



Cover picture

## Solar thermal farm

### Leading



#### CONTRACT AWARDS

Two motorway contracts in Poland  
[Page.3](#)



#### EVENTS

Opening of road C-17 between Vic and Ripoll  
[Page.11](#)



#### CURRENT EVENTS

Two tunnels built by FCC ranked with the best  
[Page.9](#)



# Index

## CONTRACT AWARDS

Domestic

[Payuelos Lower Canal](#)

[International Convention Centre of the City of Madrid](#)

International

[Luis Chicho Fábrega Hospital in Panama](#)

[Two motorway contracts in Poland](#)



## FINISHED PROJECTS

[Office building in L'Hospitalet](#)

[New access to Vilagarcía harbour](#)

[Sant Boi Hospital](#)

## ALPINE

[The Austrian Pavilion is one of the biggest crowd drawers at the Shanghai World Expo](#)

[Award for the refurbishment of the Hala Ludowa in Poland](#)



## EVENTS

[Drawbridges on Seville's new lock pass test A-OK](#)

[Opening of the Vic/Ripoll section of the C-17](#)

## CSR

[FCC on the Dow Jones Sustainability Index](#)

[Environmental Defence Award](#)

## CURRENT EVENTS

[Majadahonda Cycle Path Network](#)

[Two tunnels built by FCC ranked with the best in EuroTAP 2010](#)

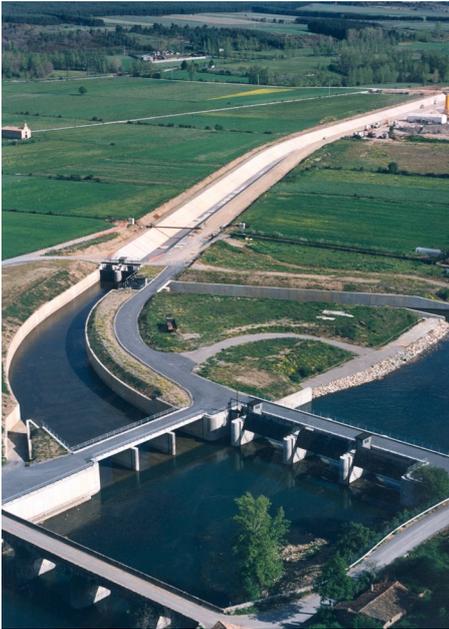


## CONTRIBUTIONS

[FCC Construcción backs renewable energy](#)

## The Payuelos Lower Canal has been awarded to FCC

The contract is worth 80.8 million euro, and work is to be completed in 36 months



Payuelos Canal

The Ministry of the Natural, Rural and Marine Environment, acting through Sociedad Estatal Aguas del Duero, has picked FCC Construcción to build the second phase of the Payuelos Lower Canal project. The canal is worth 80.8 million euro and is to be completed in 36 months. Half the funds for the job are being provided by the 2007-2013 ERDF Cohesion Fund.

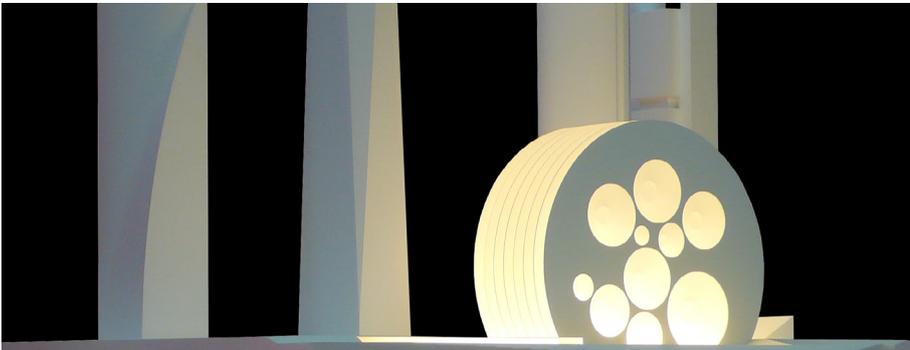
The canal is an open channel with a trapezoidal cross-section, shrinking to rectangular in the sections where there are constraints on width. Three pools are to be built, with capacities ranging

between 200,000 and 350,000 cubic metres, for canal regulation purposes.

