

# Ashta Hydropower Plant



## First international mega-project of VERBUND and EVN.



Ashta power plant is located in the north of Albania



View of Ashta 1

### The power plant

The Ashta hydropower plant is located in the north of Albania near Shkoder, the fourth-largest city in the country. In future, the Ashta power plant will be producing 240 million kilowatt-hours of electrical power. As many as 100,000 Albanian households will be supplied with electricity from renewable sources.

The plant is effectively split in two: Ashta 1 first generates electricity where, three decades earlier, the Spathara Reservoir with its effluent weir and several small irrigation plants for farming were erected. And then, at the end of a 5-km, low-lying bypass channel near the village of Ashta,

electricity is generated once again, this time by Ashta 2.

The combined capacity of both plants (Ashta 1 and Ashta 2) is 53 megawatts (MW).

### Energy for Albania

A special project company – Energji Ashta Shpk – was formed for the plant’s construction, operation and funding.

The power plant improves security of supply in Albania and helps to reduce the country’s dependence on electricity imports. It has been planned in an environmentally compatible way and produces no emissions. Once the 35-year concession period is over, the power plant will be transferred to the Republic of Albania.

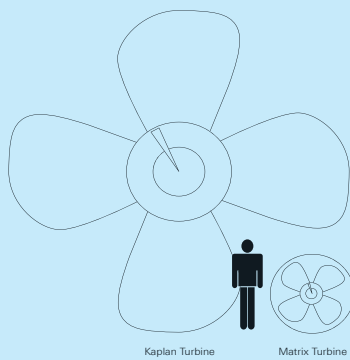
### Technical data of Ashta Hydropower Plant

Type of power plant	Run-of-river power plant with matrix turbines
Commissioning	September 2012
Average annual power production (Ashta 1 and Ashta 2)	240 million kWh
Turbines: number/type of turbine	2 x 45 / matrix turbines
Total capacity (Ashta 1 and Ashta 2)	53 MW
Head Ashta 1	4.98 m
Head Ashta 2	7.53 m



Aerial photograph of Ashta power plant

Ashta power plant is a world innovation: the biggest power plant in the world to feature matrix technology based on small turbines.



Matrix turbine in size comparison

**The turbine**

The most outstanding aspect of this power plant is its use of HydroMatrix® turbines. This power plant is the largest of its kind in the world.

The matrix technology – based on small turbines roughly the size of a telephone box – enables a particularly efficient utilization of hydropower and was specifically designed for low heads.

Ashta power plant differs from a conventional run-of-river power plant with bulb turbines in that it basically employs a higher number of turbines.

For the two power plant facilities as many as 45 turbines are installed each, which were pre-installed in the factory and delivered complete to the construction site.

Nations Framework Convention on Climate Change (UNFCCC). It will produce no CO<sub>2</sub> emissions and – being a hydropower plant – it will save around 114,000 tons of CO<sub>2</sub> a year. So far unique in Albania, the Ashta project generated the implementation of an extensive dialogue with the involved stakeholders.

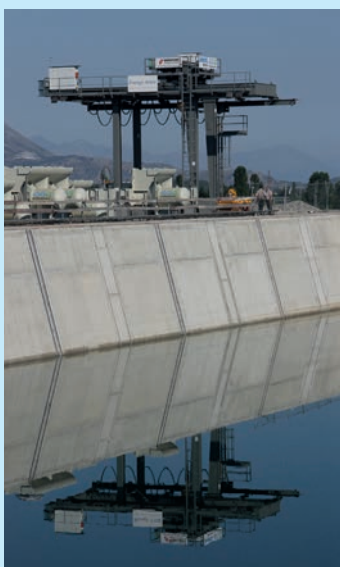
Alongside a professional stakeholder management system at a national level, local stakeholders such as local politicians, residents and the population were given comprehensive information in regular events organized for the citizens.

**Ashta contributes to climate protection**

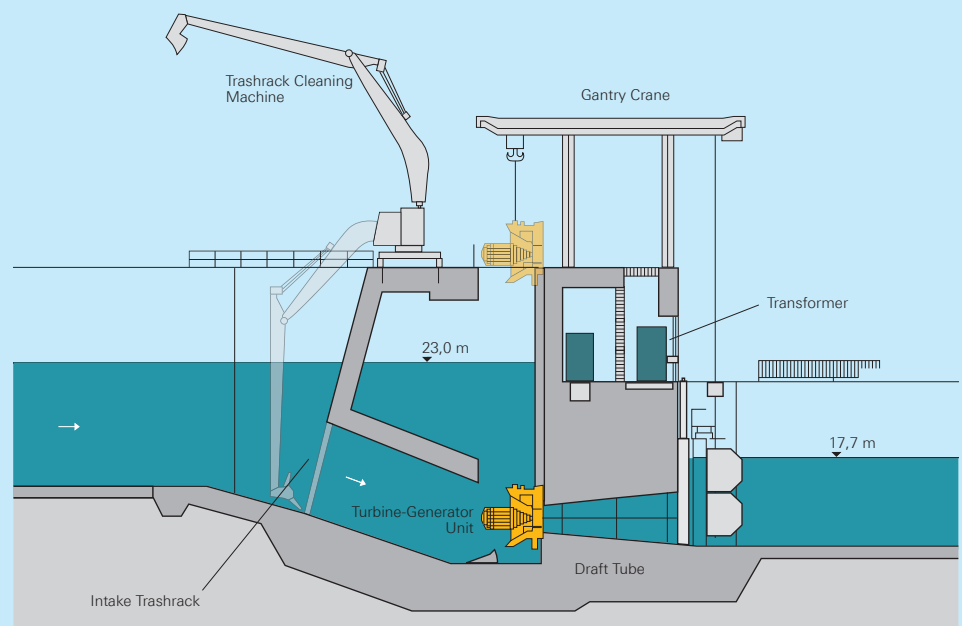
The Ashta project was erected in accordance with the Clean Development Mechanism (CDM) regulations issued in the United



A matrix turbine waiting to be put to use



Power plant bridge with matrix turbines



# Energji Ashta



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**Layout & production** brandfan

**Photography** Energji Ashta

**Printing** B2 Agency

September 2012