

Specification

The small reservoir volume and rapid precipitation discharges from the Alps and the Puka highlands, necessitate the dynamic monitoring of the hydro situation and the proactive operation of the HPP, in accordance with the specific meteorological conditions of the Koman watershed. Koman HPP also, is considered as a first-class work in terms of economic, social and environmental risks. Komani has a 500 million m³ reservoir and a 5 million m³ concrete screen rock filled dam. This dam is 115 m high and reaches 179 m.a.s.l at its crest. Normal top water level for Komani Plant is above 170 m.a.s.l. with a maximum of 175.5 m.a.s.l. Komani dam is designed for maximum calculated flow during the rainy season, for 1 in 1,000 years (7,245m³ / sec), and maximum control flow during the rainy season for 1 in 10,000 years (10,560 m³ / sec). The bypass of the waterflow in Komani is carried out through discharge tunnels; Tunnel 3 with a capacity of 1800 m³/sec. and Tunnel 4 with a capacity of 1600 m³/sec. The total water discharge capacity at the 176 m level is 3400 m³/sec. The Intake System was built for the supply of water from the lake to the plant. It conveys water from the Intake Portal, through two tunnels, at the balance towers, from this point the tunnel split into 4 intake pipes, one for each turbine of the power plant. The system has a capacity to transport up to 720 m³/sec. The generation units installed in the plant have "Francis" vertical turbines, with 156 MW power each; 3-Phase synchronous generators of 13.8kV voltage; active force 150 MW (Alstom France) and 170 MVA, 13.8kV / 242kV lifting transformers to connect with the substation. The total power and the HPP is 600 MW. Auxiliary and control monitoring devices are also located in the Plant's building. The substation with its transmission, control and protection equipment, enables the connection with the Power System via four 220 Kv lines (double-line Koman-Tirana, Koman-Fierzë and Koman-Vau i Dejës). The annual output of the Koman HPP is on average 1,800 GWh. This amount represents approximately 45% of the Cascade's production. The importance of Komani Hydro power Plant relates primarily to its energy production capacity, as the most important generator of the Electricity System. Komani Lake, due to its level stability, is used for the transport of the goods and passengers, throughout the year, in such a remote and mountainous area. Traveling through Komani Lake is also considered too beautiful attraction for the wild nature loving tourists.