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SOLAR POWER IN THE MIDDLE EAST AND NORTH AFRICA: WHAT FUTURE DOES IT HAVE? PART II

A recent article by Stratfor, <u>A Bright Future for Solar Power in the Middle East</u>, assessed the future of solar power in the Middle East and North Africa, and offered guidance to those seeking to invest in the market. We have been following the development of the PV sector in the region and agree with much of Stratfor's comment. With permission, we have published some of their main points below, adding our own views.

Saudi Arabia

Saudi Arabia relies on oil for electricity production, and it faces rising domestic demand for electricity at a time when low oil prices have put significant financial strain on the government. Its domestic fuel consumption is following an unsustainable trend and the need to wean itself off oil is ever growing.

Under current goals, renewables would account for 8 percent of electricity production by 2020 and 15 percent by 2030, with solar power accounting for the majority of that increase. In the past, however, Saudi Arabia has lengthened the timelines for such targets. The Kingdom also has ambitious nuclear energy plans, which we have been involved in, and aims to remain an 'energy exporter' post oil by developing and then exporting its own solar and nuclear technologies.

Saudi company <u>ACWA Power</u> is involved in multiple projects in the region (Morocco and Jordan) and farther away (South Africa and Turkey). ACWA Power has gained a regional reputation as having sufficient economies of scale to underbid other major solar power firms, mostly Western or East Asian companies. This helped ACWA Power win large bids such as the first phase of Morocco's Noor plant and the Mohammed bin Rashid solar park in the United Arab Emirates. Saudi Arabian Oil Co., the national oil company, has even expressed interest in developing solar export capability. There are also plans to add solar technology production facilities.

The United Arab Emirates

The UAE, meanwhile, has positioned itself as a renewable energy financier and development hub. It is the home of the International Renewable Energy Agency, and hosts important conferences focused on both renewable and non-renewable energy. Furthermore, it has used its ample hydrocarbon largesse to develop unique large and small-scale renewable projects in ways that less resource-rich countries such as Morocco, Jordan and Egypt cannot match. The United Arab Emirates has established itself as a regional leader in solar power in part because of its greater ability to adopt the technology (both domestically and through partnerships with other countries) and to fund



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projects throughout the world. <u>Masdar</u>, the country's renewable energy arm, is connected with the <u>Mubadala Development Co.</u>, one of the country's smaller sovereign wealth funds. Masdar is involved in projects throughout the Middle East, Africa, South America and Europe and on islands in the Pacific.

The UAE has shown a similar aptitude for new technologies and flexibility in working with international partners to have the foremost nuclear energy programme in the region, with the first nuclear power station due to commence generation this year, although a delay is looking likely.

Algeria

Algeria is a leading natural gas producer, and has ambitious plans to follow a similar path with solar energy. Renewable power installations totalling 22 gigawatts of capacity — 13 gigawatts of that solar — are proposed to go online by 2030. That is enough power to meet nearly a quarter of domestic needs while still reserving a significant portion for exports. However, the issue of insufficient energy storage, which is a barrier to incorporating large amounts of variable renewable power worldwide, will require substantial research and investment first. Energy storage is a major issue that we have advised on but which is yet to be cracked.

Algeria will require foreign investment and cooperation to meet its grand plans. While Algeria is more stable than some of its neighbours, such as Libya, its government is in a slow leadership transition, and the risk of instability caused by protests relating to development and distribution of energy resources is high. Nonetheless, the country has made strides toward attracting the necessary investment to build out its solar capacity. With over 250 megawatts of capacity installed in 2015 and work occurring at additional sites in 2016, Algeria is moving toward its target of 15 percent of electricity being generated by solar by 2020.

Summary

Overall the region will undoubtedly install more renewable energy installations in the coming years. However, there are and will continue to be concerns for those wanting to build, own and operate systems in the region. There are lesser risks for those supplying renewable technologies and those seeking to operate purely as EPC contractors, particularly with the involvement of the World Bank in countries such as Jordan.



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