

Sun over scorched earth

Five PV factories will be built on the Peloponnese peninsula over the next two years



Last summer, the Greek peninsula was engulfed in flames for days. Funding for reconstruction is also going towards PV factories.

Last summer, the Greek Peloponnese peninsula was in flames for days on end. Many in the country were wounded or fatally injured, and there were thousands of hectares of incinerated forest. A close look at efforts to rebuild show that state funds allocated for reconstruction will also benefit the PV industry. As many as five new factories to produce wafers, cells and modules are in the works.

There's no lack of sun on the Peloponnese peninsula, but there is a dearth of solar cell and module factories. But that will soon change, as there are plans to build factories with a cumulative production capacity of around 220 MW. The Aegean peninsula, with its nearly 1

million inhabitants, could develop into a notable European PV industrial center. Nevertheless, experiences with the booming Greek PV industry, which until now has primarily consisted of plans and announcements, urge caution.

But fact is that the government's exceptionally attractive feed-in tariffs have created a market for solar modules, even if development has been hampered by all kinds of bureaucratic hurdles. At the same time, the state is providing 20 to 40 percent of total investment in the construction of small- to medium-sized industrial companies. And then there's the special program for the Peloponnese to help alleviate the damage from the devastating forest fires in the summer of 2007. The state is providing up to 20 percent of investment costs for reconstruction in affected areas. Moreover, projects that help to quickly provide new jobs to victims of the fire will receive precedence. Last but not least, the peninsula is particularly attractive because it's also the home of the Technical University of

Patras, which can provide qualified personnel and possibilities for cooperative research projects.

At the starting line

As a result, three investors now have plans on their desks to build a total of five PV factories. The starting shot in the solar industrialization of the region is being fired by Solar Cells Hellas SA. The company is planning an integrated factory for multicrystalline silicon wafers as well as cells and modules. The factory site is located in an industrial area of Greece's third largest city, Patras. »The construction is complete, the machinery delivered, the first solar cells will be produced in May and the first modules in September,« says factory manager Alexandros Zachariou. After the start-up phase, production capacity will reach 60 MW.

These plans seem very ambitious. Although the company isn't new to the PV industry – the Solar Cells Hellas Group operates a module production facility in Bulgaria (see PI 7/2007, p. 50) – it's still a

rather small operation with an annual capacity of just 10 MW and the company has no previous experience with solar cell or wafer manufacturing. Aside from this, Solar Cells Hellas also announced the construction of a thin-film production facility, although it failed to give a timeline: Patras will also be the base for the company's production of micromorph modules based on microcrystalline and amorphous silicon. The turnkey production line is said to be delivered soon, although Solar Cells Hellas hasn't commented on the source of this equipment.

Next Solar SA is also planning production with micromorph thin-film silicon. And in this case the equipment supplier is already known. The company has clinched a sales contract with Swiss machinery manufacturer OC Oerlikon Balzers AG. The production facility will be constructed in an industrial area in the small town of Tripoli. By 2009, the facility is planned to have a capacity of 30 MW, which will then be expanded to 60 MW. The managing director is Georgios Fakidis, who has also providing the capital for the company's founding together with two investment companies – US-based Plainfield Asset Management LLC



Solar Cells Hellas, S.A.

as well as Sciens International Investment and Holdings SA from Greece. Next Solar has not provided details about the extent and exact distribution of these investments.

Apparently, Elica will build a production center for ingots and wafers that will operate under the aegis of a company called Piritium. Elica claims the necessary equipment will be delivered by Rena Sondermaschinen GmbH, KR-Solar GmbH, and wire saw manufacturer Applied Materials Switzerland (formerly



REN Renewable Energy Innovations

At the starting line: Construction of Solar Cells Hellas' building is complete and the machinery delivered. Pictured is a crystal growth furnace from GT Solar.

Integrated production

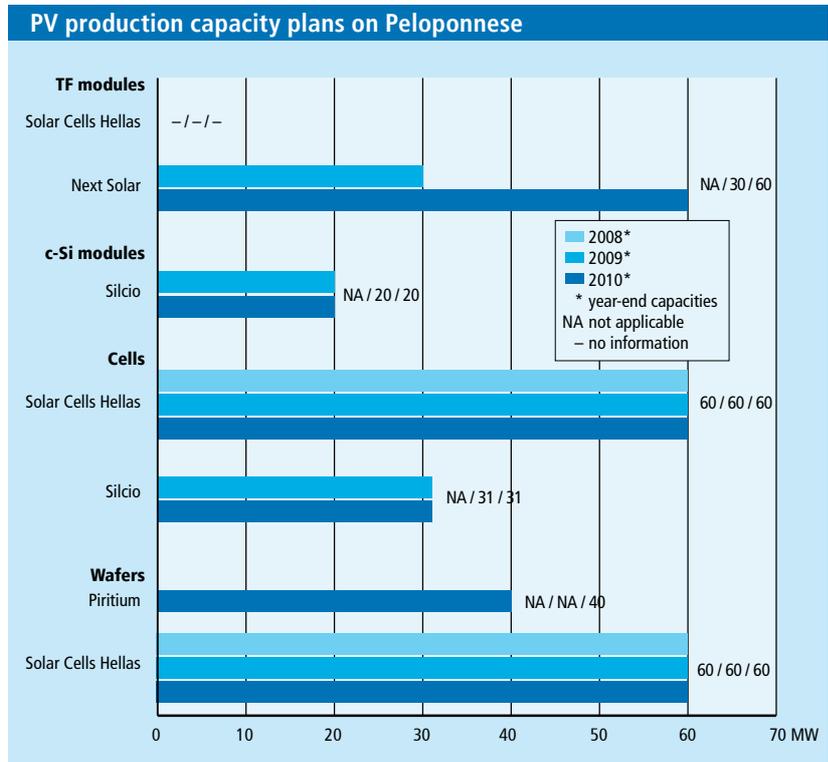
The Elica Group has its eyes fixed on the most ambitious PV plans for the Peloponnese. The company has launched two new start-ups, Piritium SA and Silcio SA, which are building production centers in the industrial area of Patras, where they will form an integrated production chain of wafers, cells and modules together.

HCT). The nearly €36 million (\$57 million) factory will have a capacity of at least 40 MW, and is slated to begin production in the first quarter of 2010.

According to the plan, the majority of the wafers produced by Piritium will be processed by Silcio SA, located next door. This company plans to begin production of solar cells in March 2009 with its turn-key production facility from German manufacturer Roth & Rau AG. At the same time, module production equipment from Reis Robotics GmbH is scheduled to come online. Silcio will build up a production capacity of 31 MW for solar cells and 20 MW for modules, says Aris Papachristou, director of Elica's PV department.

Until now, Elica has been an active wind power consortium, which, according to its own information, has built 38 MW of wind power projects and 5.5 MW of hydroelectric power. But Elica's very brief company bulletins reveal few clues as to how this rather small firm intends to carry out such an ambitious project.

If you listen to all the letters of intent and press releases, the Peloponnese definitely sounds like it's on its way to becoming an important European center for the PV industry. But, apart from the delivery of machinery to Solar Cells Hellas, there isn't any other concrete proof of progress on the ground, that is, if you don't include the sales agreement for Next Solar's thin-film production facility. Thus, for the time being, the PV economic miracle on the Peloponnese still remains something of a mirage.



Domestic supply?: If everything goes as planned, at least a portion of the solar modules that Greece needs will be manufactured domestically.

Olga Papathanasiou