

# Saudi Arabia eyes renewable energy shift to retain oil hold

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Dubai/Al Khobar: For oil colossus Saudi Arabia, a shift to renewable energy is as much about preserving its international influence and maximising its revenues as saving the planet.

The world's leading oil exporter and custodian of more than 260 billion recoverable barrels — around a fifth of the world's stock — Saudi Arabia has long held sway over markets and governments with its ability to add or subtract crude at a turn of the spigots.

It has repeatedly said the world will for decades to come need the fossil fuels that in the short term are by far the most profitable.

Adding renewables to the mix, however, is both inevitable and pragmatic, analysts say, as soaring domestic energy use will burn huge amounts of fuel oil unless alternatives, such as solar power, can be used instead.

"It's really a preservation decision using solar for domestic consumption and keeping your oil for more lucrative export markets," said Vahid Fotuhi, director, Middle East, of BP division BP Solar.

Industry officials have predicted a tripling in Saudi power consumption to around 120 gigawatts by 2032 from around 40 gigawatts last year.

That rate of expansion could consume all of the roughly eight million barrels per day (bpd) Saudi Arabia produces.

"Right now, out of the eight million barrels per day they produce, over three million barrels per day are consumed domestically, mainly for power generation. That figure is growing eight per cent per annum," Fotuhi said.

Unless it can develop renewables, Saudi Arabia could find itself with nothing to finance the national budget and with no spare capacity to be the world's supplier of last resort — a role that has long cemented its relationship with the biggest oil user the United States.

Back in September 2009, Saudi Oil Minister Ali Al Nuaimi had already set the highly ambitious goal of matching oil output with solar power. Around eight million barrels of oil equivalent per day in solar energy would make it the world's leading solar power.

**Most liberal city**

"In the same way we are an oil exporter, we can also be an exporter of power," Al Nuaimi said at the time King Abdullah University of Science and Technology (KAUST) was inaugurated in the Red Sea port of Jeddah. The university, in the kingdom's most liberal and outward-looking city symbolises Saudi Arabia's plans to diversify not just into alternative energy, but into a knowledge-based economy.

In Dhahran, a major administrative centre for the Saudi oil industry and home to state oil company Saudi Aramco, the King Fahd University of Petroleum and Minerals (KFUPM) is also working away at similar problems.

Its enthusiastic students see the kingdom making leaps forward, even though there are technological problems to overcome.

"I think Saudi is moving fast towards being a leader in solar energy," Majid Lenjawi, an engineering student at KFUPM.

### **Spectacular yields**

"Saudi Arabia is the world's largest oil exporter and it has to become the leading exporter of solar energy," said fellow engineering student Ammar Madani.

"Oil has good yields and the cost of production is low, but it is not a renewable source of energy." For Saudi Arabia, the yields for oil are spectacular.

Analysts have estimated the total cost for extracting Saudi crude, including capital expenditure, is around \$5 (Dh18.36) a barrel, the cheapest in the world.

The industry's most expensive extraction costs for non-conventional oil, such as Canadian tar sands, are pegged at around \$50 a barrel and higher — still below current market prices of roughly \$100 for Brent crude futures.

As well as providing billions to invest back into the oil industry, Saudi Arabia's huge profits leave it well placed to come up with the capital needed for alternative energy forms.

In theory, gas is an easy, short-term answer.

Accordingly, Saudi Arabia has invited foreign partners to help as it expands its gas capacity, although so far finds have been disappointing.

Without allowing any foreign involvement into its sacrosanct upstream sector, Saudi Arabia has already expanded its oil capacity to 12.5 million bpd.

That leaves it with roughly four million bpd of spare capacity should the need arise