

**RENEWABLE ENERGY PLANTS
IN
ABRUZZO REGION
(ITALY)**

WIND ENERGY

There is a large area in the mountains in the province of Chieti, covered by many windfarms. This territory belongs to different municipalities of the Alto Sangro and Alto vastese zones.



The Monteferrante wind farm is a wind power plant is part of the Alto Sangro wind farm. The plant was initially built in 2001 with the installation of 30 600 kW wind turbines and completed in 2002 with the installation of 11 other similar machines; it has a total capacity of 18 MW.



The following wind power plants all belong to the Alto vastese zone: the Roio del Sangro wind farm was built in 2001 with the installation of 10 600 kW wind turbines, for a total output of 6MW.

The Fraine wind farm: the plant, built in 2002 with 15 600 kW wind turbines, for a total capacity of 9 MW.

The Castiglione Messer Marino and the Roccapinalveti wind farms provide 26 600 MW.

The Schiavi di Abruzzo wind farm was built in 2001 with the installation of 15 600 kW wind turbines, for a total capacity of 9 MW.

The Montazzoli wind The plant was built in 2001 with 16 600 kW wind turbines, for a total installed capacity of 9.6 MW



HYDROELECTRIC ENERGY

A hydroelectric power plant is located in the lake of Provvidenza in the province of l'Aquila, built in 1949. Coordinates: 42° 30' 46" N 13° 24' 38,12" E. It is a special type of power plant in cave.



Provvidenza is the first of the power plant system built along the valley of the Vomano river which receives waters from the lake of Campotosto, which is one of the most important artificial lakes in Europe, in the regional natural park of Gran Sasso- Monti della Laga.



at an altitude of 1300 m: it was created after the building of a dam in 1939.



(Campotosto lake)

Another hydroelectric center is that of San Giacomo a Fano in the province of Teramo. Coordinates: 43° 32' 16,1" N 13° 33' 23" E. also built in cave in 1947-1998.

The plant is part of the hydroelectric system built along the valley of the Vomano, downstream of Providenza. Equipped with 3 turbines group horizontal-axis plus one with vertical-axis.

SOLAR ENERGY

Torano Nuovo in the province of Teramo, is located in the north west of Abruzzo.



In this village there is the largest photovoltaic solar field in the Abruzzo Region: 5688 panels and an annual electricity production of 1.5 million kilowatt hours. The plant was designed and built by Cpl technicians on an area of 38340 m².



BIOGAS

BIOGAS ENERGY SOCIETÀ AGRICOLA S.R.L., a company of the Green Network Group, has built a biogas plant for the production of electricity powered by anaerobic fermentation of agricultural products with a power of 999 kW in the municipality of Lanciano in the province of Chieti.



The biogas plant was connected to the national electricity grid on 21/06/2012. The biogas plant consists of two areas: The first is used for anaerobic digestion processes: biogas is produced here and consists of a loading tank, mixer, hydrolysis tank, two anaerobic digesters and a digestate storage section. The second is the one that allows the production of energy and consists mainly of an internal combustion endothermic engine with a power of about 1MW. The plant has been configured with a cogeneration structure, therefore the engine produces both electricity, which is entirely sold to the network net of plant uses, and thermal energy which is partly used for heating the anaerobic digesters. The production of electricity from biogas is configured as renewable energy.

