

Interest in Spanish Solar Power Plants Skyrockets

In the 21st century, when capital is moved freely wherever it is best for investors, the solar photovoltaic (PV) industry shows a potential difficult to match. In a world alarmed by climate change, which financial markets eager to attractive alternatives to the gloomy real estate market, many have started to look at the Spanish sun.

Moved by the favorable conditions granted by the Spanish legislation, the stable long-term retributive scenario, the steady economic growth of the country and the sure bright sun in the sky—as long as climate change keeps on granting Spain such privilege—solar investors are approaching Spain with deep cash-full pockets. Solaraccess.com said.

According to Edwin Koot, president of SolarPlaza.com, a Netherlands-based company dedicated to studying the solar PV industry, the interest from traditional investors on the solar PV industry and its business potential is growing at a great pace. And Spain offers second to none opportunities for this.

"The country's economic growth, its climate conditions and the positive legislation have turned Spain into an obvious choice for investors," said Koot.

"Although the market was saturated in the last months, the future seems now brighter, with plenty of new projects that are bringing the attention of investors from all over the globe. We are even regularly consulting U.S. venture capital firms about the market situation in Spain. This market is considered to be one of the major markets in the world," he added.

On the other side, numerous Spanish companies are developing these Huerta solares, or solar power generation park projects.

"Permits are the most complicated part of the process, as this can only be done by Spanish companies. However, with a market that is still far from meeting the Government's target for the coming years, bureaucracy should stop being a problem," said Koot.

As a global platform, SolarPlaza.com receives requests for their match-making service from several international



Spanish solar market is booming for international investors.

investors seeking projects in Spain. The company has observed that investors do not necessarily look for projects already under construction phase.

Indeed, some of the funds can even help developers by financing the initial phases of the promotion avoiding external financial schemes dur-

ing the whole park development and construction period.

"Most of these bigger investors are looking for projects above 1 MW and a return on investment (ROI) higher than 10%. The interesting thing is that the capital really is no problem, as long as all permits and licenses are granted," said Koot.

Legal Eye: Coal and Kyoto

With all the fuss surrounding coal, coal miners and their pensions, it's easy to forget that coal is not an environmentally-friendly form of energy.

Coal is, however, the primary source of fuel for generating energy (electrical and heat-generation) in Poland. And this fuel is located in Poland. Coal is not only a thorny issue between the European Union and Poland when it comes to domestic coal industry policies, but also plays a significant role in a disagreement with the EU over environmental policy.

Greenhouse Gases

The issue relates to reductions in greenhouse gas emissions. The European Union is a strong proponent of the Kyoto Protocol to the United Nations Framework Convention on Climate Change. Poland has been a party to the Kyoto Protocol since 2002. The Protocol requires developed countries to reduce their emissions of greenhouse gases (such as CO₂) by a certain percentage. It is claimed that this unusually warm winter is just a hint of the climate changes to come, if we don't

stop polluting, WBJ.com reported.

So far, Poland has been on track to meet its declared Kyoto goals to reduce greenhouse gas emissions by six percent in 2012 in comparison to 1988. In fact, because of the effects of the changeover to a market economy, Poland currently has "emissions reserves" (as is the case with most of the new EU member states). In other words, Poland polluted less in past years than it could have done.

More Is Less

The EU declared an overall reduction of eight percent, as opposed to Poland's six percent. In doing so, however, the "old" members of the EU agreed to share the burden of the potential economic costs of these reductions. Thus, more developed countries (e.g., Germany and Great Britain) agreed to make bigger cuts, while less developed countries (e.g., Spain, Greece and Ireland) could actually increase their emissions. This plan was agreed upon before the ten new member states joined the EU in 2004.

Now comes the dilemma. Must Poland only satisfy its six-percent declaration or must it comply with

the EU goal of eight percent? Can Poland make use of its emissions reserves or must it keep making further cuts? Citing the need for economic development, Poland argues that it intends to stabilize its emissions, and later work on further reductions. This may mean dipping into the reserves. On these interpretational questions, determining who is right will ultimately need to be resolved in high-level Poland and EU discussions.

Coal Hole

When it comes to carbon-dioxide emissions, Poland is frank that these emissions relate to coal burning. Poland anticipates that 64 percent of its entire CO₂ emissions allowance will be swallowed up by the electrical energy and heat-generation sector.

Not to vilify coal unduly, it is not the only polluting substance that influences this debate. Over the past several years increased economic prosperity has caused significant growth in a number of consumer conveniences that emit greenhouse gases, including air conditioners and automobiles.