The layout includes three major siphons, the 614-metre-long Castrotierra siphon, the 873-metre-long Vallecillo siphon (both 2,600 millimetres in diameter) and, lastly, at the intersection beneath dual carriageway A-231 between León and Burgos, another siphon, which is 81 metres long and 3,000 millimetres in diameter. The maximum flow the canal is slated to carry is 36 cubic metres per second.

## FCC wins the contract for the below-ground structure of the International Convention Centre of Madrid

The Centre will be situated in Madrid's most select financial zone



Model of the International Convention Centre of the City of Madrid

Madrid Espacios y Congresos has awarded a joint venture featuring FCC and ACCIONA the contract to build the below-ground structure of the International Convention Centre of the City of Madrid (CICCM) for a sum of close to 72 million euro.

Under the terms of the contract, the building will be raised as far as the zero level, for reasons of safety and urgency. The rest of the job will then be suspended, to be finished in phase two when the demand for this sort of facility be-

gins to revive. The work concerned in the contract consists in the construction of the structure of the centre's car parks and underground auditoriums, at which point the perimeter walls and the entire enclosure can then be made safe.

The future convention centre will be a building organised as a huge luminous structure of different storeys stacked inside a big circular tower, according to the design by architects Emilio Tuñón, Luis Moreno Mansilla and Matilde Peralta del Amo.

Situated in one of the most select financial areas of the city, next to the four skyscrapers on Paseo de la Castellana, the building will form part of an urban park having an area of over 60,000 square metres. The centre will stand 120 metres tall and have 70,000 square metres of permitted building area, with 15,000 metres of exhibit space looking out over Madrid.

In addition, the International Convention Centre will have a main auditorium seating between 4,000 and 5,000 people, depending on how the venue is set up (and enlargeable to 6,500), plus another two smaller auditoriums.

The design also includes the construction of five storeys of parking with the capacity for 55 buses and more than 3,300 cars.

## Luis Chicho Fábrega Hospital in Panama awarded to FCC

The total contract comes to 99 million euro



Simulated view of the hospital

The Panamanian Ministry of Health has awarded the contract to design, build, equip and finance Luis Chicho Fábrega Hospital, in the province of Veraguas, Panama, to FCC. The con-

tract is worth 99.2 million euro and is to be completed in twenty-seven months. The new building, with a floor area of 41,914 square metres, consists of a base housing the hospital's central services (the ground floor and basement of the complex) plus a three-storey edifice rising above, where the hospitalisation facilities and doctors on duty will be located. The hospital

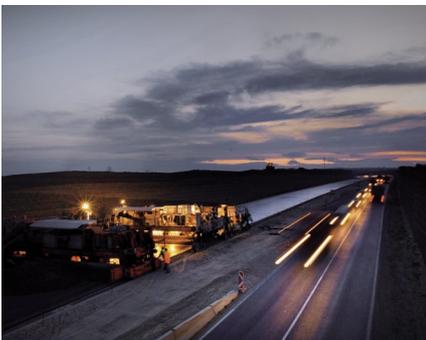
will have a highly developed outpatient programme, and it will have 313 beds and provide 344 parking spaces.

The design, by the prestigious Spanish architects Alfonso Casares and Carlos Lamela, has been crafted in observance of the strictest criteria of environmental friendliness, with the concept of the "sustainable green hospital" ever in mind.

The design, by the prestigious Spanish architects Alfonso Casares and Carlos Lamela, has been crafted in observance of the strictest criteria of environmental friendliness, with the concept of the "sustainable green hospital" ever in mind.

## FCC wins two motorway contracts in Poland

A section of the A1 motorway and a section of the S5 expressway, for a total of 385 million



Section of road built by ALPINE

The Polish Directorate-General of National Roads and Motorways (GDDKiA) has awarded FCC two contracts through FCC's Austrian subsidiary, Alpine Bau GmbH. The first contract is to build the S5 expressway in

Poland, which bears a 245-million-euro price tag. The second is to complete motorway A1 by building the section between wierklany and Gorzyczki, for a total of 140 million euro.

