

## Opportunities for Renewable Energy Projects in Saudi Arabia

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Authors: Stefan Schmitz, Hayley Steel, Vincent R. Gordon

While traditionally regarded solely as the world's premier producer of oil, Saudi Arabia has recently started to look at alternative sources for its energy consumption, and, maybe not surprisingly, renewable energy ranks high on the list: the country has very high levels of solar irradiance and huge areas of desert, which make it an ideal location for solar projects, along with other renewable energy projects. The Saudi plans are very ambitious (as will be shown below) and many investors believe this is a good opportunity to get involved in this market.

### The Future for Renewable Energy in Saudi Arabia – The K.A.CARE Plan

Currently, the Kingdom only boasts 3 MW of solar power, less than Egypt, Morocco, Tunisia, Algeria and the United Arab Emirates, and despite the fact that the irradiance in Saudi Arabia exceeds that of even the best European solar markets.

Now, however, Saudi Arabia wants to expand its renewable energy generation and, in particular, plans to create a solar sector capable of providing 30 percent of its electricity by 2032. It wants to build very large amounts of solar projects in the near future – plans that will require about \$109 billion of investment – with specific rules to be finalised soon. Along with plans to increase solar energy generation, Saudi Arabia is also planning to place more emphasis on renewable energy generation generally, with intentions to include wind, geothermal, waste-to-energy and nuclear energy generation plans in its strategy.

The King Abdullah City for Atomic and Renewable Energy (K.A.CARE) was set up in 2010 to provide the framework for developing an alternative energy capacity for the Kingdom. K.A.CARE introduced a proposal for a new renewable energy policy in May 2012. Saudi Arabia hopes that its ambitious plans will help reduce the domestic oil consumption by as much as 523,000 barrels a day over the next 20 years. Indeed, the aim of the K.A.CARE plan is to turn Saudi Arabia into “the Kingdom of Sustainable Energy”.

Interestingly, Saudi Arabia plans to move quickly to **feed-in tariffs** to build out the program, which should make the projects very interesting to investors.

Of the total of 54,000 MW of capacity in the proposed program, which also includes wind and geothermal, nearly 90 percent of the capacity will be assigned through the application of technology-differentiated feed-in tariffs.

Here are some of the proposal's other key elements:

There is no maximum project size

Minimum project size is 5 MW

Term for the PPA is 20 years

Evaluation criteria include price and non-price factors

Feed-in tariff will be launched after the second auction

The policy will be reviewed every three years

Some domestic content will be required

## **The Proposal for Renewable Energy – Solar**

The K.A.CARE plan involves developing 41,000 MW of solar power within two decades, of which 16,000 MW should come from PV panels, with a further 25,000 MW to come from concentrated solar power (“CSP”) plants.

The emphasis on solar power has already led to the recent completion of a solar park on the rooftop of the King Abdullah University of Science and Technology – a project that has been delivered by Saudi Arabia’s National Solar Systems (NSS) and a German-based consortium.

The K.A.CARE program will begin with a minimum of two rounds of competitive bidding for solar PV, Concentrated Solar Thermal Power, wind energy, geothermal energy and waste-to-energy capacity.

The two rounds of bidding are anticipated to include plans for around 5 GW of utility-scale solar projects to be installed. The first round of bidding will take place in 2013<sup>1</sup>, the second in 2014.<sup>2</sup>

Bids are anticipated to be evaluated based on a number of factors, including local content and track record in solar project development.

These projects may also qualify to receive CERs (certified emissions reductions), on the basis of measured emission reductions, in accordance with the CDM (clean development mechanism) carbon reduction credit scheme – if they meet the necessary conditions, especially that of additionality.<sup>3</sup>

**The Proposal for Nuclear** Although the focus of the K.A.CARE plan appears to be on solar generated energy, the plan also sets out plans to generate additional output via nuclear energy generation. The plan calls for the first nuclear power plant to be online in 2020, and potentially to construct up to 60 reactors by 2030. Again, the detailed proposals are yet to be publicised, but this shows that Saudi Arabia is serious about making changes to the energy generation market and is exploring a variety of energy generation sources and options.

**Opportunities for Investment** The K.A.CARE plan is ambitious and we are anticipating that this will lead to a seismic shift in the Saudi Arabia energy market, with immense opportunities for investment in the renewable sector. Indeed, as the details of the K.A.CARE plan become more developed, we are anticipating that the eyes of the renewable energy market will focus very quickly on Saudi Arabia. If the plans come to fruition, Saudi Arabia will become one of the world’s largest solar power producers.

As noted above, the investment required to implement the aims of the K.A.CARE plan is vast and may be worthwhile for potential investors to examine these opportunities. For example, the “Global Market Outlook For Photovoltaics Until 2016” report publicised by the EPIA identifies Saudi Arabia as a “promising” market as a result of “a growing awareness and interest from policymakers.”<sup>4</sup>

We have had preliminary discussions with various contacts in the renewable energy market and have been overwhelmed by the number of entities that are already giving serious consideration to exploring Saudi Arabia's opportunities. In particular, we have received comments from solar module producers (including contacts within the Chinese production market) who are interested in finding project partners to provide investment/development expertise, with arrangements that allow for placing orders with project partners.

If this is something you would like to explore, Reed Smith has the knowledge and contacts within the renewable market to further discuss your interests. Please feel free to contact any one of our authors or the following Energy & Natural Resources partners: Stefan Schmitz, Vince Gordon, Henry King, Don Ousterhout, Stephane Nguyen, Marc Fredj, Richard Ceeney.

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<sup>1</sup> Targets are: Solar PV: 1,100 MW, Concentrating Solar Power: 900 MW, Wind: 650 MW, Geo-thermal & Waste-to-Energy: 200 MW

<sup>2</sup> Targets are: Solar PV: 1,300 MW, Concentrated Solar Power: 1,200 MW, Wind: 1,050 MW, Geothermal & Waste-to-Energy: 250 MW

<sup>3</sup> To that effect, the projects would need to be planned and designated as CDM projects right from the start and not just labelled as such later.

<sup>4</sup> "Global Market Outlook For Photovoltaics Until 2016" May 2012 – European Photovoltaic Industry Association, at page 56.

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