



Category: Renewable energy (Solar PV cell manufacturer)

Sub Category: R&D, Solar PV

Company profile

A producer of silicon-based unique bifacial photovoltaic (PV) solar cells.

Date of establishment: 2007

No. of employees: 10

Background on the company

bSolar is a developer and producer of the first bifacial photovoltaic (PV) solar cells that produce up to 30% more electricity per cell at the same production cost as conventional cells, doubling by that the PV Project IRR and halving the payback time. Founded in Israel in 2007 in Israel, with an office in Germany, bSolar brings together over 35 years of Experience in developing high-efficiency silicon-based PV cells. The company is headed by an execution-oriented management team with a proven track record in building 500+MWp silicon-based cell production lines.

Examples of past projects

4 MWp of bifacial cells and modules made by bSolar's industrial partner, are successfully operating in various commercial installations and sites in Europe. bSolar has signed agreements for the sales of over 350 MWp over 3 years with various customers in Europe and Asia. The company will soon launch its first large production plant with a 3-year target of reaching over 500 MWp/year production capacity.

Technology & product(s)

General description: bSolar's Bifacial Photovoltaic Cell

bSolar's differentiated and disruptive bifacial cell technology is based on P-type, mono-crystalline, Boron BSF, open back sided bifacial silicon cells, which collect solar energy from its both front and back sides. The cells have an improved front side efficiency due to an improved BSF, the elimination of aluminum back layer and the superior boron solubility in silicon. The cell has an overall improved efficiency due to its bifaciality, the IR transparency and lower working temperature and its thinner silicon wafer avoids cell bowing and provides very low in-process breakage rate. These mono-crystalline cells collect by their active backside also the substantial amount of light reflected from both the earth and the atmosphere and offer up to 30% additional energy output.

With this back collection capability, bSolar's mono-crystalline bifacial cell provides an unprecedented and industry leading equivalent efficiency (front efficiency plus back collection) of more than 21%, with an even higher equivalent efficiency of 24% expected from the company's 2nd generation cell, at a low production cost.

Function of the product(s):

bSolar's cell is the best solution for rooftops and ground installations, as well as for trackers, PV sound barriers, facades and some forms of BIPV. It is proven, patent pending, successfully operating in European commercial sites and ready for production expansion.

Objectives / Target companies

bSolar seeks today for complementary funding, as well as for new customers who will join our list of strategic customers from Germany, China and Japan.