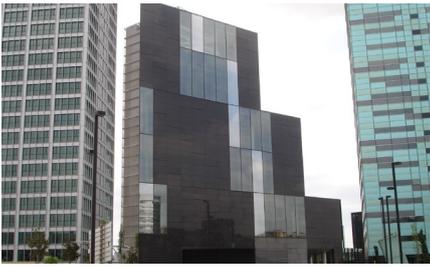
The work on the A1, which involves an 18.3-kilometre-long section between the wierklany exit and the Czech border in Gorzyczki, southern Poland, includes the construction of two junctions, two rest areas and 31 bridges. The most eye-catching feature on the architect's slate is a 380-metre-long cable-stayed bridge.

The S5 project consists in the construction of a dual carriageway joining the cities of Poznan and Wroclaw, including ring roads around the cities of Bojanowo and Rawicz. The 29-kilometre-long section will be twinned to include four lanes. A nine-kilometre-long district road will also be built, running perpendicular to the dual carriageway.

### Other Contract awards

- OCIBAR has picked FCC to build special foundations and the first phase of the structure of the Port Adriano shopping centre in Calviá, in the Balearic Islands.
- The Government Department of Urban Development and Housing of the City of Madrid has awarded FCC a contract to refit Escuelas Pías for social and educational uses.
- The Galician Regional Council has chosen FCC to build the new courthouse in Santiago de Compostela.

## Office building in L'Hospitalet



The buildings' stepped façade

L'Hospitalet de Llobregat can now boast of a new office building built by a joint venture featuring FCC. Work was completed in May 2010. The property contains retail space and parking spaces for private use. The job included the development of a certain space for public use according to the stipulations of the complementary development project for Plaza de Europa.

The complex the property belongs to contains buildings set in the form of an open island, surrounded by three 19-storey office high-rises and three 16-storey residential high-rises. All the buildings are designed by architects Albert and David Viaplana and have the same cross-section.

The building constructed on this lot is intended to hold offices. It is long and set at an angle, with a length of 118 metres plus another 57 metres. The offices have a ground floor and four stepped upper floors. The building features a two-storey porch in the central area and contains a basement car park.

The wall facing onto the square is a curtain wall with solar control glass, and the rear wall is black basalt granite with windows. These walls are unique in that they are not flat, but instead form a sawtooth shape with a modulation of four metres.

### + Team

**Department head:** Gerardo Alvira

**Manager and construction manager:** Alfred Sanfeliu

**Site technician:** Xavier Puertas

**Quality technician:** Sara Revuelta

**Systems technician:** David Velasco

**Office staff:** Antonio Quesada and Lola Martín

## New access to Vilagarcía harbour



Aerial view. Copyright: Paisajes españoles

Development Minister José Blanco presided over the ceremony held on 25 June to mark the opening of the new access to Vilagarcía de Arousa harbour. The access was built by FCC and required a total investment of 54 million euro, co-financed with European Union ERDF funds.

The new road is 7,121 metres long and makes a direct itinerary possible between Vilagarcía harbour and road AP-9. In addition, the new road completes the north/south ring road around Vilagarcía de Arousa through the junctions with regional roads VG-4.7 and VG-4.3. The layout runs transversally from west to east through the southern portion of the city, crossing the municipalities of Vilagarcía de Arousa, Vilanova de Arousa and Caldas de Reis.

The road has one 3.5-metre-wide lane in each direction and 2.5-metre-wide verges. The most special features of the job are Santa Mariña Viaduct (480 metres) and El Lomba Viaduct (120 metres). In order to keep the new road permeable to cross-traffic, eight flyovers and four undercrossings have been built.

Certain measures have been taken to correct environmental impact. Work has been done to integrate the road into its environment aesthetically by replanting denuded surfaces, planting trees and sowing native plant species that will thrive under the local environmental conditions. Sound barriers have been erected in the more-sensitive areas.

### + Team

**Department head:** Miguel Pérez-Lafuente Córdoba

**Construction manager:** Fidel Adrio Monterroso

**Quality technician:** Elisa Pernas González

**Foreman:** Rosendo Ramos Leal

**Office staff:** David Otero Amoedo

# Sant Boi de Llobregat Hospital



The hospital viewed from the front. Copyright Simón García

The new Sant Boi Hospital, built by FCC in the Sant Joan de Déu health complex, threw open its doors on 11 June after three years of construction and an investment of 100 million euro.

