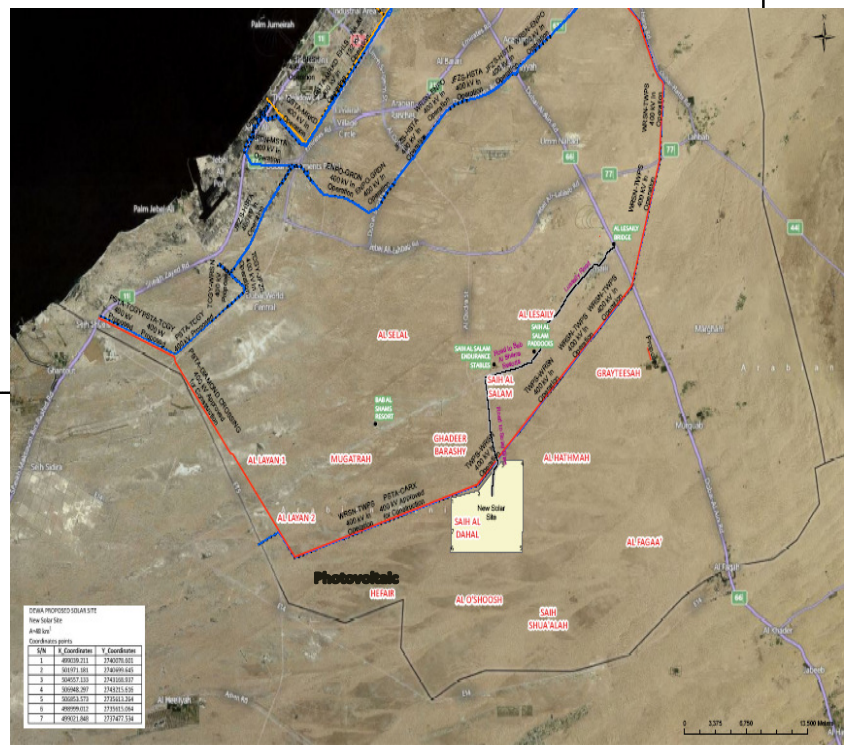
Sheikh Mohammed Bin Rashid Al Maktoum Solar Park

- Design and Development:

- HH Sheikh Mohammed bin Rashid Al Maktoum Solar Park project is part of Dubai's energy diversification initiatives to meet the renewable resource contribution targets.
- Location : The government of Dubai has allocated a site in Seih Al-Dahal, Dubai.
- Capacity : 1000MW
- Location : Dubai, Seih Al-Dahal
- Area : 40.45 KM2
- Technology: Solar Energy
- Environment: Carbon emissions reduction



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Sheikh Mohammed Bin Rashid Al Maktoum Solar Park

- Goals and Objectives:

- Support the energy diversification strategy.
- Reduce Carbon footprint.
- Convert desert wastelands into a natural resource environment.
- Promote sustainability and preserve earth's natural resources by using renewable resources in electricity generation.
- Contribute to improving the technology used for electricity generation by solar energy.
- Develop UAE expertise in the field of solar and renewable energy and building.
- Increase social levels of awareness about climate change and sustainable energy.
- Promote Research and Development and involve local universities and colleges in the field of renewable energy.
- Contribute positively towards Dubai's vision, brand, growth, society and environment.

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Sheikh Mohammed Bin Rashid Al Maktoum Solar Park

- Environmental Impact:

- Solar power systems generate no air pollution during operation, the environmental, health, and safety impact during operation is minimal. Using solar power will reduce the Carbon footprint compared to current methods using fossil fuels. (Will be reduced to 1 million tons of carbon a year when producing 1000 MW of solar energy with the number of 2000 hours operation)

Date	Installed capacity (MW)	Avoided emissions (tons of CO2 / year)
2013	13	10,000
2020 (1% of total capacity)	110	110,000
	130	130,000
2030 (5% of total capacity)	650	650,000
	1,000	1,000,000

