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Telco Systems taps solar start up for energy cost relief

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Israeli carrier Ethernet specialist, Telco Systems, has tapped an experimental solar energy system to power its laboratory following an intense search for solutions to lower rising costs. Telco Systems CEO, Zvi Marom, says the new miniature concentrating photovoltaic (MCPV) solar system developed by a new Israeli start up, Distributed Solar Power (DiSP), fits perfectly to the company's requirements because it can generate both electrical power and thermal energy that can be used in heat exchanges for air conditioning.

One of the key benefits of solar power for Telco Systems is that it generates electricity when the price of power costs the most during a day.

"In Israel, there is a price differential for electricity in different times during the day," Marom said. "Between 8 in the morning and 8 in the evening, electricity costs more than 6 times more than during the night."

The main difference of the DiSP system from traditional photovoltaic panels is that it uses a reflective dish to focus the sun's rays into a small energy conversion unit. Each is installed on a tracking mechanism that follows the sun during its path across the sky and is expected to generate 200 watts of power. A system that can generate 40 kilowatts of electricity would require a total area of 500 square meters housing 180 of the units, according to DiSP, who also asserts that the system is more efficient in converting energy to electricity than traditional solar power systems, and with the added thermal energy harnessed, offers a drastic price reduction for the energy.

"A detailed analysis of large scale manufacturing costs of the MCPV unit shows that the normalised cost for electricity alone is in the range of \$1.5-1.75 per watt. When factoring the value of the thermal energy, the cost is reduced to approximately \$0.9 per watt," DiSP said. Telco Systems is now working with DiSP to commercialise the product before the end of this year, Marom said.