The facility has a total floor area of 38,620 square metres and 8,357 square metres of parking. It has a 292-bed capacity and will be the lead health centre for 128,000 people.

The building is arranged into volumes of varying heights, three main volumes and one secondary volume. The first three, connected by a central hallway, are to

be used for hospitalisation wards, the outpatient consulting offices, outpatient care facilities, admissions, administrative and computer units, intensive care, the coffee shop and the dining hall. The secondary building is to be used by the management.

The building as a whole houses six blocks with different floor layouts, eight in the highest portion and four below ground where all the blocks form a single complex. This complex is to be used to house operating rooms, emergency treatment facilities, the image diagnostics department, the obstetrics

department, the intensive care unit, parking, storage, the kitchens, dressing rooms, the pharmacy, the sterilisation unit, the morgue, a filing area, cleaning facilities and the disinfection area.

## + Team

**Department head:** Bernabé Sanz

**Construction manager:** Miguel Ángel Empez

**Production chief:** Javier Villalta

**Site technicians:** Raúl Fernández, David Sanz and Joan Ignasi Palomas

**Quality technician:** Ester Alfonso

**Systems technician:** Silvio Alvira

**Surveyor:** Jordi Francesc Giménez

**Office staff:** Emilio Ortega

**Foremen:** José González and Juan José García

## The Austrian Pavilion is one of the biggest crowd drawers at the Shanghai World Expo

Built by FCC subsidiary ALPINE, the building has already had over a million and a half visitors



The Austrian Pavilion in Shanghai by night

A few days ago, the building made by Alpine, an FCC subsidiary, to act as the official home of the Austrian Pavilion at Expo 2010 in Shanghai crossed the threshold of one and a half million visitors since the 1st of May, when the World Expo opened.

Built on an area of 2,000 square metres,

the Austrian pavilion is situated at one of the Expo grounds' landmark locations, near the Lupu Bridge in the immediate vicinity of the pavilions belonging to Rumania, the Netherlands and Croatia. The design of the futuristic-looking construction was developed by the Viennese architectural studio SPAN & Zeytinoglu.

The Central European country's pavilion reflects the harmonious interaction of city, landscape, nature, urban habitats and urban cultural landscapes in a design that appeals to all the senses and is innovative in both conception and execution.

## Award for the refurbishment of the Hala Ludowa in Poland, a World Heritage Site

FCC won the 2009 construction prize in the refurbishment category



Hala Ludowa

The Polish Association of Engineers and Construction Technicians has granted FCC its 2009 construction prize for the refurbishment of the Hala Ludowa in Wrocław, Poland, by Austrian subsidiary Alpine.

With 6,000 seats and standing room for 20,000, the Hala Ludowa is a magnificent piece of work, a trailblazer of 20th-century architecture. Its innovative design successfully conveys a sensation of lightness

and harmony that emanates from the enormous cupola, which is 65 metres in diameter and 42 metres tall. In 2006 the Hala Ludowa was included on the list of monuments that form part of the UNESCO World Heritage.

The refurbishment work now done makes the Hala Ludowa the first reinforced-concrete building to shine with renewed splendour.

## Drawbridges on Seville's new lock pass tests A-OK

The FCC-built lock will make increased sea transport possible



Drawbridge over the lock's navigable channel

At the new lock built at the port of Seville by a joint venture featuring FCC, the installation of the traction, actuating and control mechanisms of the four gates and the three drawbridges has now been completed, and the first tests for checking that the mechanisms are in proper working order have been passed.

The electromechanical system installed makes it possible to operate the 293.65-metre, 800-tonne lock gates safely and accurately. The four gate

frames were built off-site at the Seville shipyard, while the traction, guide and control mechanisms were installed right at the lock.

There are two vehicular bridges 44 metres long by 12 metres wide, plus a railway bridge of the same length but 6.10 metres wide. A hydraulic system has been installed on each, making it possible to raise the 200-tonne bridge deck within three minutes' time into an upright position totalling 40 metres in height.

