Tal Instruments ZenithSolar

Presentation le15 Septembre 2009 Nice

ZENITHSOLAR

TAL INSTRUMENTS

Solaire la réalité du Photovoltaïque

1+1/4 barrel of oil

1 sq meter for one year (*)

10 sq meter of PV(**) for 1 year

(*) 100% of the sun's energy
(**) 10% system efficiency

L’enjeu

Production en masse de deux energies electric-thermique hybrid solar power system
À un prix competitif **comparé au coût de l’electricité sans aucune subvention**

Presentation de Zenith Solar

- December 2005 :Sde-Boqer, seed has been planted
- July 2006 : Founded by Roy Segev & Prof.Faiman
- December 2006 : “Seed” round ($2M)
- April 2007: Strategic agreements, Azur space and ISE
- September 2007 : Z10 prototype up and running
- June 2008: “A” round of financing ($8M)
- October 2008: First serial produced Z20
- January 2009: 41.1% 3J world record by ISE
- April 2009 : Yavne site fully deployed

Zenith system

- ~ 1,000 x concentration
- Efficiency 70%
- Lowest €/Wp
- Upgradable on site
- Z20, 4.5kWp (e) + 11kWp (t)
- 3J GaAs solar cells 35% (e)

21% Electric output

50% Thermal output

Chaleur et Electricité

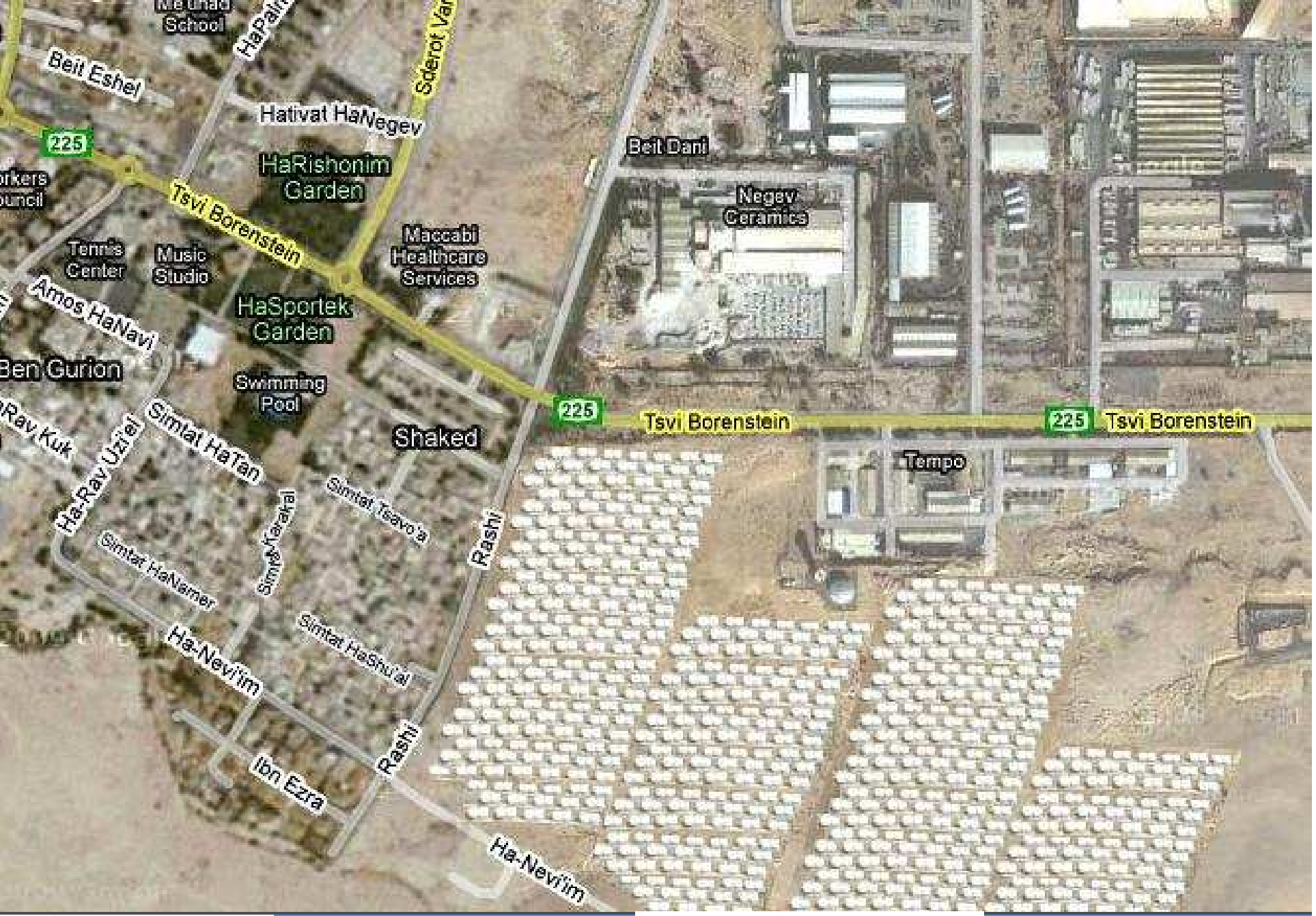
Yavne – Municipal Pilot

- 32 modules on 16 Z20 systems
- Field installation addressing 250 family homes
- Centralized water heating system
- Replacing 40,000 liters/annum of fossil fuel
- ~2,000 hours of direct sun annually (DNI)
- Installation will generate 144MW of electricity (fed to the grid) and 350MW of thermal heat per annum
- Up and running since April 2009

Terrain operationnel

Municipal CHP Power Plant

- Zenith CHP Central Power plant
- 1,000 Z20 systems on ~50,000 m2
- Energy Generation
  - 4.5 MWp electric
  - 11 MWp thermal
- Annual energy savings
  - 9,000 MWh ~ $1,000,000 (Electric at $0.12 per kWh)
  - 22,000 MWh ~ $1,500,000 (Thermal at $0.07 per kWh)


Beit Eshel
Hativat HaNegev
225
HaRishonim Garden
Tsvi Borenstein
Maccabi Healthcare Services
Tennis Center
Music Studio
HaSportek Garden
Amos HaNavi
Ben Gurion
Swimming Pool
Shaked
Simtat HaTan
Ha-Rav Uzi'el
Simtat Teavo'a
Simtat HaNamer
Simtat Yarkeh
Rashi
Ha-Nevi'im
Simtat HaShu'al
Ibn Ezra
Beit Dani
Negev Ceramics
Tempo
225
Tsvi Borenstein
225
Tsvi Borenstein

Take away

- World class team
- Parity with energy costs today, generates energy at $0.09 kWh (*)
- Simple payback @ today's Israel feed-in tariff less than 5 years
- Probably the only CPV company that is fully vertically integrated – strong/special relations with Azur Space
- Highly scalable from kWp systems to MWp installations

(*) 2,000 DNI per annum, 15 years amortization period

Champs de production potentiel

- Lotissement pour fournir de l'eau chaude et de l'electricité
- Réhabiliter des sites pollués coût de remise en état pour la dépollution important, possibilité d'une rentabilité ou des sites industriels en fin de carrière, ou des mines en fin d'exploitation

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MERCI!

STRUMENTS

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