

## **SOLAR POWER PROGRAM IN ISRAEL**

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The Israel Ministry of National Infrastructures, which is also responsible for the energy sector, decided on November 2001 to introduce to the Israel electricity market until 2005 the CSP as a strategic ingredient, with a minimal power unit of 100 MWe. There is an option to increase the CSP contribution up to 500 MWe at a later stage, after the successful operation of the first unit.

This decision was now approved as a part of the future development of the national electricity market.

The investment in the first unit is expected to be 200 million US\$, with an estimated cost of 9 ¢/kWh for the electricity of the first unit and an expected reduction to 7 ¢/kWh when the 500 MWe unit is completed.

The construction and operation of the first unit will create around 1000 jobs during the construction and 120 permanent jobs for the operation and maintenance of the plant.

The Ministry of National Infrastructures designated a team for the location of the site. The priority now (not yet decided) is the Yamin Plain near Arad in the south of the country.

The technology will probably be parabolic troughs, although not finally specified. This matter depends slightly on the enterprise that will build the plant.

Discussions and negotiations are taking place now about two options for the leading body of this project:

1. The Israel Electric Company (IEC) would be responsible for the project. In this case, they will issue an international bid and will probably specify the technology of the parabolic troughs.
2. A private manufacturer will build own and operate (BOO) and sell the electricity to the IEC. In this case, the Ministry of National Infrastructures will be responsible for dealing out the bid (probably an international tender).

The second subject is the cost of the electricity. The Israel Electricity Authority (IEA) is a special commission that approves from time to time the market price. Legally, the IEA must include the cost of the CSP in the basket of the electricity market and certify an increase of the cost (if needed), when a strategic decision on the future development of the electricity market is approved.

In February 2002, the IEC management allowed the construction of a 100 MWe solar power plant at a 250 million US\$ investment, with the option to increase the capacity up to 500 MWe (176% of the current production capacity). The IEC approved the establishment of the plant upon the condition that the IEA will take into account the

higher cost of the electricity in the national tariff policy. This fact will cause a light increase of the electricity, which will be covered by the public.

In April 2002, all the relevant persons visited the potential site. The IEC was designated to carry out the project. The IEA will shortly place a formal proposal to the National Council for Planning and Construction (NCPC), in order to get authorization to proceed with the site and the project.

#### **TECHNICAL DETAILS**

Site: Not yet decided. The Yamin Plain in the south is the place of choice.

Land: Each power station will use a 500000 m<sup>2</sup> reflective area of troughs and will occupy a land area of 1800?800 m.

Steam conditions: 390?C at 100 bar.

Mode of operation: of Hybrid mode, 4400 hours/year, 50% of which is solar and the balance is gas.