

Middle East becomes a solar energy hotbed

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Buildings equipped with solar panels, such as this barn in Germany, are common in Europe, but Arab countries are quickly catching up. Getty Images

The rate of adoption of solar energy is accelerating in markets such as Europe and the US, while the Middle East has generally been slow in developing alternative energy sources.

But there is growing evidence that countries including the UAE are not only beginning to catch up, but may even overtake more developed markets.

Global demand for solar energy grew by 54 per cent in the second quarter of this year, says the international solar energy market research and consulting company Solarbuzz.

Total industry revenues were about US\$17.2 billion (Dh63.17bn) in the second quarter of this year, compared with \$6.2bn in the second quarter of last year.

“The rush to install in Germany ahead of tariff declines in mid-2010, combined with strong incentive programmes across Europe [especially in Italy, France and the Czech Republic] and an improved financing environment, drove the global photovoltaic [PV] market to over three times the level in the second quarter of 2009,” says the Solarbuzz president Craig Stevens.

Analysts believe the global demand for solar energy panels is going through a boom period and within a few decades is set to achieve grid parity, the point at which alternative means of

generating electricity is equal in cost, or cheaper than, grid power.

“There has been a substantial increase in the addition of solar-based technologies in power generation, especially after 2007,” says Lakshman Rao Sutrave, a senior energy and power systems analyst at the research company Frost & Sullivan.

“Global solar power cumulative installation is expected to reach more than 25 gigawatts in the end of 2010 ... This is a substantial growth compared to annual addition in 2004, which was a mere 1gw.”

Solarbuzz says solar energy demand has grown at about 30 per cent a year over the past 15 year, contrasting with hydrocarbons (oil) energy demand, which typically grows up to 2 per cent annually.

Solar power is now being seen as the main potential replacement energy source when oil reserves start to run low. But some analysts believe the Middle East may take longer than other regions to deploy the new technology fully.

“Solar power is definitely a viable alternative for conventional energy sources compared to depleting oil and gas reserves and carbon emissions ... countries like India are expecting to reach grid parity in solar power by 2030 through large-scale production and investments in research and development,” says Mr Sutrave.

“The Middle East, where oil is cheap compared to global peers, is expected to take slightly more time – say 10 years more – to reach grid parity.”

But the Middle East is starting to catch up and is proving to be a magnet for solar energy developments.

“The Middle East has been a slow runner in deploying alternate energy sources due to its huge oil and gas reserves,” says Mr Sutrave.

“However, of late it has realised the long-term effects and has started taking steps to deploy alternate energy sources like solar ... some of the key initiatives considering its abundant solar energy are projects like Desertec and Masdar.”

Desertec is a project designed to enable the use solar energy and wind energy in deserts worldwide. It was initiated by the Club of Rome innovation think tank and the German Trans-Mediterranean Renewable Energy Co-operation, which promotes the use of renewable energy in Europe.

Desertec technology will be implemented in the MENA region by the consortium DII GmbH, formed by a group of European companies and the Desertec Foundation.

Jutta Hoeflich, a spokeswoman for Desertec, says huge desert solar energy facilities in countries including Morocco and Algeria are already being constructed.

“We have gone to build in Morocco and Algeria,” said Ms Hoeflich. “Development has begun but there is really nothing to see as yet.”

Masdar is a city being built by the Abu Dhabi Future Energy Company, a subsidiary of Mubadala Development, a strategic investment company owned by the Abu Dhabi Government, which is providing the majority of seed capital.

The city is being built on a site beside Abu Dhabi International Airport. It will rely entirely on renewable and clean energy and is to host the headquarters of the International Renewable Energy Agency.

Developments such as these have convinced research companies such as Frost & Sullivan that the Middle East, particularly the UAE, are now extremely serious about implementing a viable energy alternative to oil and gas by the middle of the century.

“Though solar power markets will not be contributing significantly in the medium term – until 2015, the market for solar power is expected to boom once these ambitious projects, which are currently slow, pick up pace,” says Mr Sutrave.

While the Middle East starts to build up solar power, a question mark is growing over future growth in markets such as Germany. The Middle East could be in a position to overtake more developed markets in solar energy.

Solarbuzz predicts tightening policies for energy subsidies, as European governments try to reduce the economic burden of their national incentive programmes, will slow down solar energy development.

The research company identifies the fundamental problem as the continued dependence of the industry on market incentives. A new mechanism of tariff adjustment in Germany is expected to subdue the German market over next year and 2012.

“Exposure to individual country markets remains a high-risk strategy,” says Alan Turner, the Solarbuzz vice president of European Market Research.

“The policy risks are simply too great and downstream solar companies need to look for a geographical portfolio that balances materiality and growth to secure their long-term position.”

But irrespective of slowdowns in markets in Europe, solar energy adoption is expected to continue to increase, with locations such as the Middle East coming to the fore.

“Even if solar power seems to be a costly affair as of today, down the line, in the next 20 to 30 years, it is expected to reach grid parity and hence a viable solution to substitute oil resources,” says Mr Turner.