UK: Conflict Over Wind Turbines

For renewable energy firms, the west of England is second to none. The likes of Good Energy, Ecotricity and Wind Prospect are well known at home and abroad.

However, for renewable energy itself, the West does not do well, especially with wind power.

In a region with abundant hills and coastline, there is just one commercial wind turbine - and fierce opposition whenever more are proposed.

So it is at Burnham-on-Sea beside the Somerset coast. A plan to put up five turbines close to the town has led to a protracted battle. "We are not against wind farms as a matter of principle, it is just the particular location of this one that upsets us," says local councillor Eric Gill, as he looks across the fields to nearby Brent Knoll hill.

"We think the view of this outstanding landmark would be spoiled by huge wind turbines. I'm sure there are other places that they could be."

Last year the council threw out a planning application. It will go to appeal in the summer. Opponents are raising thousands of pounds to hire a lawyer, according to BBC.

Local Support

But not all locals agree. Supporters of wind power have set up their own group, Families For Clean Energy.

"Everybody knows that climate change is an imminent disaster, and there are things we can do."

"We need to start now," says spokesperson Jo Brown, standing in a strong breeze on Burnham beach.

"We have the whole Atlantic ocean blowing wind all the time, and the South West of England has hundreds of miles of coastline. "It is just what we need for wind farms."

At his office in the Cotswold town of Stroud, Dale Vince gives a weary

Planning Process Stalled

As a result the planning process takes years - and Britain's efforts to use more renewable energy are slowed. By 2020 it is meant to be providing 20% of our electricity. But government officials have admitted that current policies mean 5% is



Everybody knows that climate change is an imminent disaster.

smile.

The firm he founded in 1995, Ecotricity, is thriving, having doubled in size over the past year.

"They run 11 wind farms in England. Yet in their own back yard they struggle."

"Wherever you go in the country, about 80% of the people will be for wind power, or not against it," he says. "10% of people will be almost rabidly against it. 10% do not know."

more realistic.

To get away from climate-harming carbon-fuels something must change.

What happens on the Somerset coast will be telling: as well as at Burnham, there are plans for wind turbines down the coast at Hinkley Point.

The site is next to a nuclear power station—expected to be one of the first choices if the government agrees to build a new generation of reactors.

Renewed Call for Renewables in China

Early this month, the Chinese government and the United Nations

Nations Development Programme (UNDP) launched a joint carbon finance project that would use carbon trades in China's less-developed regions to help reach the UN Millennium Development Goals, including poverty alleviation and environmental sustainability.

China is pushing hard for Clean Development Mechanism (CDM) projects in the energy efficiency, clean energy, and renewable energy sectors.

The three-year, US \$1.7 million project will set up Clean Development Mechanism (CDM) technical service centers in 12 selected provinces, including Hubei, Inner Mongolia, Jilin, Qinghai, and Xinjiang. The goal is to channel international

Int'l Green Investment Favored

"green" investment into local sustainable development, especially renewable energy use.

CDM is a market-based mechanism under the Kyoto Protocol that allows participating industrialized countries to fulfill their greenhouse gases (GHG) emissions reduction obligations by investing in clean energy projects in the developing world at a lower cost. In a win-win situation, the industrialized country receives carbon credit for meeting its emission reduction target, while the developing country obtains the capital and clean technology to implement the project, Solaraccess.com reported.

In addition to the new "MDG-Carbon" project, China and the United

Nations (UN) plan to open a carbon trading exchange in Beijing later this year—the first of its kind in a developing country—in an effort to share the multibillion-dollar global carbon trade market with similar structures in Europe and the United States, the Financial Times reports. The UN expects more "special" carbon credits that can be used to benefit the poor to be traded through the exchange.

China held 60 percent of the total US\$2.3 billion CDM market in developing countries in the first three quarters of last year, according to the World Bank. But the majority of CDM projects in China focus on reducing emissions of HFC-23, an ozone-depleting substance, from

factories, with little use of clean technology. Facing dim prospects for its ambitious energy saving targets (reducing 20 percent of energy consumption per unit of GDP and increasing renewable energy use by 10 percent by 2010), China is pushing hard for CDM projects in the energy efficiency, clean energy, and renewable energy sectors.

To respond actively to global climate change—a national strategic priority—the Chinese government will be launching a CDM Fund in March to help finance climate mitigation projects, Xinhua News reported. The money will come mainly from income generated through the government's carbon credit transactions as well as donations from

international financial institutions and individuals.

