



Revolutionary Concentrated PV reaches world record of 72% solar efficiency in the field, now connected to the grid

ZenithSolar provides electricity and thermal power with zero carbon emissions at the same cost as fossil fuels

Kiryat Gat, Israel, November 24, 2010

ZenithSolar, a global leader in renewable energy solutions, recently installed its 3rd Generation Solar Z20, the world's most efficient Combined Heat and Power system (Concentrated PV + Solar Thermal) making for the first time, clean-energy solar power economically viable without the need for subsidies.



ZenithSolar launched its advanced 3rd generation Combined Heat and Power Z20 Concentrated photovoltaic system at Kibbutz Yavne, Israel, providing the municipality with both hot water and electricity. With all new high efficiency multi-junction PV, **Z20 is achieving 72% solar efficiency in the field, making it the most efficient clean-energy solar generator in the world.**

While the first 16 demonstration units installed in Kibbutz Yavne in April 2009 provided hot water and electricity to the community, with the latest product upgrade Kibbutz Yavne is now producing and selling electricity to the Israel national grid and providing hot water for 220 community residents. Z20 is certified for FIT (Feed In Tariff) rating.

According to ZenithSolar CEO Roy Segev "In essence, PV 'Generation 1' was solar flat panels, 'Generation 2' was thin film and now 'Generation 3' in the PV world is Combined Heat and Power, Concentrated PV + Solar Thermal". Mr. Segev added that "For solar energy to economically compete and become a more widespread alternative, the mechanisms that capture the energy must be more affordable and much more efficient. ZenithSolar's mission is to bring solar energy into power and heat to people and businesses globally at the same cost as national energy."

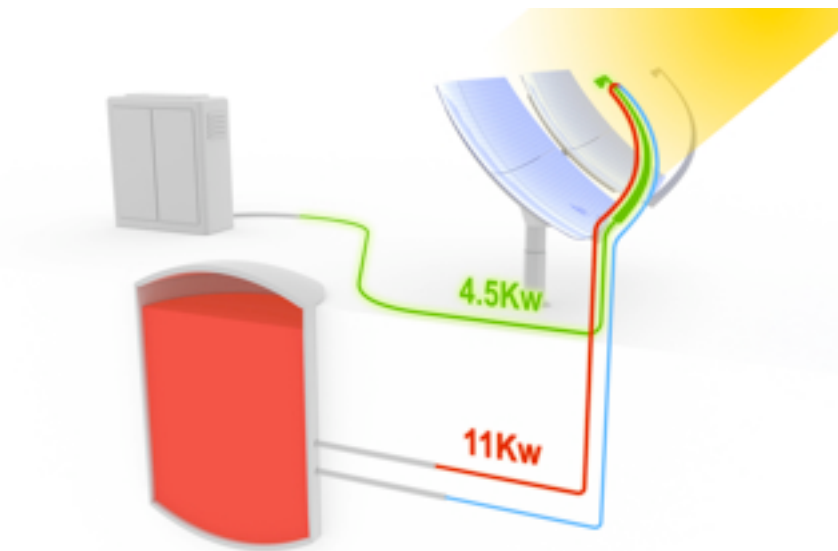
The 3rd Gen PV system eliminates the gap by combining Heat and Power in Z20 Concentrated PV + Solar Thermal system proving solar energy can be profitable without government subsidies. Segev who co-founded ZenithSolar in 2006 with Prof. David Faiman, a renowned scientist in the solar field with more than 30 years' experience, and Dr. Andreas Bett from the ISE institute in Germany. The ZenithSolar team has successfully created a competitive commercially available clean-energy product in an extremely short time period.

Integrated in a surrounding vineyard for optimal land usage, the Z20 units in Kibbutz Yavne are producing today 250 Kwp Combined Heat and Power with only 352 sqm of solar mirrored dishes. According to Hanoch Pnini, Kibbutz Yavne member and Project Coordinator "ZenithSolar field has been positive and exciting, we significantly reduced the hot water oil heating bill and are now selling electricity at a profit!"



How it Works?

The ZenithSolar Z20 features two 11-square-meter semi-parabolic optical mirror collectors to capture, reflect and concentrate incoming sunlight onto a highly efficient receiver that generates both electricity and thermal energy.



The Z20 receiver consists of a high temperature multi-junction photovoltaic array directly coupled to ZenithSolar engineered Micro Channel Heat Exchanger, designed to **convert the concentrated solar flux into both electrical power and thermal power**. DC electrical power from the PV cells is converted to AC power and fed to the utility grid. The thermal energy in the form of heated fluid up to 100⁰ C is pumped through a closed-loop system for industrial processes, facility heating, residential hot water, absorption air conditioning, water distillation or other hot water applications.

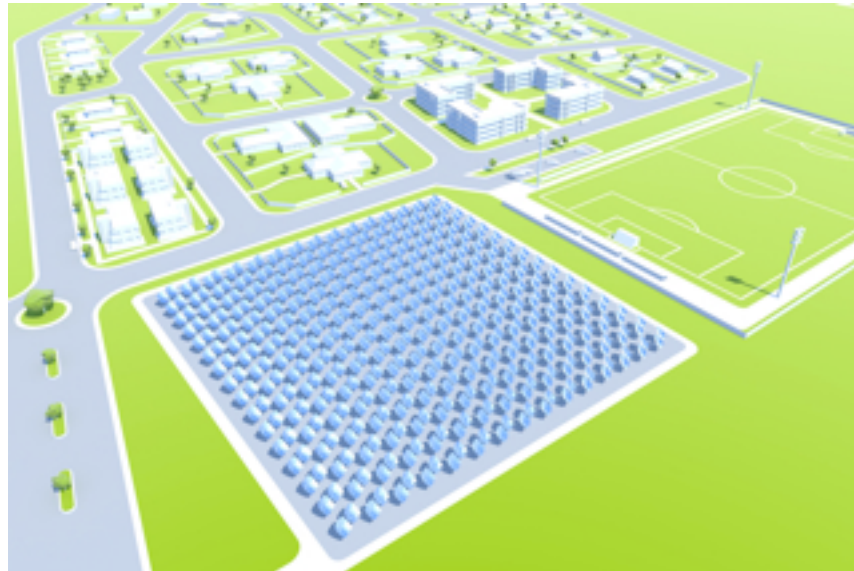
Z20 is mounted on a dual axis tracker with ZenithSolar developed high precision imbedded performance feedback-driven closed loop to continually reposition the dish for maximum effectiveness.

Benefits:

- Lowest cost per watt and best potential for energy system cost reduction;
- Highest efficiency in the field >72%;
- Shortest possible return on investment;
- Only Concentrated PV system to triple performance with captured thermal energy
- Fully modular assembly can be easily scaled for specific applications and accommodate available field shape;

- System design for easy upgrade;
- Best space utilization of land area;
- Highest possible prevention of CO₂ emissions through clean energy generation

ZenithSolar is now constructing worldwide systems for installations in three new clean-energy sites for 2011. With its new Z20 product, ZenithSolar is on the front line of the green-energy revolution providing a real solution for solar energy system able to compete without subsidies.



The Z20 was selected this year for the honorable National Design Triennial of the Cooper Hewitt National Design Museum in New York and the I.D. magazine's 2010 Annual Design Review.

For more information on ZenithSolar products please visit our website at: www.zenithsolar.com ,

see us on YouTube at: <http://www.youtube.com/watch?v=dbzfHP9dq9o> or

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