These tests validate the operativity of the gates and drawbridges and open up the way to the final construction phase, consisting of closing off the river and bypassing the current lock, making it possible to improve the inland water traffic in Seville.

# Opening of the Vic/Ripoll section of the C-17

Between the end of the Les Masies de Voltregà relief road and Sora



Aerial view of a section of the C-17

Joaquim Nadal, head of the Regional Department of Land Policy and Public Works, accompanied by the mayors of the local corporations concerned, inaugurated the new section of dual carriageway C-17 between Vic and Ripoll on 30 July. The section, between the end of the Les Masies de Voltregà relief road and Sora, Osona, is 10 kilometres long. With this new section, 72% of the C-17 is now twinned. This is the third sector of the 50-kilometre-long Centellas/Vic/Ripoll project, which is being built by FCC.

The new section includes three tunnels and five viaducts. Its layout is divided

into two parts, the part that goes from the end of the Les Masies relief road to the start of the Sant Quirze de Besora and Montesquiú relief road (which is 5.7 kilometres long), in which the C-17's existing bed has been kept, and the lane expansion that has been built out on both sides of the road, adapting to the lie of the terrain.

The other part of the new section is the Sant Quirze de Besora and Montesquiú relief road. This four-kilometre-long section called for the twinning of the Sant Quirze and Montesquiú relief road, on the basis of the pre-existing two-lane roadway. Two tunnels have been built,

parallel to Ginestet Tunnel and Las Codines Tunnel.

Behind the twinning of this road is a total investment of 312 million euro, and the entire project is scheduled to be finished in the summer of next year.

## + Team

**Construction manager:** Jorge Viñals Blanco

**Section chief:** Xavier Mestre Fusco

**Tunnel production chief:** David Berenguer Viñals

**Systems production chief:** Pere Garrigó Rosiñol

**Earth production chief:** Roger Gómez Alibés

**Quality and environmental technician:** Cristina de Beascoa Creixell

**Safety and hygiene technician:** Iñaki Prieto Vicente

**Technical office and planning:** Aitor Mata Martínez

## Ethical and environmental management consolidate FCC on the Dow Jones Sustainability Index

For the third year in a row, the citizen service company's commitment to social responsibility and sustainability is recognised



FCC's commitment to social responsibility and sustainability has been recognised by the selective international Dow Jones Sustainability Index, which has included FCC for the third year running in its World and European indexes. The results of the 2010 findings underscore the citizen service company for its economic work (since FCC is a world leader in the heavy construction sector), in economic terms and in three of the index's five criteria: risk and

crisis management, codes of conduct (compliance, corruption and bribery) and non-financial project evaluation.

The experts of the world's most important stock market and business index company have given FCC top marks in two of the environmental criteria, those referring to environmental reporting and to transport and logistics. FCC's social reporting, environmental management policy

and systems and resource efficiency and conservation have been graded very positively as well.

The Dow Jones Sustainability Index lists over 300 companies from 27 countries, and it showcases companies committed to engaging in sustainable growth and creating value for shareholders by complying with over ninety strict economic, social and environmental criteria in their business dealings.

The heavy construction sector of the Dow Jones Sustainability Index contains only three Spanish construction companies, FCC, Ferrovial and Acciona, plus one German firm and two Korean enterprises.

## FCC takes home an honourable mention from the ADM Business School-UNIR Environmental Defence Awards



FCC Construcción's Pilar López and ADM's Joaquín Jiménez ADM Business School-UNIR (International University of La Rioja) granted FCC Construcción an honourable mention in

defence of the environment at the Third ADM Business School Awards.

What makes these awards so different and original is that the only candidacies allowed are those submitted by the students in the school's own master's degree programme in environmental management. It is they who report on each candidate and sit on the demanding panel of judges.

In their final decision, the students declared that the winning organisations "ought to be looked on as pacesetters and models of sustainable development", and the students valued the winners' commitment to "innovation and eco-efficiency, as well as the development of renewable energy sources".

