## NEW HYDRO-ELECTRIC PROJECTS COME TO LIFE IN PORTUGAL - ABREU ADVOGADOS

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## Portugal is one of the EU countries with the highest hydro-power potential still to be exploited, and with the least growth in developed capacity over the past 30 years.

Currently, Portugal uses less than 50% of its energy production capacity. Its developed hydrocapacity is around 5000MW, including 4580MW from ordinary hydro-electric power plants and 365MW from small hydro-power plants.

At the beginning of December 2007, the Government approved the National Plan on Dams with High Hydro-Electric Power Potential (PNBEPH), leading to the approval of the construction of ten dams: Foz Tua, on the River Tua, Pinhosão (River Vouga), Padroselos, Vidago, Daivíµes, Fridão and Gouvães (all along the River Tí¢mega), Girabolhos, near Mondego, and Alvito (River Ocreza), and Almourol (River Tejo).

The PNBEPH aims to identify and set priorities for the investments to be made in hydro-power plants between 2007 and 2020.

The PNBEPH goal is to reach a national developed hydro-electric power capacity of over 7000MW by the end of 2020, with the major installations providing an additional 2000MW of installed power, thereby helping to fulfil the 2020 goal set by the Government for renewable energy sources, to reduce the nation's dependence on other energy sources and to reduce CO2 emissions.

All the selected power facilities in PNBEPH will have a total developed capacity of 1100 MW, allowing an average annual production of around 1630GW. The energy produced annually will represent a reduction of at least 570,000 tonnes/year of CO2 emissions, compared with the alternative energy sources used currently.

En este artículo, Manuel Andrade Neves, socio de Abreu Advogados, explica que el gobierno luso lanzó su «Programa Nacional de Presas con Elevado Potencial Hidroeléctrico» (PNBEPH, siglas portuguesas) en 2007 para identificar y explotar la red de ríos del país a fin de generar electricidad. El gobierno ha aprobado en principio la construcción de 10 nuevas presas; asimismo, EdP e Iberdrola son las empresas que han ganado la mayoría de las licitaciones. Con la aplicación del mencionado programa, Portugal dependerá menos de las energías no renovables, reducirá las emisiones de CO2 y generará empleo para 1500 personas.

The hydro-electric plants of Foz Tua, Padroselos, Alto Tí¢mega, Daivíµes, Gouvães, Pinhosão and Girabolhos are reversible, with a total developed power capacity of 807MW.

In 2020, with the full implementation of PNBEPH, the total developed power capacity in large hydroplants will be around 6950MW, fulfilling, more or less, the 7000MW target.

EDP - Energias de Portugal was the only company to tender a proposal for the construction and 75-year operation of the Foz Tua dam. Iberdrola made the highest bid for the construction and operation of the Padroselos, Alto Tí¢mega, Daivíµes and Gouvães dams (€303.7m), with a total estimated investment in excess of €1bn.

By making the highest bid, Iberdrola has ended the monopoly of EDP, which previously controlled the major hydroelectric dams in Portugal, ensuring the concession of the Padroselos, Alto Tí¢mega,

Daivíµes and Gouvães dams, part of the third public tender package under the PNBEPH.

No bids were received in respect of the hydro installations of Girabolhos and Padroselos. According to the Water Institute (INAG), this was due to technical reasons, leading them to implement two autonomous public tender procedures.

EDP won the public tender for the construction of the Alvito and Fridão dams. As with the Alqueva dam, this is a project that EDP may share with Galp.

Fridão, Alvito and Almourol are singled out as exceptions under the PNBEPH, as the successful bidder may choose to build only one of the plants. This leaves open the possibility that Alvito and Almourol may ultimately not be constructed.

In conclusion, the launching of the PNBEPH is expected to bring significant environmental and energy benefits as well as being an important mechanism in achieving the 2020 renewable energy goals. Indeed, the aim of the Plan is to use 70% of the national water potential, which represents, as mentioned above, a developed power capacity of 7000MW.

The implementation of the Plan is expected to have a significant impact on the national economy by reducing the nation's dependence on other energy sources, reducing CO2 emissions and creating jobs. According to data provided by the Ministry of Economy, the construction of the projects mentioned above will, at their peak, generate employment for 1,500 people.

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