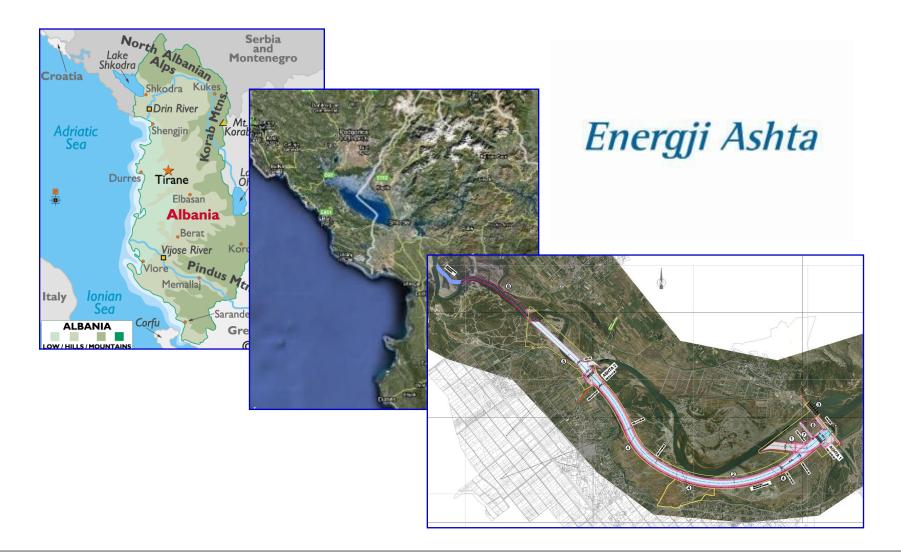


Energji Ashta A Project Company of VERBUND and EVN



ASHTA HYDROPOWER PLANT

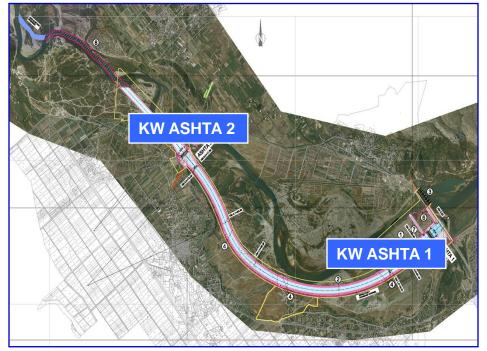
Welcome to the Project: Ashta Hydropower Plant



PROJECT OVERVIEW

Key Data: ASHTA HYDROPOWERPLANT

- Ashta hydropower plant on River Drin in the north of Albania
- → Total capacity: 53 MW (242 GWh)
- \rightarrow Concession contract for a 35-year-period
- → Off-take via KESH for a 15-year-period
- → Investment amount: EUR 200 million
- Application of Hydromatrix technology from Andritz Hydro (45 turbines for every power plant)



Energji Ashta

With its headquarters in Tirana, the project company Energji Ashta is responsible for the planning, construction and operation of the Ashta hydropower plant.

VERBUND and EVN are both 50 percent shareholders on the River Drin-based power plant that is to be erected in the north of Albania by 2012. The implementation of this power plant project is the task of the Tirana-based project company Energji Ashta; VERBUND is entrusted with the construction and management within the framework of a service contract.

Verbund

VERBUND is Austria's leading electricity company and one of Europe's largest producers of electricity from hydropower. In 2009 the company generated an annual turnover of 4.5 billion Euro with approx. 2,800 employees. In Austria, VERBUND operates in the areas of production, transmission, distribution and sales in its capacity as the largest producer and transporter of electricity. The company is internationally active in more than 20 countries in production and trade, and is continually expanding its activities as an internationally operating hydropower group. For further information: <u>www.verbund.com</u> Energie vernünftig nutzen



EVN AG is one of the leading international energy and environmental service provider companies and generated a turnover of 2.7 billion Euro in the financial year 2008/2009.

Based upon a cutting-edge infrastructure, EVN offers its customers electricity, gas, heating, water, thermal waste processing and the therewith connected services "from one source", as well as producing electricity from renewable (water, wind, biomass, photovoltaic) and conventional (gas, coal) energy carriers. With its range of services, the company safeguards and improves the quality of life for more than 15 million people in 18 European countries.