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Sheikh Mohammed Bin Rashid Al Maktoum Solar Park

- Solar Energy
- Renewable Academy
- Research and Development Center

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Sheikh Mohammed Bin Rashid Al Maktoum Solar Park

- Solar Energy:

- First project in the Solar Park with a 13 MW capacity (PV).
- Design Basis Report for 1000 MW Development of Solar Power Park
- The Project is jointly Funded by the members of The Supreme Council of Energy.
- Consultancy Services Awarded in 22nd Feb. 2012 with M/s ILF Consulting Engineers.
- The 13 MW project planned to commence operations in October, 2013.

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Sheikh Mohammed Bin Rashid Al Maktoum Solar Park

- Status of 10 MW – Photovoltaic Electricity Generation Project:

- EIA Study report approved on 2nd Aug 2012
- RFQ document sent to all Contractors (160 nos) on 16th April 2012
- 78 Contractors submitted the Statement of Qualification
- Final short listed contractors (12 nos) with evaluation report was submitted on 18th June 2012 by the consultant
- EPC Tender documents finalized on 26th June 2012 and issued to shortlisted 12 Contractors
- Submission of Bids on 16th Aug 2012 and 6 Bids received.
- Plant commissioning Oct 2013.

Sheikh Mohammed Bin Rashid Al Maktoum Solar Park

• Meteorological measurement station

The installation of the station is included in the scope of 13 MW EPC Contractor. The following measurements/equipments shall be provided to monitor ambient and weather conditions:

- Air temperature, Humidity, Rain fall, Barometric pressure, Wind direction and Wind Velocity.
- Global solar radiation on inclined plane/ reference cell, horizontal & inclined plane.
- Direct and diffuse solar irradiation on horizontal plane.
- Module temperature.
- Data Logger.
- The station shall have facility to upload weather information to the internet (web portal) at least every 15 minutes.

The station shall be installed within 8 weeks from the award of contract to the 10 MW EPC contractor, so that the measurements shall be conducted for planning next phase projects CSP plants/PV in the solar park.

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Sheikh Mohammed Bin Rashid Al Maktoum Solar Park

- Status of Design Basis Report for 1000 MW Development of Solar Power Park

The report includes:

- Meteorological Data Analysis
- EIA study
- Hydraulic Assessment
- Site Description
- Potential Safety Impacts on Aviation and Airports
- Technology Description and Selection (CSP,PV)
- Grid Connection
- Plant Control system
- Building and Infrastructure
- Technical Performance and Energy Yield Assessment
- Plant Design and optimization
- Economic Analysis and Optimization (Financial Analysis)
- Implementation Strategy and overall site Strategic Philosophy

Design Basis Report will be finalized by end of 2012.

EIA Study for total solar park is under progress

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Renewable Academy

- The Renewable Academy will support meeting the ever growing demands for training in the Renewable Energy Sector for the region. Adopting international suppliers of further training and knowledge-transfer in the fields of renewable energies and energy efficiency.
- Our goal is to qualify more personnel in the areas of renewable energy and energy efficiency. The process is to offer immediate and precise training with a lasting effect, for rapid practical application and to fill a part of the gap in the market in the GCC for training and further education in the area of renewable energy, and to facilitate the transfer of know-how to developing and newly industrialized nations.

The Future Starts Here……

Research & Development Center

- The center will be fully dedicated to advancing renewable energy and energy efficiency technologies from concept to commercial application. By carrying on with the latest innovations, analysis, and expertise to enable all possibilities for a more clean energy industry and lead to numerous success stories from across the center.
- The center main goal will be to develop renewable energy and energy efficiency technologies and practices, advances related science and engineering, and transfers knowledge and innovations to address the nation's energy and environmental goals. This will help to shape clean-energy alternatives for powering our homes and businesses, and the nation's transportation infrastructure.

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THANK YOU FROM ....

Sheikh Mohammed Bin Rashid Al Maktoum Solar Park

The Future Starts Here.....