## Construction under way on the Majadahonda Cycle Path Network



Francisco Granados and Narciso de Foxá

The head of the Community of Madrid Department of the Presidency, Justice and the Interior, Francisco Granados, and Majadahonda Mayor Narciso de Foxá have presented the design of the Majadahonda Cycle Path Network, which is going to be built by FCC. The project, in which 4,350,069 euro will be invested, began this summer and will be concluded in seven months.

The Community of Madrid will build eight kilometres of bicycle lanes, which will hook up with the already existing lanes to connect all the city's nerve centres. The bicycle lanes will run along the El Plantío road, Avenida de España, Doctor Calero,

the Pozuelo road, behind the El Carralero Industrial Park, Avenida de Juan Carlos I and Calle Santa Brígida.

This project will be complemented by the Majadahonda City Council's installation of 158 rental bicycles (plus 50 reserve bikes), which will be available at stations at different spots in Majadahonda. Citizens will be able to rent a bicycle at, for example, the local train station and pedal into the city centre, to Monte del Pilar or to the neighbourhood of Puerta de Hierro Hospital.

The system will be very simple. All people have to do is sign up for the ser-

vice. When they swipe their smart card over the base station, it will select an appropriate bicycle and release it to the user. Bicycles in poor condition are automatically pulled out. When users have finished, they may drop off their bicycles at any other station in the city.

This is the first phase of a bicycle path that in future will connect Majadahonda with the bicycle paths belonging to Boadilla, Las Rozas and Pozuelo, thus hooking up to the Madrid ring through the Casa de Campo.

## Two tunnels built by FCC ranked with the best in EuroTAP 2010

Bracons Tunnel in Spain and Kreuzenstein Tunnel in Austria



Bracons Tunnel

The EuroTAP 2010 European tunnel assessment programme analysed 26 tunnels in 13 countries. The infrastructure looked at included Bracons Tunnel in Spain and Kreuzenstein Tunnel in Austria, both of which were built by FCC and both of which earned a “very good” rating.

For their analysis work, the independent inspectors of EuroTAP look at infrastructure and risk. Tunnels must exceed certain minimum safety standards in order to earn a good final grade. EuroTAP has been running inspections for 12 years, having analysed over 370 tunnels to date.

Bracons Tunnel, built by FCC for G.I.S.A., was opened to traffic on 3 April 2009. With its length of 4,560 metres, it is the third-longest vehicular tunnel in Catalonia. The study underlined the fact that Bracons has a low driving risk due to its small volume of traffic, just some 4,300 vehicles per day.

Bracons’ preventive measures scored well too, since the tunnel has wide-enough lanes, lay-bys and very good lighting. In addition, it is monitored 24 hours a day from a centralised command post, and it has an automatic fire alarm system and excellent conditions for effective evaluation.

Kreuzenstein Tunnel, built by FCC’s Austrian subsidiary Alpine, forms part of the S1 motorway between Eibesbrunn and Korneuburg. It is a newly designed

