

Oil-rich UAE looks to the sun for energy

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The United Arab Emirates is still sitting on huge reserves of oil and natural gas, but now it plans to harness yet another of its abundant natural resources -- the year-round sunshine. In the vast desert surrounding the capital Abu Dhabi, the authorities are planning to spread arrays of solar panels to transform the blazing sun into energy. The plan may be expensive, but the handsome surpluses currently earned from oil revenues can cover the cost.

"In the UAE today we do not suffer from a lack of energy security, but we never want to suffer from it," said Sultan al-Jaber, chief executive officer of the Abu Dhabi Future Energy Company (ADFEC). "We are thinking ahead of ourselves," he told AFP as he explained ADFEC's initiative to develop alternative energy -- branded Masdar, or "source" in Arabic. The government-backed initiative is ambitious, aimed not only at generating solar power but also at luring major manufacturers to produce the required technology locally. Jaber describes the Masdar initiative as a whole new economic sector fully dedicated to alternative energy, which will also have a positive impact on the emirate's economy.

Abu Dhabi sits on most of the UAE's oil and gas reserves, ranked respectively as fifth and fourth in the world. Proven oil reserves on their own are expected to last for another 150 years. But like most oil-producing countries, the UAE also wants to diversify its economy in order to ease its traditional economic dependency on oil.

The idea of solar power has also appealed to the ruler of neighbouring Dubai, Sheikh Mohammad bin Rashid al-Maktoum, who said this month that solar technology is the "best renewable option (for Dubai) going forward." The booming city-state, which unlike Abu Dhabi has dwindling oil wealth, faces a surging demand for energy to power its rapid economic development. Such "green" talk brings wide grins to the faces of environmental activists. "This is a very good prospect for the country's energy sector," said Habiba al-Marashi, who chairs the non-governmental Emirates Environmental Group. "It is very encouraging to know that the leaders of the country are making moves to shift to renewable sources of

energy," she told AFP, predicting that it will blaze a trail for other initiatives.

Abu Dhabi's ambition also aims to maintain its world reputation as an energy exporter. "It is time for Abu Dhabi to start positioning itself as a (solar) technology developer... This is to maintain, and hopefully expand, Abu Dhabi's position in the global market," Jaber said.

In practical terms, Masdar has announced plans to build a \$350 million 100-megawatt solar plant, which will later be boosted to 500 megawatts to help ease peak-time pressure on the national grid. The plant, which will use concentrated solar power (CSP) technology, will be tendered in August to foreign developers who it is hoped will also bring in investment.

On the research and development front, ADFEC announced late in February that it was teaming up with the Massachusetts Institute of Technology (MIT) to establish the Masdar Institute of Science and Technology. This will be developed on part of a six-square-kilometre (two and a half-square-mile) plot of land granted by the government of Abu Dhabi and dedicated to become an energy cluster. "Our target is to have the Masdar zone as a showcase of sustainability," Jaber said, insisting that Abu Dhabi wants to invest in research and development to enrich its human capital.

Lamenting as "unfair" the UAE's ranking by the World Wildlife Fund as a top per capita emitter of carbon dioxide (CO₂) because of its high energy consumption, Jaber said the Masdar zone is planned to have a zero CO₂ emission. Despite its constant access to sunshine, only parking meters currently seem to be powered by solar energy in the UAE. Even solar water-heaters -- popular in several sunny countries -- are seldom seen. Other Gulf countries share a similar poor record in exploiting solar energy. But Masdar wants to take the UAE within six years from total negligence of solar power to becoming an exporter of solar technology.

Jaber said ADFEC expected within two months to sign an agreement with a major producer to manufacture photovoltaic components in the Masdar zone. Besides solar power, ADFEC is also looking into the possible use of wind to generate electricity, with feasibility studies being conducted as far as 15 kilometres (nine miles) offshore. Jaber said that a wind atlas for the UAE will be available in about nine months.

It remains to be seen, however, whether the UAE will be able to allocate enough space for solar panels and wind farms while the value of land continues to soar on the back of a robust construction sector. "This is one of the challenges when making the move to shift to alternative energy... We are confident that there will soon be a balance of priority between the property and the energy sectors," said environmentalist Marashi.