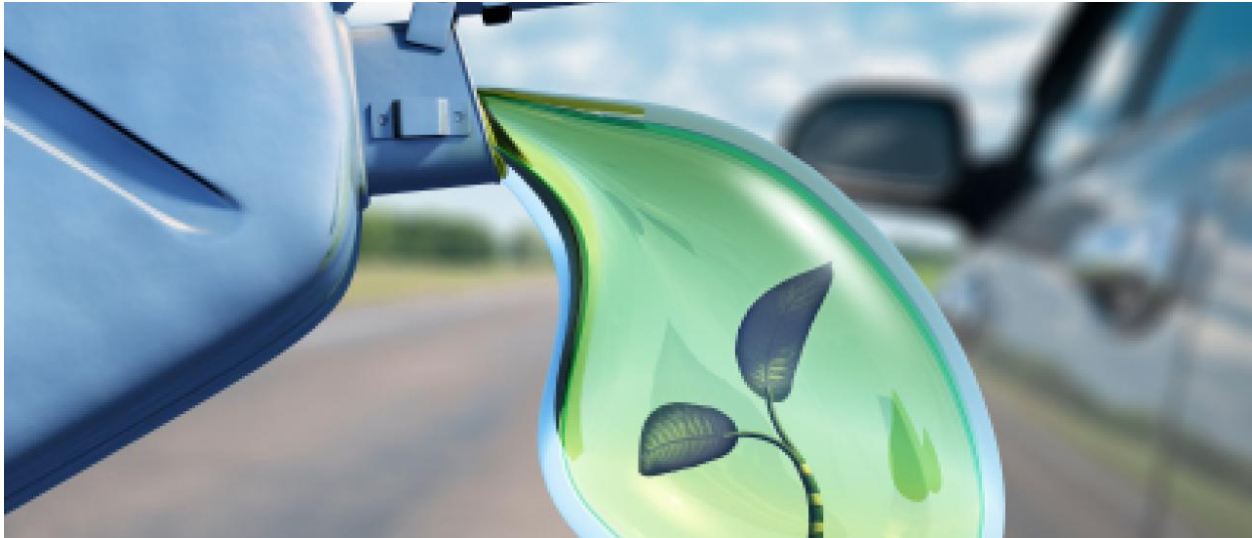

Going Green - Or Else: The Dilemma Facing Abu Dhabi



By Jane Williams, Editor, Knowledge Arabia

With depleting gas supplies and a looming power shortage Abu Dhabi is looking to nuclear and renewable energy to fuel its ambitious development plans. Is the oil titan going green?

Climate change is prompting many governments to rethink their energy policies and reduce carbon emissions. In the Middle East, major oil exporter Abu Dhabi is spending tens of billions of dollars building the Middle East's first nuclear power plants and developing renewable energy technology. But in this case motive is more a case of economics. Ironically, the Middle Eastern emirate, sitting on 10 percent of the world's oil reserves, is running out of gas.

"The change in Abu Dhabi's policy to embrace renewable energy is a hard-headed response to national economic interest," Dr **Li-Chen Sim**, an associate professor specialising in foreign policy and oil politics at the U.A.E.'s Zayed University told a policy breakfast audience at INSEAD's Abu Dhabi campus recently. "While it's true nuclear and renewable energy could bring prestige to Abu Dhabi, and adopting alternative energy as a brand shows the country is not an opponent of climate change, I wouldn't say its

green credentials are a driving factor... (neither) is it, as critics claim, decoration to paint over the fact that Abu Dhabi is a major fossil fuel exporter.

“It’s a case of need. They need gas for development, they need renewables and they need nuclear.”

The looming gas shortage seems odd given Abu Dhabi is sitting on the world’s fifth largest gas reserves. But it’s this abundance that has made the emirate so reliant on the commodity, according to Hamda Al Kindi, senior information specialist for the Abu Dhabi Council for Economic Development. In a recent report, "Abu Dhabi’s Gas Dilemma", Al Kindi noted the challenges the emirate’s natural gas sector was facing both in accessing and processing its gas and balancing demand and supply.

