



Ribeiradio and Ermida Hydroelectric Dams

Supply & installation of instrumentation and monitoring during the construction stage

Transforming your infrastructure into living assets



Simulation of the dam



Plan view of the two dams in Geoscope

Engineering Services	Monitoring Services
Platform Solutions	Mapping Services

The Portuguese company Energias de Portugal is a leading operator in the energy area (electricity and gas).

In June 2009, EDP started the construction of a new hydro-electric facility based on two new dams near Oporto, in Portugal.

During the Ribeiradio-Ermida dams' system construction, SIXENSE was contracted to carry out the monitoring work for both dams.

The work, that are currently in progress, are based on the supply of different sensors to determine the geotechnical and structural performance of the embankments, dam, and dam infrastructure such as the galleries during the construction phases.

On site, the sensor cables are centralised to common control boxes that subsequently transfer data to the central control point. The geotechnical site investigation for the dam's geology is also being carried out by SIXENSE.

In addition to the commissioning of a variety of monitoring sensors, Geoscope (a GIS program for the data management) has also been implemented by SIXENSE.

Thanks to this software the monitoring and management of both the received manual and automatic data is providing reliable accessible information.

This new installation is due to be completed in early 2014 and is expected to produce up to 134 GWh per year.



Oporto



Started in 2008
140 months



Key figures

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Instrumentation of dams under construction

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Data in real time (Geoscope)

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Installation of the instrumentation

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Automatic and manual readings

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36 months of works