

Italian sunshine and subsidies lure investors

With generous incentives and the prospect of generation costs soon falling in line with market prices, foreign companies are taking position in Italy's solar market. But success may hinge on finding the right local partner to negotiate Italy's legendary bureaucracy.

| by James Osborne

When Pope Benedict XVI addressed an audience of 10,000 in a vast auditorium next to St. Peter's Basilica in the Vatican City in late November, he was preaching not only the Catholic faith but also belief in the need for solar energy. Above his head, on the arching roof of the Aula Paolo VI, 2,394 solar modules were for the first time providing electricity to his tiny city state. The installation is the first sign of Joseph Ratzinger's choice to embrace alternative energy solutions for his 44-hectare Vatican site and coincides with an explosion of enthusiasm for solar energy in Italy.

'Faced with widespread environmental degradation, humanity is now realising that we can't carry on using the Earth's resources as in the past,' the Pope said in a key declaration two years ago. 'An ecological conscience is thus taking shape, which must not be smothered, but rather encouraged, so that it develops and matures in the form of concrete programmes and initiatives.'

Seeing the Pope undertake such a "concrete initiative" as installing solar panels is a potent signal for Italy as a whole, where as

much as 97% of the population is nominally Roman Catholic and the Holy Father's words and deeds carry much weight.

But the installation also highlights how the boom in solar photovoltaic technology in Italy is being dominated by foreign companies. The papal project, with peak output of 222 kilowatts (kW), was a gift from Bonn-based SolarWorld and built at the German company's facility in Freiburg.

'These are top-quality technological products, which have some of the highest

While German tourists have travelled south for the Italian climate and beaches for decades, this new passion for the Italian sun derives from a feed-in tariff mechanism for photovoltaic plants, approved in February 2007 and known as the new or second Conto Energia. An initial system, dating from September 2005, failed to stimulate the market because of its bureaucratic implementation, including the need to submit a preliminary application before each solar plant was even built. An annual limit on the amount of capacity eligible for

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yields and efficiency in the world,' Mauro Villarini, head of renewable energy projects for the Vatican, told the Holy See's newspaper, *l'Osservatore Romano*. 'Solar energy represents for us a gift that comes from "above", an almost unlimited resource that if it were exploited enough could satisfy all the world's energy needs.'

incentives was substituted with an overall cap of 1,200 megawatts (MW).

Under the new system, photovoltaic plants installed in 2008 get an incentive of between 36 and 49 euro cents a kilowatt hour, depending on size and degree of integration into building structures, fixed



for 20 years. The incentive drops by 2% a year for plants coming online in 2009 and 2010, when the whole system is due for revision.

At the same time, countries that have led demand for solar power in Europe in past years, such as Germany and Spain, are cutting back their own incentive systems because of the spiralling cost, pushing PV companies there to look abroad for growth opportunities.

'The Italian market has taken off thanks to a decent incentive system, which ensures low risk but very high remuneration,' says Domenico Inglieri, managing director of Italian solar systems integrator RED 2002 and board member of trade association Gruppo Imprese Fotovoltaiche Italiane (GIFI). 'The Italian market is expected to grow very fast. GIFI's forecast for 2008 as of six months ago was for 150 MW but that's already been exceeded. Based on official data we're headed towards 180 MW. Italy will be the most important market in Europe in a few years.'

Only the beginning |

According to Gestore dei Servizi Elettrici (GSE), a state company that manages the photovoltaic incentive system, there were 20,185 solar installations in operation in Italy as of December 1 2008 for a total

Gianni Silvestrini, scientific director of Kyoto Club, an Italian non-profit organisation, is even more bullish, forecasting 1,500 MWp installed by the end of 2010.

Companies such as Phoenix Solar of Germany and Japan's Sharp found their long-term optimism on the fact that Italy may become one of the first countries where the cost of producing electricity from photovoltaic modules falls to the same level as conventional generation, known as grid parity. Such a phenomenon, helped by the fact that Italy has the highest wholesale electricity prices in Europe, would trigger further growth in solar because PV technology could compete directly with other forms of production.

Given this outlook and a lack of major Italian players in the solar market, foreign companies are rushing to take advantage and recent months have seen a wave of announcements.

Solar Industries of Switzerland said it would invest in Milan-based MX Group and set up a joint venture with the same company in solar cell production. Solar Industries is also joining both an MX subsidiary and Api Nòva Energia to build a silicon plant. Avelar Energy, part of Russia's Renova Group, is buying 15% of solar cell and module producer

Meridionale Impianti and renewed its 20-year cooperation with Solarex.

Surge of interest |

Luca Zingale, scientific director of Solarexpo, Italy's biggest trade fair for renewable energy, identifies four strategies that have been followed by foreign players. Big system integrators, such as Germany's Conergy, set up branch offices directly in Italy, especially in northern regions of Lombardy and Veneto. A second path has been to buy small Italian operators to gain local expertise and knowledge of Italian bureaucracy, such as the purchase by Phoenix Solar of Inglieri's RED 2002. Others chose to remain simple distributors through local partners. Finally, companies such as Solon acquired some of the few Italian solar module manufacturers to gain a local production base. The Berlin-based company in January 2006 purchased SE Project in Italy and is now the biggest producer of solar modules in the country.

