

Spain

Endesa To Invest €781 Million In Its Catalonia Network

Endesa, the Spanish electricity company, will invest €781 million by 2005 to improve its 70,000 km transmission network in the Catalonia region. The latest agreement between the company and the Catalonia government requires Endesa to increase its provisions for improving the quality of its service. Endesa and Red Eléctrica, operator of the Spanish electricity network, are under pressure from the regional government to finance the construction of a tunnel beneath the Pyrenees, which will run alongside the high speed railway line and connect with the French network.

France

Underground Entrance Envisaged For Eiffel Tower

The 324 m-tall Eiffel Tower is the most visited paying monument around the world with more than six million visitors in 2000. To cope with the increasing number of visitors, Société Nouvelle d'exploitation de la Tour Eiffel (SNTE) plans to develop an underground entrance that would cost around €61-76 million and would take three years to build. The 'Old Lady' was erected for the 1889 universal exhibition in Paris. New underground spaces beneath its 7,300 tons of steel would house new restaurants and a possible museum on the Eiffel Tower. The underground entrance would centralise at one place all visitors to the tower, who now can enter from the four pillars. The entrance would be covered by a slab or a transparent bubble. Some 10,000 sq metres are available between the four pillars and there would be room enough for a congress facility or even a car park.

World Digest Of Tunnels Under Planning

France. The west branch of the Rhine-Rhone high speed train is in preliminary stage. Both SNCF, the French railways, and RFF, the infrastructure operator, support the tunnel option to cross the city centre of Dijon. The next stage will consist of draft design.

Italy. Venice may have an underground railway one day. The city is seeking private sector funding for a \$247.5 million system that would carry more than 2,000 passengers an hour from the Marco Polo international airport on the mainland to the former Arsenale shipyard, near St Mark's Square via Murano island. The required investment is estimated at €150 million. A further extension to the Lido is also being considered. The plan has appalled conservationists who fear that old buildings, already threatened by floods, would be undermined by the tunnels. But supporters to the project argue the railway is the solution to the waves from boat traffic which erode the foundations of the crumbling palazzi. Another tunnel is under study under the lagoon to cross the Grand Canal and connect the Giudecca island with Zattere. The 330 m-long tunnel would lie at a depth of 15 metres and would be equipped with lifts at each end to come in and out. Inside, there would be a travelator like those in long metro stations and airports. Tourists and walkers would thus save much time and weight. Venice's population has shrunk from 170,000 to 67,000 in 40 years and the scheme is also designed to stop the exodus and revitalise the islands.

Spain. The 31.5 km Estella-Logroño section on the 62 km Pamplona-Logroño highway will include a 500 m tunnel

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between Los Arcos and Lazagurria. Tenders for construction will be invited at mid-2002. Construction of the first phase of the highway between Pamplona and Estella started in October, 2001. One noteworthy structure is the 2 x 1.350 m-long El Perdón tunnels.

Spain. ATM, the Barcelona metropolitan transport authority, has approved the 2001-2010 infrastructure masterplan. Among the planned metro projects are a €66 million Line 3 extension from Canyelles to Trinitat Nova where it will connect with Line 4, a €100.9 million Line 5 extension from Horta to Vall d'Hebron where it will connect with Line 3, a Line 4 extension to Badalona, as well as a Line 9 extension to Sagrera and Badalona. Line 9 has yet to be built. Visit www.atm-transmet.es

World Digest Of Bids

France. Open tendering, deadline 8th March, 2002 for technical control of waterproofing works as part of Line B of the Toulouse metro. Visit <http://ted.eur-op.eu.int/ojs/en/frame.htm>, OJ S 14, document 10580-2002 or contact SMAT, Toulouse, fax +33 5 61144851.

Italy. Open tendering, deadline 28th February, 2002 for engineering dealing with geological studies, environment impact study, draft and detailed designs, work management and safety coordination for an avalanche protection tunnel in Sisoret in the Aosta Valley. The tunnel will be 250 m-long and 9.5 m-wide and will be built at an altitude of 1,400 metres. Visit <http://ted.eur-op.eu.int/ojs/en/frame.htm>, OJ S 9, document 6821-2002 or contact the Aosta Autonomous Region, Aosta, fax +39 0165272658.

