



A call from school.



Erasmus+
project.

THE POWER OF STUDENTS

The educational action promoted by the Erasmus Plus project aims to promote awareness among young people of the consumption of natural resources and the preservation of the same for fu-

ture generations. A priority is the knowledge of the use of renewable and alternative energies to those fossils in the activities productive. Hydraulic energy is clean energy.



Hydroelectric power plant in Presenzano "Enel" (the National Electric Body)

The Enel "Domenico Cimarosa" hydroelectric power plant in Presenzano is a typical closed-cycle power plant. consists of two basins with a capacity of approximately 6 million cubic meters each with a capacity of about

500 meters. The hydroelectric plant is located between the provinces of Caserta and Isernia and has a fundamental importance in the production of energy for central and southern Italy.

MECCANIC ENERGY TURNS INTO ELETRIC ENERGY



During the operation of generation, the water passes through the pressure tunnels and the penstocks and arrives at the plant. In the plant, the water acts on the turbine blades which, in turn, transform the mechanical energy of rotation transmitted, through a shaft, to the alternator. It is up to the latter to turn it into electricity.

Thanks to the transformer, electrical energy is fed into the 380 kw lines of the transmission network. The reverse

process takes place during the night. The electrical energy is drawn from the grid through the transformer and supplied to the alternator which, in this case, functions as a motor. The motor drags the shaft and transmits mechanical energy to the turbine which, turning in the opposite direction, functions as a pump: first draws water from the lower tank, then sends it back to the upper basin.





ENEL Green power, a new world record for renewables, has also started the development of 'mini' plants, but it should not be underestimated that the production of hydroelectric power from existing plants has the advantage of generating considerable revenues.

RENOVATION AND EFFICIENCY

Entered into service in 1991, the central Domenico Cimarosa of Presenzano is located along the river shaft of the river Volturno, in the homonymous valley, with a jump of 495 meters and a flow rate of 250.56 cubic meters the second. A plant that today represents an example of how to invest in order to obtain value from the existing central park, focusing precisely on energy deficiency. In Italy, thanks to over 500 active agents in 19 of

the 20 regions of the Country, Enel produces about 80% of its renewable energy thanks to the hydroelectric. This is why it has invested and is investing in efficiency and has started the review of the plant which has led to an increase of 4 - 5 MW of the power of each generation group. In practice, as having built a new 20 MW power plant, a medium-sized hydroelectric plant.



15 YEARS OLD YOUNG PEOPLE SHOWING INTEREST



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THE ENERGIES OF MOLISE



The Enel power plant in Presenzano has been in service since 1990. Its approximate cost was one trillion lire. The first is in Italy and the second in Europe. The plant, which produces "green energy" thanks to the power of water, is equipped with two tanks, one upstream and one downstream, and can move water from one to the other thanks to the pumping systems. The water, pumped into the up-

stream basin is then stored and released according to production needs. This mechanism makes the system particularly versatile and useful for the balance needs of the national energy system. The energy efficiency of this clean, renewable but limited energy must encourage young people to acquire good practices in daily life related to saving and responsible and sustainable consumption.