

# Israel: getting better at going green

Noga Tarnopolsky on Nov 24, 2011 @ 3:45 AM

TEL AVIV, Israel — What can be done about an intractable problem like the movement of the sun?

For many years, if you were in the solar energy business, the solution to the conundrum of energy lost due to the static nature of panels was elusive or costly: the options were either to resign oneself to squandering half a day's worth of power or to mount the panels up on a "flamingo leg," a sturdy mast which rotates towards the moving sun.

If, however, you are Eyal Dror, an Argentine-born engineer and the founder of Eternegy, a start-up company recently highlighted at the Innovation Pavilion of WATEC, the water, energy and environment industry exhibition held last week in Tel Aviv, you think differently.

Dror is a kite surfer. One day, out on the waves, enjoying the sun and reigning his sail in on thin lines of twine, he thought, why not?

Eternegy now offers technology based on steel wires to hold solar panels firm against the wind, and angle them towards the sun. Entire fields of solar panels can be managed through wireless commands. They can withstand winds of up to 140 kilometers and are better suited to desert sand than the poles.

Eternegy is on the verge of mass production.

Two hundred and seventy exhibitors representing 100 countries crammed into Tel Aviv's exhibition grounds for WATEC, an annual high-tech mecca.

Scott Kleinberg, deputy director of the private enterprise office at the US Agency for International Development (USAID) was shopping for new, cheap technologies that can help with the salinization of deep, old wells in the West Bank.

“We are looking for solutions offered by industry here,” he said. “We want technologies that Palestinian farmers can use to extend the lives of their wells.”

Eli Cohen, CEO of AYALA Water & Ecology, stood in front of a huge wall depicting the city of Nice, France, and the surrounding lands of the Var valley, in which his company has just completed a self-sustaining system of waterways and enclaves to protect the city from the flooding that has plagued it.

“Old agronomy have been abandoned, causing flooding, and the depletion of aquifers has brought about contamination. Flora and fauna have vanished,” he said.

AYALA won a 2008 tender to create a network of natural watersheds protecting the city and its rebuilding its water ecosystem without resorting to any chemical intervention.

Peter Paz deals with another troublesome predicament of urban life: 32 billion cubic meters of water are lost every year to leaky pipes, representing 25 percent of all the water distributed. In London, 650 million liters of water are lost every day.

Most of the losses are incurred due to small, sometimes tiny leaks. But most systems designed to protect urban piping are intended to plug large-scale seepage.

Paz's start-up, Curapipe, offers what might be called laparoscopic surgery for pipes, an alternative to actual pipeline replacement and the attendant urban disruption. Using a proprietary sponge-like unit called a pig, the system employs water pressure to detect small leaks, and deploys an epoxy-based curing compound to seal and cure the affected pipe. Curapipe's system is currently being piloted by Thames Water and will be commercial in 2012.

Tal-Ya Water Technologies exhibited one of the most visually striking pieces in the pavilion, a silvery plastic polymer platform with sci-fi ribs that surround and protect a young sapling, heating its roots and collecting dew, which flows to a central drain for natural irrigation.

"It is basically a mini-greenhouse specifically for the sapling's roots," said Menachem Agassi, the company's soil and water conservation expert. Even smaller versions are made for the propagation of such trifling plants as lettuce. Each platform costs about \$2.70.

Still, Agassi was not the only guy at the conference plying mini-greenhouses.

Micha Naveh's enterprise, Hamamit offers everything from greenhouses the size of a lunchbox, for the window-ledge propagation of seeds, or delicate orchids that conserves water to specially outfitted large greenhouses for therapeutic use in special-ed schools.

Hamamit's bespoke greenhouses come equipped, if need be, with thermostats and heating devices that can recreate any environment from the soil to the sky, but "specialize in Israeli environments," according to Naveh. A school in Milwaukee, Wisc., for example, can order a Dead Sea atmospheric greenhouse, or a church in Belgium can order a recreation, in miniature, of the Sea of Galilee.

These are particularly popular with religious institutions. The company also offers improbably miniscule rain-drop showerheads to be fitted on recycled plastic soft-drink bottles, so that, in the event that delicate seedlings in a greenhouse require extra watering, the experience will not prove traumatic.