World Digest Of Contract Awards

Australia. TransGrid has awarded or is about to award the construction of two major cable tunnels in Sydney. The Energy Australia tunnel, 1.4 km-long 3.2 m in diameter, running from Surry Hills to a new substation in Haymarket has been commissioned to Downers. It will be excavated by a Mitsui 2000 roadheader due to start on 4th February, 2002. The TransGrid tunnel from Haymarket to Redfern, 3.5 km-long 3.4 m in diameter, will be awarded to the Walter Group of Germany or Transfield. It will be TBM-driven. The tunnel has been designed for two 330kV circuits and also two 132kV circuits for the last 600 metres of tunnel. The cable will be installed in excavated trenches in public roads for the majority of the route. However, a tunnel has been preferred for the final 5 km to minimise the environmental impact of the cable installation in the approach to the city. The Environmental Impact Study (EIS) has been prepared by EDAAW. The project works are from Sydney Park to Haymarket and involve several different areas of construction, as follows:

- the construction of the Sydney Park adit shaft from where the main TBM tunnel drive commences and from where all muck disposal will occur,
- the construction a 3.4 m nominal size TBM-driven tunnel approximately 3,200 m in length,
- the construction of the Haymarket adit from where the roadheader tunnel will be mucked out, and the connection to the future Ultimo Road substation made,
- the construction of a 3.4 m nominal size roadheader driven tunnel approximately 600 m in length,
- the construction of a TBM exit shaft at Wattle Street,
- the construction of two access shafts to provide access to the cable joints (subject to review).
- the construction of a cable entry shaft at Sydney Park,
- the construction of ventilation exhaust shaft,
- the construction of tunnel services including by not limited to tunnel ventilation including fan rooms, drainage lines, sumps and pumps, water treatment plant, and a tunnel transport and life safety system.

Visit www.transgrid.com.au and www.edaw.com

United Kingdom. Norwest Holst, the British subsidiary of French construction major Vinci, and

Hochtief have signed a €195 million contract on 24th January, 2002 to build in jv several structures, of which 500 metres of cut-and-cover tunnels on the Channel Tunnel Rail Link as part of contract 342.

Vietnam. Matsushita Electric Industrial Co. Ltd. and Itochu Corp. announced they have received an order from the Vietnamese government for a dust collection and ventilation system to be used in the Hai Van tunnel construction project. The order is worth around ¥2.6 billion. The system will be mainly manufactured by Matsushita Seiko Co. Ltd., a subsidiary of Matsushita Electric. The 6.3 km tunnel is situated roughly midway along Route One, which links Hanoi and Ho Chi Minh City. Construction of the tunnel began in 2000 and is scheduled to be completed in 2004. For further details, visit www.tunnelbuilder.com, item vn/11.

World Digest Of Ongoing Tunnelling

France. The construction of a 740 m tunnel is underway in Gometz-la-ville to bypass the city on the RD 988 local road between Paris and Chartres. The first phase including the tunnel will cost €28.9 million and is scheduled to open in the summer of 2003. The tunnel will be equipped with ten video cameras, a sophisticated ventilation system, six escape staircases and it will be monitored 24 hours a day.

Venezuela. Construction of the 40 km Caracas-Los Valles del Tuy railway is now 75% complete on schedule to be opened in 2004. The line will run through 23 tunnels and will connect with Line 3 of the Caracas metro in La Rinconada station. Work has been completed on 22 of the 23 tunnels. Excavation of the Las Mayas tunnel, the last and nearest to the capital, is about to start. The 6.7 km Tazón tunnel is the longest south American tunnel to date. The total cost to build the line amounts to US\$1.7 billion.

World Digest Of Inaugurations

Russia. Russia opened a 1.3 km-long in the Black Sea resort of Sochi on 28th December, 2001. The tunnel lies under a mountain ridge between the Matsesta and Agura rivers. According to engineers, the new tunnel can withstand earthquakes of up to 7 points on the Richter scale.

Spain. A 313 m-long 9 m-wide tunnel has been inaugurated in mid-November, 2001 in the town of Sepúlveda in Castilla León region. The tunnel was bored under the city centre by a jv of Teconsa and Obras Subterráneas for Ptas853 million.