As a major feedstock to generate electricity, gas is vital to desalination, responsible for 21 percent of the United Arab Emirates’ water supply. A huge amount is being re-injected into the emirate’s aging oil fields to increase their productivity and large volumes are being shipped to Japan to meet long-standing export contracts.

On the domestic front, electricity usage is skyrocketing at a rate of nine percent a year - three times the global average - to meet the needs of the U.A.E.’s expanding population and the country’s economic ambitions to diversify away from oil and into energy intensive industries such as steel, fertilisers and petrochemicals.

“Without gas or alternative forms of cheap energy these industries which are targeted to contribute 20 percent of GDP by 2020, will be in huge trouble,” Dr Sim told INSEAD Knowledge.

Addressing the gas dilemma

To address the “gas dilemma” the government is looking at an energy mix, developing new gas fields, increasing imports from gas-rich neighbours, and developing alternative forms of energy. More than US\$20 billion has been committed to building Masdar City, an emerging cluster for experimental housing and businesses using solar, wind and hydro power. The cluster is home to the International Renewable Energy Agency (IRENA) and Masdar Power, a developer and operator of renewable power generation projects with a target to generate seven percent of Abu Dhabi’s energy by 2020.

This figure is unimpressive when compared to the European Union where more than 12 percent of energy is generated by renewable sources (Sweden, Finland, Austria and Latvia all recorded rates of over 30 percent in 2011). But the figures, says Dr Sim, while modest are achievable.

“What Abu Dhabi is doing is using renewable energy as a hedge for the future. They can see in the future there’s going to be carbon credits and there’s going to be more environmental protection legislation. They don’t want to necessarily play a leading role but they are far-sighted enough to realise they have to plan for the future and to know that when the time comes, when renewable technology advances, they are ready to advance with it.”

Not so nuclear power. “This is a different story, they are very proud of their nuclear programme and this is an area where they are very keen to lead if not the world, at least the region.”

Nuclear ambitions

Talk of a nuclear plant in the Middle East usually sets alarm bells going. But Abu Dhabi’s proposed US\$22 billion nuclear plant at Braika, a windswept coastal town, 270km west of Abu Dhabi near the Saudi Arabian border, has strong international support.

Construction work on the plant - being built, run and maintained by the South Korean company, Kepco - is 25 percent complete with the first of four 1,400MW reactors expected to be online by 2017, scaling up to supply a quarter of Abu Dhabi’s power needs by 2020. The U.S. Export-Import Bank has authorised a US\$2 billion loan to the U.A.E. and the United States Congress has cleared the way for U.S. power house, Westinghouse Electric Company to supply nuclear components, technology and construction services. Initial agreements have been signed paving the way for uranium sales with the U.S., Russia, Australia, Canada, Britain and France.

To get this support and this level of international interest, Abu Dhabi has had to pass a federal law promising not to enrich uranium or reprocess the waste in any way.

“The U.A.E. is the only country to have put that in its federal legislation,” says Dr Sim. “It’s a very big deal because it sends a message that peaceful nuclear plants can have a place in this region. Abu Dhabi is very serious

about its nuclear ambitions. It's not just the money, a lot of time and diplomatic muscles have been spent on the programme."

The Emirates Nuclear Energy Corporation (ENEC) is paying Emirati students a working salary to study nuclear engineering at a tertiary level and has set up a master's degree programme for engineering and physics graduates. High school students have been sent to South Korea for an intensive 12-day summer programme organised by ENEC and Korea Hydro and Nuclear Power Co., Ltd, and Westinghouse is taking on engineers to train them in nuclear technology.

Cutting subsidies

But despite the money and efforts spent driving its alternative energy programmes, Dr Sim says Abu Dhabi's green credentials won't be taken seriously until something is done about its domestic policy. With massive subsidies for energy and water (between 50 and 90 percent depending on whether you are an expatriate or a local) there is little incentive to curb excessive household usage. "There is a lot of feeling here in Abu Dhabi, and the Gulf in general, that cheap energy is a national birthright for countries that have lots of gas. The decision to lift those subsidies is a political issue, and a difficult one to make given the current climate in the Middle East. All government agencies realise they have to raise electricity and water tariffs. When they will, that's a big question."

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