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Israel's 'Don Quixote' of wind power says two-thirds of electricity demand can be met with wind turbines

Eli Ben-Dov: In 10 years of working through the application process, I have yet to receive a license

• By EHUD ZION WALDOKS

Thirty-six years of "tilting at windmills" and attempting to promote the large-scale adoption of wind turbines to generate electricity has given Eli Ben-Dov a cutting wit that almost masks his frustration with government bureaucracy.

Ben-Dov, who was the guest lecturer at the Holon Institute of Technology's "Window to a Vision" seminar late last week, began measuring wind potential in Israel in 1974 during the OPEC oil crisis. He spent years working for the Israel Electric Corporation building measurement devices and meticulously recording the wind speeds and other factors that govern the production of electricity using wind turbines.

In 2006, he left the IEC to manage Afcon E.B. Wind Energy Ltd, a private wind farm contractor, part of the Afcon Industries Group.

In a surprisingly well-attended lecture for the first week of the summer semester, Ben-Dov made the case for wind as Israel's main source of alternative energy, in a presentation laden with equal amounts of quips and technical jargon.

"Over the last 10 years, wind energy has multiplied a lot around the world. At decade's start, 17,734 megawatts had been installed. Now, there are about 160,000 MW installed," Ben-Dov said.

The top three countries are Germany, at 25,000 MW; Spain, at nearly 18,000; and Denmark, with 3,384, which represents 20 percent of the country's electricity demand.

By comparison, in the Middle East, there are just 835 MW installed. Egypt has installed 450 MW and plans to install another 200. In Israel today, despite 36 years of Ben-Dov's efforts, there are only six MW installed.

Afcon is now working on adding another 22 MW.

However, Ben-Dov said that with a feed-in tariff of 60 agorot per kilowatt hour, there was a potential for 7,000 MW. Demand for electricity currently stands at just over 10,000 MW nationwide.

A feed-in tariff is the price at which the government will buy electricity from private producers guaranteed for 20 years.

While the government will never rely on wind energy as its main source of fuel, Ben-Dov was trying to make the point that, despite official skepticism and the many bureaucratic hoops he has had to leap through, wind energy could be a respectable contributor to Israel's fuel basket.

Turning to a comparison with solar energy, Ben-Dov contended that wind turbines produced more energy per dunam than standard solar photovoltaic panels and required far less land.

Furthermore, he said, they could be profitable with a feed-in tariff of 60 agorot, rather than the NIS 1.50 being offered today for medium-sized solar fields.

He also noted that it took about four days to set up a wind turbine, implying that the installation process was far shorter than that of a solar field.

While few think of Israel as a particularly windswept country, Ben-Dov vigorously maintained that his measurements revealed that there was enough wind in Israel for wind farms.

He refused to divulge his measurements, calling them classified business information.

Others in the field have also contended that there was *enough wind* although the IEC has remained somewhat skeptical as to its overall potential.

However, Ben-Dov also noted the many steps a wind farm needed to go through before getting a license.

"In 10 years of working

through the application process, I have yet to receive a license," he said.

The Holon Institute of Technology (HIT) was a fitting host for Ben-Dov's lecture. It is the first academic institution to have started an alternative energies track in its engineering school, Prof. Gady Golan, dean of the faculty of Electrical, Electronics and Communication Engineering, told *The Jerusalem Post* before the lecture.

HIT has 4,000 students and accepts 100 more a year than Tel Aviv University,

according to Golan.

Moreover, HIT prides itself on "being a second chance for marginalized or socially excluded populations," where we attempt to "break the glass ceiling for them, enable social mobility in Israeli society, and create agents of change," he said.

More than 50% of graduating classes were of Russian origin, he said, and there were a fair number of Ethiopians as well.

"Whereas, generally, a grade of 80 is needed on the entrance exam, for Ethiopi-

ans we made it 70 to give them a better chance, given their unique background [which often did not include much formal schooling]," he said.

Golan recalled one student who had been accepted despite being illiterate until the age of 15.

Despite a select lessening of entrance criteria, Golan insisted that the quality of the education was second to none and his engineers were always in demand.

The alternative energy track consists of six courses: an introductory course, sun technologies, installing solar energy systems, wind and water technologies, power engineering, and fuel cells.

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(Bloomberg)

WIND TURBINES can generate more energy per dunam than standard solar photovoltaic panels, according to expert Eli Ben-Dov, right.

The track also has a state-of-the-art solar and wind laboratory, Golan said.

He said he was especially interested in collaborations with overseas partners to

widen the opportunities for his students and promote alternative energy in Israel.