

ENERGY

Frozen out?

The Gulf's transition to clean energy cannot wait any longer, says renewable energy entrepreneur Omer Ghani

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AS the winter storm Jonas blitzed through the US east coast late last month, New York's utilities were challenged to keep the lights on. Thousands lost power in the world's financial nerve centre, prompting many analysts, as well as consumers, to ask whether they would be better off having their own microgrids to help provide power in extreme situations.

Omer Ghani, a renewable energy entrepreneur who watched from his apartment as the superstorm dumped thick snow on Central Park, thinks he may have a solution.

"When people lose power, they need to go to a shelter or access rescue services and these are powered by a microgrid, which is currently based on fossil fuels - but can be run on renewable energy" explains the chief executive of KiloWatt Labs, an energy storage and renewable energy technology company based in New York.

Ghani whose company was showcasing its technology at the Abu Dhabi Sustainability Week recently, is a strong advocate for energy independence and empowering customers.

In Abu Dhabi, Ghani's company launched a battery, which is non-chemical and charges in 30 seconds, he claims.

"The Sirius battery and the Centauri server," he says, referring to the

products being showcased, "have the resilience and robustness in delivering in extreme weather events and, more importantly, they enable the transition from dependency on fossil fuel generation to its elimination."

This may be a brave new world altogether for the Gulf region. Only last year, when Ghani was still based in the UAE and working on developing the battery technology, market realities were very different. Oil prices were low, but not as low as they are now, and subsidies were still going strong.

Today, the region is removing subsidies, deregulating utility prices and privatising national resources.

"Utilities all over the world are a monopoly because it's very expensive to generate and distribute power," Ghani notes.

"The real advantage of renewable energy is the ability to generate and consume electricity in the same place. Where you put solar power, you can generate electricity and consume it right there. You can generate electricity in your house. You don't have to buy electricity from an entity, whether it's state-owned or privately-owned. It's like being able to grow your own food."

Ghani is quick to add that he doesn't advocate the "elimination of the utility company" as such.

"But this technology enables energy independence," he says.

Being able to generate your own power may be a radical concept now, but it may well be the reality sooner rather than later as the world's reserves



Around 26.8 inches of snow - the highest in a century - were recorded as winter storm Jonas lashed New York

of easily extractable fossil fuels deplete.

"Imagine building another dam or deploying a large gas plant and laying wires from remote locations far way," says Ghani.

"How much time and money that takes, compared to putting up a solar farm right next to, for example, Arabian Ranches Two [in Dubai]. While you're building the community, you can build the electricity infrastructure. And it's just for those 50,000 people - you don't have to worry about the rest of the city.

"That's how renewable works. You can scale in a modular fashion."

It was not long ago, when oil was at

its peak, that Gulf states were pledging ambitious renewable energy targets over the coming decade, to reduce fossil fuel consumption and reduce emissions. As yawning deficits eat into regional government reserves, those goals are now under scrutiny.

"What's important is to see if the governments of the region continue to invest," says Ghani. "Governments have a lot of priorities, and not just solar farms.

"It's unreasonable to expect that the level of investment will continue at \$20 per barrel, as it was committed to at

\$80 per barrel.

"How much longer depends on the price of oil and what happens geopolitically."

The scalability of renewable energy in the Gulf, and the importance of achieving targets by their established timeframe, is imperative in light of increased cost-efficiency concerns within the GCC, says the International Renewable Energy Agency (Irena).

The GCC could save 11 trillion litres of water withdrawal (16 per cent less than current levels), save 400 million barrels of oil in the power sector (25



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Jonas disrupted utilities around New York

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per cent decrease), create more than 200,000 direct jobs and reduce the per capita carbon footprint by eight per cent in 2030, if the targets are achieved, Irena says in its latest report.

Realisation of these goals will help the region "reduce carbon dioxide emissions and save precious water resources, all the while meeting its fast-growing energy needs sustainably," said Irena director general Adnan Z Ameen, in comments reported by *Gulf News*.

Ghani agrees that it's only a matter of time before renewable resources are the next big energy source.

"If you take the core asset of the Middle East, oil, the region has the entire infrastructure for it," says Ghani.

"As the shift happens from fossil fuel to renewables, the Middle East will incorporate and deploy a massive infrastructure to generate all that energy it can supply to the rest of the world.

"You've got an aeroplane going around the world on solar power. The Abu Dhabi government is behind that."

The UAE recently announced plans to increase its target for power generation from clean fuels to 30 per cent by

2030. Dubai ruler Shaikh Mohammed bin Rashid al Maktoum even hopes to place solar panels on every roof by 2030 and announced the establishment of a Dhs100 billion (\$272 million) Dubai Green Fund intended to provide "easy loans" for investors who work in clean energy.

While Ghani is enthusiastic about these changes, he says the reality is that renewable energy entrepreneurs face several challenges in the region.

"It [finance] exists on an informal personal level - there's currently no institutional money for that," he says.

"But if you're able to get over that hurdle, somehow find the money, then there is some form of angel investment available.

"Angel investing is growing in the region but it is more focused on tech as opposed to green tech, though we have seen some activity happening in

green tech as well and some deals are happening there."

As New York cleans up after Jonas, Ghani is keen to get back to business. He's currently working to raise a Series B round of \$10 to \$15 million for his renewable energy startup, which he hopes to secure by the second quarter of this year.

For now, he says that interest is coming in from all quarters, including from oil and gas investors.

"Funnily, there's a group of investors in our company who are oil and gas money from the south of the US - Louisiana, Texas" says Ghani.

"These are third generation oil well owners. We talked to them about what's going on and they're quite clear that this [fossil fuel] price is not going to last because you're getting close to production cost

"You have to make the conversion to renewables. It's not a changing every moment thing. Investing in renewable is a process that is continual regardless of the price of oil - because when the price of oil goes up, you lose the same amount of time that you gain by not doing it." ■