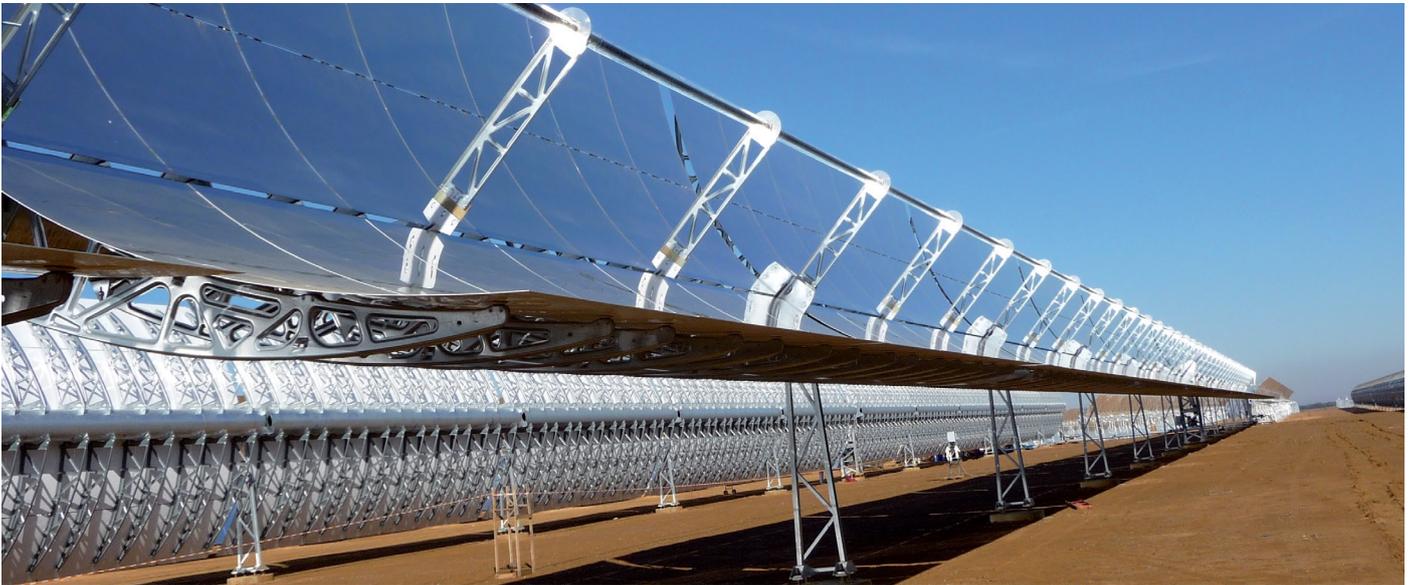
tunnel opened recently and is a total of 1,765 metres long. Its traffic volume, 23,000 vehicles per day, makes it a medium-risk tunnel, but it is safe because it has unidirectional, wide, well-lit lanes, it is monitored by qualified personnel from the control centre, it provides motorists with information over variable information displays, the radio and loudspeakers, and because it has a good emergency response system.



Aerial view of Kreuzenstein Tunnel

# FCC Construcción backs renewable energy

By Paloma Mora and Carmen Anguita of Espelsa



Collectors in Palma del Río. The Guzmán Project

FCC Construcción supports the FCC Group's strategy to boost activity in the energy sector. It is working with the group's Energy division in the design, construction and operation of two of the largest solar thermal plants currently under construction in Spain or in the world.

Espelsa and ISO, companies belonging to the industrial and specialised companies division of FCC Construcción, are the leaders (with a nearly 70% interest) of two 50-megawatt projects, the Guzmán Project in Córdoba and the Villena Project in Alicante. The developer of both is FCC Energía.

Each of these projects (currently in the construction stage) will, thanks to an annual production of 110,000 megawatt hours apiece, provide enough eco-efficient energy for more than 70,000 homes.

The Guzmán Project, situated in Palma del Río, involves an investment of upward of 250 million euro and the creation of more than 500 jobs. The site covers an area greater than 200 football pitches and will

have more than 340,000 square metres of automated parabolic mirrors that mimic the movement of sunflowers. Their job is to reflect the maximum amount of solar energy and beam it onto an oil-filled collector tube, which will reach a temperature of over 400 degrees centigrade. The oil will then be piped through a complex plumbing system to a power plant. There it will heat water to produce steam, which will flow through a turbine to generate electricity.

This solar thermal power plant, which is scheduled to be commissioned in late 2012, will make it possible to cut atmospheric CO<sub>2</sub> emissions by some 110,000 tonnes per year, thus helping to make FCC's commitment to clean energy and eco-efficiency something real.

The Guzmán Project is therefore a zero-discharge plant and will, as such, avoid the elimination of waste in the locality and uphold the vocation of continuous improvement in waste management.

The Villena Project is also a solar thermal plant, but it is currently in the design stage. It is scheduled to be commissioned in late 2013.

The two projects join other projects in FCC Construcción's industrial portfolio, such as the two photovoltaic farms contracted in Sardinia, Italy, which together will have 4.3 megawatts of power. They are the first step in Espelsa's international expansion strategy. Espelsa currently operates two 10-MW farms in Espejo, Córdoba, for FCC Energía. Right now it has energy projects under study for Italy, France, Brazil and the US.

These projects represent a firm commitment by Espelsa and ISO to boosting this kind of activity in the renewable energy sector, a sector in which they aim to consolidate their position as one of the leaders in end-to-end EPC (Engineering, Procurement, Construction) project management.