



Qatar’s first solar test facility to be ready this year

The project is meant to identify the best-suited solar technologies for Qatar

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Work in progress at the Chevron Qatar-GreenGulf solar test facility at QSTP.

PICTURE: Steven Ziegler

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The country’s first solar test facility, being established at Qatar Science & Technology Park (QSTP) by Chevron Qatar and GreenGulf, is expected to start testing in three or four months.

The five-year project is meant to identify the best-suited solar technologies for Qatar, given that dust, heat, humidity and limited availability of water and land are the key challenges.

Chevron Qatar, an affiliate of global energy giant Chevron Corporation, and GreenGulf, a Doha-based clean technology advisory and investment firm, had signed a memorandum of understanding for joint study in April 2010.

“We are testing solar photovoltaic (PV) and solar thermal technologies, in the first and second phases, respectively, and ideally, would like to inaugurate the facility by November this year,” Chevron Qatar president Carl A Atallah told Gulf Times.

Revealing that the installation of PV panels is underway, GreenGulfs CEO Omran al-Kuwari expressed the hope to complete phase one construction by September and that of phase two by first quarter next year.

The promising technologies will continue to be tested while the ones that are not going to succeed will be replaced with others at the live facility, he explained.

A lot of different applications will be explored, ranging from power generation to desalination. For example, solar car parking canopies, in which Chevron has expertise, are to be installed at the test facility, with a vision for commercial application.

“What is important about the test site is that not all solar technologies are created equal. We are going to test the efficiency of those technologies and select the ones that are best for the specific environment,” Atallah said.

GreenGulf is also working with some of the solar companies to test technologies which they feel are particularly suited for the climate in Qatar.

“Now the Mena region has become a big market, a lot of engineering and design has taken this into consideration. So a big chunk of what we are testing is going to be a first time for those technologies,” al-Kuwari stated.

The tests could include application of certain coatings that make dust bounce off from the solar panels, or certain materials that operate under high heat and humidity. Basically it is like design and material modifications that would make these technologies more suitable for use here.

“But at later stage, we will work with some of the approximately 20 companies involved with us on a case by case basis, and this will be throughout the year,” al-Kuwari said.

It is intended to generate close to half a megawatt of power from the test facility, though the main goal is testing different technologies.

“We will utilise that power in the facility itself, for electric cars and other purposes including supply to the nearby buildings like QSTP and so on,” the GreenGulf CEO said.

Within PV there are several different types. Solar thermal is in a complete different category, it is the principle of using the sun to generate steam which could in turn power turbines or for other uses.

Solar thermal is steam focused whereas PV is more electricity focused. Steam focused is mostly used for larger scale applications, including desalination and water heating, al-Kuwari observed.

Atallah pointed out that solar thermal technology is also used for enhanced oil recovery.

"Instead of generating steam with gas, you can do the same with sun. We are testing that technology in California for steam generation."

Asked about the more than a year's delay in the start of construction for the project, al-Kuwari clarified it was caused by the extra time in planning.

We wanted to make sure that the technologies and methodologies are right, looked at lessons learnt from what Chevron has been doing in California and the experiences from Abu Dhabi (Masdar project).

"We did not want to rush into it and at the same time wanted to make sure what we are doing is tailor-made for Qatar.

"We are looking at a lot of applications, including those suitable for 2022 World Cup and food security. The delay was kind of on purpose to make sure we do it right," he added.

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