



RES market places

“Oñatiko Ur Jauziak” a Mini Hydroelectric Power Station



Project idea and execution

The municipality of Oñati covers 108.2 km² and is located in the heart of the Basque Country. According to the data for the year 2003, Oñati had a population of 10,734 inhabitants.

As a result of the co-operative movement and industrial development of recent years, the industrial sector plays a key role in the employment figures recorded for each economic sector. Although industrial development has had a strong influence on the primary sector, out of the approximately 10.000 hectares encompassed within the boundaries of the municipality, almost half are still used for farming purposes. The agricultural sector is based mainly on sheep and cattle farming, although a significant amount of land is also used for forestry activities. Thus, the primary sector is still alive in Oñati.

In 1989 the Municipality of Oñati bought a mini hydroelectric power plant which was working since 1908 to provide electricity to a siderurgy company. After the deal, the Council decided to do an increase of capital to the Basque Energy Agency (EVE) which currently holds the 10 percent of the capital. The increase of capital offered the possibility of modernisation and automation of the plant in order to enlarge the productivity and gain in efficiency.

Hydroelectricity is created by falling water. The water turns a hydraulic turbine, which rotates a generator and produces electricity. Once the water has been through the turbine, it is directed into the exit. By holding water in the reservoir, the potential for immediate electricity is stored. Concretely, the system of Oñati consist of six falling waters which provide electricity to all municipality becoming self-sufficient and self-supporting. Moreover, the surplus of electricity is transfered to an energy supplier which guarantees the provision of electricity in dry season and low production periods.

Lessons learned

The innovative idea consists on recovering an old mini hydroelectric station to supply electricity to the municipality of Oñati. The success of the project is related with the sustainable way of energy supplying. The Key factor lies in disposing a river with enough regular flow during the year. Regarding to the environmental impact, the hydroelectric energy is 3,100 % more ecologic than other traditional energy systems.

Downloads

A description of the mini hydroelectric station is available in Spanish.

Contact

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