So far, the government had approved some 300 CDM projects, with 37 already registered under the United Nations Framework Convention on Climate Change (UNFCCC), out of a global total of 500 CDM projects; others are still in process. China is predicted to be the world's largest carbon credit provider, accounting for 41 percent of all carbon credits issued by the UN, by 2012.

Egypt Concentrating on Solar

Egypt may soon harness the same physics that a child uses to burn an ant with a magnifying glass to generate electricity from the sun, a move that reflects the growth of concentrating solar power technology worldwide.

Plans to build a 150 MW combined solar and gas-powered electric plant near Cairo are part of a larger effort by Egypt, and others in the region, to expand their use of renewable energies, including solar, wind and nuclear power.

The Egyptian project, set to be built in Kuraymat, 65 miles south of Cairo, will use parabolic-trough concentrating solar power, a technology that has been used on a limited scale for more than 20 years, but has recently attracted attention in the Middle East because of efforts to reduce greenhouse gas emissions and due to concerns over the future of petroleum supplies, Monstersandcritics.com said.

Worldwide consumption of renewable energy will almost double by 2030, according to the Energy Information Administration, the data arm of the US Department of Energy.

And the Middle East is set to see the most dramatic change, with an average yearly increase in its renewable

electricity generation capacity of more than 21/2 times the global average.

Although last year's high-level endorsement of nuclear power attracted headlines in Cairo and around the world, the Egyptian government has been pursuing other renewable sources of energy, most notably wind and solar. The Egyptian New and Renewable Energy Authority hopes to provide 3 percent of the country's electricity needs through renewable sources by 2010.

The technology planned for Kuraymat uses rows of parabolic-shaped trough reflectors to focus sunlight onto a tube filled with circulating liquid, which is heated as it moves through a field of reflectors.

The liquid, which will reach temperatures of about 752 degrees F at Kuraymat, can then be used to power a steam turbine.

It is part of a larger family of solar technologies called concentrating solar power, which use a number of methods to generate electricity by concentrating the sun's rays. Traditional solar cells, or photovoltaics, use sunlight to generate electricity directly.

While concentrating solar power can direct sunlight onto solar cells, it can also generate electricity through an

intermediate, such as heating water to drive steam turbines.

Concentrating solar power is now almost exclusively being used in the United States, but projects are underway in the Middle East, North Africa, Europe and Latin America.

Spain hopes to generate 500 MW of electricity from concentrating solar power by 2010, and China is considering a 1000 MW plant that could cost more than \$2 billion.

The \$200 million project at Kuraymat, expected to be finished in 2009, will produce about 150 megawatts of power, 45 percent of which will be from solar parabolic troughs and steam turbines, the rest coming from natural gas turbines, according to the Egyptian NREA. Egypt had about 20 GW of installed electricity capacity in 2006, according to the Egyptian government.

The solar project will not only provide needed electricity, but will also reduce carbon dioxide emissions by 38,000 tons per year, according to the NREA.

The power plant in Egypt, and others like it, uses natural gas turbines to supplement the solar generated power, a method that allows a consistent supply of power at night and during bad weather.

Scottish Firm Interested In Oregon Wave Energy

A Scottish firm is the second company to express interest in harnessing wave energy along the Douglas County coastline.

David Langston, business development manager for Wavegen, told county Commissioners Marilyn Kittelman and Joe Laurance that his company is interested in exploring development of a shore-based energy converter near the south jetty at Winchester Bay, AP reported.

Wavegen is owned by Voith Siemens Hydro Power Generation a partnership between two of Germany's industrial giants. It has produced electricity by harnessing

wave energy since 2000.

It operates a plant and test facility on the island of Islay, off Scotland's west coast.

A column of water inside a chamber moves up and down from the action of the waves, which, in turn, produces electricity. Voith Siemens produces 31 percent of the world's water-based electricity, Langston said.

The company produces 14 gigawatts at a plant in Brazil and another 18 gigawatts at the massive Three Gorges Dam in China.

He said his company is interested in developing new technologies but that those are expensive and take time to become viable.

Existing technologies are competitive, and new ones would have trouble at first competing with organizations and companies doing major projects, Langston said.

A New Jersey company, Ocean Power Technologies, wants to locate a series of electricity-producing buoys in the Pacific Ocean northwest of Winchester Bay. The buoys, which would be tethered about three miles off shore, would produce electricity through the pounding action of waves.

Langston said his company would need no undersea cables or moorings and would have no visual impact.