Solarexpo, which started 10 years ago, has seen this recent surge of interest from foreign players at first hand. 'One cannot but be optimistic,' Zingale says. 'Insofar as Solarexpo is a mirror of the market, we've witnessed staggering growth rates.'

'Italy will be the growth market in Europe in the years ahead,' commented Andreas Haenel, chief executive of Phoenix Solar, when the German company announced it would buy the rest of RED 2002 last July. 'Italy is a rather special market,' explains Inglieri. 'The Germans have the technical know-how but no knowledge of the Italian bureaucratic system. While it's true that the incentive mechanism has become more simple and the GSE is working nicely, the authorisation process has created chaos.' Without an Italian partner, 'it would take longer to reach full efficiency in this market,' he adds.

Inglieri laments how Italy lost its early expertise in solar technology. The country's first photovoltaic installation was built in Sicily by Solarex in 1980, followed by an 80 kW plant installed by Enel on the island of Vulcano in 1984. In 1995, Rome-based Enel

'Local officials just have little understanding of the technology'

capacity of 226.8 MWp. Half of the total has been put online under the new incentive system in the course of little more than a year and a half.

Many experts and industry players say this is only the beginning. Bonn-based EuPD Research said in a report in August 2008 that new installations would rise to 250 MWp in 2009 and 355 MWp in 2010. That would take the total installed in the country to 862 MWp by the end of 2010, according to EuPD.

Kerself and ordered at least 105 MW of solar plants from the Italian company in return for help sourcing silicon in Russia. NextEnergy Capital, a Luxembourg-based merchant bank, said it would invest 1 billion euros over five years in solar plants from Enerqos, initially in Italy and Greece. Germany's Solon purchased 19.5% of Italian start-up Estelux while Japan's Itochu acquired 43% of Greenvision Ambiente Photo-Solar for 7.7 million euros. BP Solar meanwhile, announced a new accord with



Solar power panels are placed on the roof of the Nervi-Paul VI Hall, in the Vatican. Photo: Giuseppe Giglia/EPA

took a big step in building a 3.3 MWp solar plant at Serre, near Naples, for many years the world's biggest PV plant.

Subsequently, little happened in Italy, even while other European countries embraced the technology and developed a substantial industry. 'As a systems integrator, this doesn't bother me - I can import modules from Japan, Germany or wherever,' comments Inglieri. 'But as an Italian, I would like to see an Italian industry.'

While reliable figures on market share are difficult to obtain because companies are reluctant to divulge data, EuPD Research cites GSE data showing that three quarters of capacity installed under the Conto Energia has been imported. It said that 43% of installed capacity came from Japan, 22% from Germany, 11% from China.

Headache |

One development that may signal an expansion of production capacity in Italy itself involves the partnership between Enel and Sharp, the world's second-biggest producer of solar modules after Germany's Q-Cells. Apart from joining forces to distribute Sharp products and build 189 MW of photovoltaic plants in Italy by the end of 2012, the partners plan to build a

thin-film solar cell plant in southern Italy. The factory would have initial annual capacity of 480 MW from mid-2010 but with the potential to expand to 1 gigawatt (GW), potentially making it one of the world's largest. The companies are looking for a third partner for the plant, saying their joint investments will come to about 850 million euros between 2009 and 2012. Apart from signalling strong commitment to the market beyond 2010, the accord brings together a producer of solar equipment and a power provider to work on everything from cell manufacture to electricity generation.

The other key issue for Italy is regulation and authorisation processes, which vary from region to region. While some administrations, such as Lombardy and Tuscany are taking a proactive approach, Solarexpo's Zingale cites Italy's system of 'wild federalism' as a headache for operators.

Industry groups Assosolare, APER and Assoelettrica last November published an open letter to the government in a national newspaper calling on it to boost support for EU policies on renewables and cut red tape. Any costs associated with this action

would reap clear benefits, they argued: 50 billion euros of investment in Italy by 2020 and 100,000 new jobs.

Assosolare's International Affairs Officer, Angelo Nogara of Oslo-based Norsk Solkraft, says many emerging PV markets are beset with bureaucratic, legal and administrative barriers. Sometimes, local officials just have little understanding of the technology. He cites the example of a residential roof-top project in Salerno that, after obtaining all necessary permits, was delayed for three months because the municipality asked for an assessment of its acoustic impact from the local health authority.

Authorisation for grid connection can also block development. Nogara says that this takes more than 14 months on average for a large-scale PV system in Italy, compared with four months in Germany. 'The implementation of feed-in tariffs does not guarantee the creation of PV markets alone,' Nogara concludes. 'Successful PV markets are dependent on the right framework conditions.' And that is a task that falls to the Italians themselves, irrespective of the presence of foreign companies. ■