World Digest Of Subsurface Urbanism

China. The construction of a new planetarium in Beijing has started on 26th December, 2001 in Xizhimenwai, Xicheng District. The works will cost Yuan240 million and will be completed in two years. The building will be 30 m-high and will cover 20,000 sq metres. There will be two underground basement and four floors above ground level.

World Digest Of Tunnel Renovation & Maintenance

France. The renovation worksite of the sewer main between Athis-Mons and Paray-Vieille Poste is at a standstill, six months behind schedule. The client, Syndicat de l'Orge Aval (Sivoa), expects to resume the works mid-March. The €335,000 renovation project consists in separating the wastewater pipe and the rainwater pipe and to connect everything to the Valenton treatment plant. A shield boring machine is being used to bore at a depth of eight metres. Since September, 2001 the works have been stopped at the entrance of Paray. When the second construction phase started in June, the

contractor selected a hard rock cutterhead. But very quickly, the TBM encountered very sandy soils and the cutterhead sank in too soft soils like in a slab of butter. At that time, the contractor claimed a financial reassessment on the grounds that the soil conditions caused cost overruns. Sivoa objected that no mistake had been made in the tendering process and that no budget increase was justified. Both parties have finally come to an agreement on 15th January, 2001. Sivoa will undertake ground investigation and a court in Versailles will determine whether the demands of the contractor are founded. Tunnelling will resume mid-March. Visit www.sivoa.fr

United States. Reconstruction work will begin in February on the 1 km-long Big Savage tunnel in southeastern Somerset County between Pittsburgh with Washington, D.C. A \$7 million contract for the tunnel work has been awarded to Advanced Construction Techniques of Maple, Ontario. The project was designed by AWK Consulting Engineers of Turtle Creek. It is required to replace the lining and lighting of the tunnel. The work is expected to take a year to complete. Big Savage is one of the highest ridges in the Allegheny Mountains of Pennsylvania.

World Digest Of Innovations – R & D

Austria. An expert in safety techniques at OGMA, the Austrian society for measurement and automation, has presented the technical capabilities of a system that monitors overspeed and dangerous behaviour in road tunnels. 'Smart' video cameras can assess the speed and the distance between two vehicles using automated imaging. The driving offences are instantly transmitted to a connected network, for instance the police. The technology will enable to identify offenders and to mitigate drivers' mistakes. In the future, a fully automatic driving within tunnels is envisageable. Tunnel safety has become a national priority in Austria. The country has recorded several fatal accidents in road tunnels in the last years. In May, 1999 twelve people died in a fire caused by a lorry crashing into five cars inside the Tauern tunnel and in August, 2001 two successive accidents in the Gleinalm and Amberg tunnels killed eight people.

Companies

Germany. Terex Corporation based in Connecticut has announced that it will acquire two German machinery manufacturers, Atlas Weyhausen and the Schaeff Group. Schaeff CMT division manufactures roadheaders for the mining and tunnelling market and has an estimated 2001 revenues of approximately \$220 million. Both of these deals were expected to be finalised by the end of 2001 or early in 2002. Terex primarily manufactures equipment for the mining industry and construction industry. In the area of mining, the brands Orenstein & Koppel and Payhauler in particular belong to the Terex product portfolio. Visit www.terex.com and www.schaeff.com

Germany. Energy giant RWE will reduce its stake in Hochtief from 62.2% to 39.7%. RWE is divesting parts of its Hochtief stake to concentrate on its core business strategy. Hochtief is the first German construction group with a broad tunnelling expertise. Hochtief is involved in major tunnelling projects among which Lot 2 of the Guadarrama rail tunnel in Spain or contract 320 of the CTRL in the UK including the Thames tunnels, two 2.5 km-long bores. Visit www.hochtief.de

United States. Hollandsche Beton Group NV of the Netherlands said it sold its 49% stake in Frontier-Kemper Constructors Inc. to Heitkamp-Deilmann-Haniel GmbH, which already holds a 49% stake in Frontier-Kemper. Frontier-Kemper has annual sales of about US\$100 million and specialises in constructing mine tunnels and shafts. Financial details of the transaction were not released. Visit www.frontier-kemper.com