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Cap. Soc. 440.199.936 Euro (al 30 aprile 2009) i.v.

ATTACHMENT 1

SA.PE.I.: the record- breaking "electricity bridge"

1,000 megawatt underwater: the first direct connection between Sardinia and the Italian mainland and the most important and high-tech electricity line ever built in Italy

The 10 records broken by the SA.PE.I., an all-Italian record

1. The longest electricity connection in the world with 1,000 megawatt of capacity
2. The deepest in the world: 1,640 meters in depth
3. Top investments: 750 million euros, the highest ever implemented in Italy from the post-war period to the present for one electricity infrastructure
4. The quickest: authorized in only 14 months
5. The most technological: cutting-edge in Europe among HVDC systems (High Voltage Direct Current)
6. The most sustainable: no-impact cable laying. The cable laying operations were carried out fully respecting the Mediterranean eco-systems and with the lowest possible environmental impact. It allows annually reducing over 500 thousand tons of CO2 in the atmosphere due to a greater use of renewable energy.
7. The longest in the Mediterranean: 435 km
8. The most powerful in the world**:** 500 kV of voltage for 435 km
9. The two largest converter power stations in Italy: 48,000 sq. m. the area of the station in Fiumesanto, Sardinia, and 35,000 sq. m. the area of the station in Latina, for a total of 83,000 sq. m
10. The largest cable-laying ship in the world for storage capacity: Giulio Verne, 7,000 tons of tonnage, unique in the world, specifically modified to lay the SA.PE.I cable.

SA.PE.I.'s economic, electricity and environmental advantages

- Saving 70 million euros a year for the electricity system thanks to removing "bottlenecks" between the Sardinian area and the rest of the electricity market.
- Increasing the electricity system's safety in Sardinia and more coverage for the demand of Lazio and central Italy (the 1,000 MW of the SA.PE.I. correspond to 5 times the peak demand of the Cagliari area and to half the peak demand of a city like Rome) thanks to the use of efficient production also from Sardinia
- Reducing CO2 in the atmosphere by over 500 thousand tons a year -equal to the emissions of 250 thousand medium-sized cars- due to a greater use of renewable energy
- Creating opportunities for electricity operators for participating with fewer restrictions in the Electricity Market while also guaranteeing greater flexibility and safety for the system's operation
- Possibility of exporting from Sardinia to the mainland more efficient thermo-electric production (1/3 of the electricity plants are coal supplied) and of producing electricity from renewable sources, particularly wind power, that is being strongly developed.

Technical characteristics

Authorized in December 2005 after only 14 months – another record for an electricity line in Italy – works started in October 2006 and ended in a little over 48 months. 5 thousand projects were designed based on 70 technical and environmental regulations.

- Beginning of works: **October 2006**
- 1st cable laying completion: **November 2008**
- Completion of converter station in Latina – 1st cable: **February 2009**
- Completion of converter station in Fiumesanto – 1st cable: **June 2009**
- Entrance into operation 1st cable: **November 2009**
- Completion of converter stations in Latina and Fiumesanto – 2nd cable: **March 2010**
- 2nd cable laying completion: **October 2010***

Testing of the SA.PE.I. connection started in November 2010 and will end in the next few weeks.

The cables that form the interconnection were built by Prysmian and partly by Nexans and were laid on the sea floor by the Giulio Verne ship.
The 2 converter power stations located in Fiumesanto and in Latina were built by the ABB Group while civil works were carried out by the Temporary Association Pellegrini-Acmar. The stations occupy a total area of 83,000 sq. m; in the area where they are located, 170,000 c.m. of land were totally removed; the waste land amounts to 220,000 tons.
46.000 c. m. of concrete were used and 4,100 tons of iron to reinforce the concrete. In the Fiumesanto station, over 1,600 foundation micro-poles were installed and drilling was carried out for 17 km. In the Latina station, for the foundations, 441 bored piles were used and drilling was carried out for 9 km.
The SA.PE.I. project involved 177 companies and over 90 human resources from Terna including technicians and staff.

The SAPEI in numbers

2	submarine cables, land cables, converter stations
12	centimeters of cable diameter
22	meters in height of the converter stations
50	tonnage of bollard pull of the cable laying ship
70	technical and environmental regulations
90	total resources from Terna involved in the project
177	companies working in the SA.PE.I. building site
435	km in length
500	kV of voltage
1,000	MW of capacity
1,640	meters the maximum depth of cable laying
5,000	project plans
7,000	tonnage of capacity of the Giulio Verne cable laying ship
35,000	sq. m. the area of the Latina station
48,000	sq. m. the area of the Fiumesanto (SS) station
170,000	cubic meters of land removed
200,000	workdays
750,000,000	euros invested

*in November 2010, testing began which is still in progress.