



## **FIRA 2000 TO INVEST 19.8 MILLION EUROS TO INSTALL A SOLAR POWER PLANT AT ITS GRAN VIA COMPLEX**

**The photovoltaic park will be the world's sixth biggest rooftop solar installation.**

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Fira 2000, a company set up to develop the Gran Via site of the Fira Barcelona exhibition centre, is to invest 19.8 million euros to install a photovoltaic solar power plant on the roofs of the complex's pavilions. The solar park, which will begin operating in September 2008, will be the sixth biggest rooftop solar installation in the world, and the biggest in Spain, making Fira Barcelona an international benchmark as an environmentally sustainable facility. With a total potential of 3.26 MW, the project will generate 4.4 GWh/year of electricity, enough to supply 980 households of 4 people each. The Catalan Energy Institute (ICAEN) has been involved in the conception and definition of the project, from an analysis of Fira Barcelona's energy needs and possibilities to technical support on connecting the park to the national grid.

The plant will occupy 135,000 square metres on the roofs of pavilions 1, 2, 3, 4, 6 and 8, and will be further extended in a second phase, which is still being worked on, of 30,000 square metres on the roofs of pavilions 5 and 7, providing 1.2 MW additional power. When the park becomes operational, it will reduce emissions of CO<sub>2</sub> into the atmosphere by 2,047 tonnes a year. This is in addition to the use of other alternative energy sources, such as wind or water, which are being incorporated into the design of the new complex by the architect, Toyo Ito, to make the building as sustainable as possible and minimise its environmental impact.

To optimise the park's capacity, photovoltaic panels using crystalline silicon technology with a fixed structure will be installed on all the pavilions except for number 2, where amorphous silicon (also known as thin film) panels will be used as they are more suitable for its structure. Altogether, 18,621 of the technologically most up-to-date modules will make the plant a world leader in terms of exploiting rooftop spaces. The installation will also have a monitoring system which will feed information about its operation to a screen which visitors to Fira Barcelona will be able to see.

Construction work on the plant will begin in February 2008. Fira 2000 will be responsible for its management and operation, and the project will be internally financed, thereby avoiding debt. The sale of electricity from the photovoltaic park will generate income of 72.3 million euros over the first 30 years of operation. Furthermore, the plant's location at the exhibition centre, which is closed off and guarded all year round, will facilitate the achievement of synergies in carrying out maintenance and safety work.



Pavilion	Technology	Number of modules	Nominal power(kW)	Annual electricity output (MWh)
Pavilion 1	Crystalline	1,890	300	424
Pavilion 2	Thin film	2,601	660	819.8
Pavilion 3	Crystalline	5,670	900	1,273.5
Pavilion 4	Crystalline	2,448	400	541.4
Pavilion 6	Crystalline	2,448	400	541.4
Pavilion 8	Crystalline	3,564	600	811.7
<b>Total</b>		<b>18,621</b>	<b>3,260</b>	<b>4,411.8</b>

With this project, it is hoped Fira Barcelona will fit in with modern energy needs, which nowadays focus on renewable energies and reducing CO<sub>2</sub> emissions. The institution will furthermore serve as an example of how photovoltaic panels can be used on rooftops, an option which reduces the visual impact of the technology and helps it to be integrated into the landscape as well as into the electricity grid. Only Japan and Germany have rooftop photovoltaic parks with a higher power output than that of the Fira Barcelona project at Gran Via, and other complexes have already taken advantage of their buildings' design to generate solar power, such as the Munich (Germany) exhibition centre, with a 2.7 MW installation, or that of Bilbao, with a 0.1 MW park.

Fira 2000 is an umbrella company representing the organisations involved in the construction of Fira Barcelona at Gran Via. Fira 2000 is investing 942 million euros to convert the Fira Barcelona into Europe's second biggest exhibition space after that of Milan. Shareholders include the Generalitat de Catalunya (Government of Catalonia), the Diputació de Barcelona (Barcelona City Council), the Barcelona City Hall, the Hospitalet de Llobregat City Hall, the Association of Municipalities of the Greater Barcelona Area and the Barcelona Chamber of Commerce.