In addition to Austria, EVN operates successfully in the energy industry in Bulgaria, Macedonia and Albania, where it supplies a total of 3.5 million households with electricity, gas and heating. Further information is available under <u>www.evn.at</u>

PROJECT ORGANIZATION: VIENNA

Energji Ashta A Project Company of VERBUND and EVN

ENERGJI ASHTA



Dietmar Reiner Managing Director VERBUND AG



Peter Stelzer Managing Director EVN AG

Project Management



Norbert Hiesleitner General Project Manager



Christian Stein Commercial Project Manager



Gerd Frik Technical Project Manager

Communication



Ines Schurin Senior Communications Manager



Paul Pöttschacher

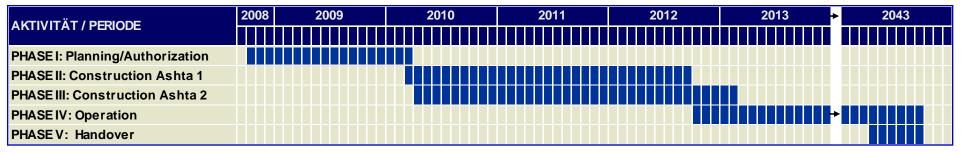
Communications Manager,



PROJECT ORGANIZATION: TIRANA AND ASHTA



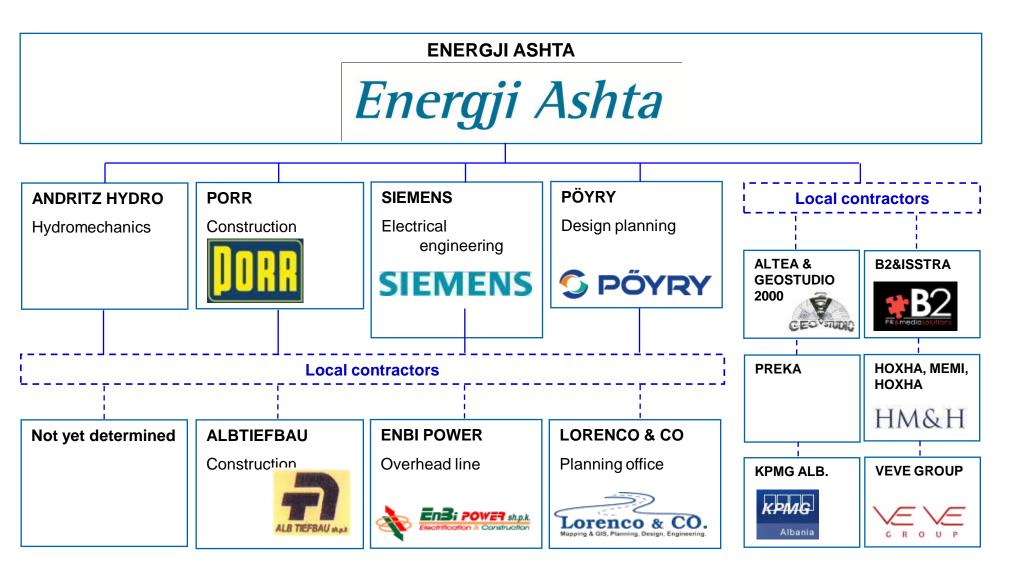
PROJECT STATUS AND SCHEDULE



SCHEDULE 2008 - 2043

- → PHASE 1 (planning/authorization phase):
 - total duration: 18 months
- → PHASE 2 (construction phase Ashta 1):
 - start of construction: March 2010
 - commissioning: Autumn 2012
- \rightarrow PHASE 3 (construction phase Ashta 2):
 - start of construction: April 2010
 - commissioning: Beginning of 2013
- → PHASE 4/5 (operational phase): 2012 2043

AUTHORIZATION	ISSUED BY	RECEIVED	STATUS
Urban study	Regional Council of Territory Planning of Republic of Albania	27.02.2009	RECEIVED
Environmental permit	Ministry of Environment, Forestry and Water Administration – MOE	30.04.2009	RECEIVED
Water concession permit	Ministry of Economy, Transport and Energy	27.12.2007	RECEIVED
Grid connection permit	Transmission System Operator – OST	15.07.2009	RECEIVED
Site permit	Communa of Bushat	14.07.2009	RECEIVED
Dam and dyke permit	Dam & Dyke Commission	15.07.2009	RECEIVED
Energy licence	Energy Regulator Entity – ERE	29.12.2009	RECEIVED
Construction permit	Communa of Bushat	14.01.2010	RECEIVED



Main Reasons for using the Hydromatrix® technology for the Ashta Project:

 \rightarrow optimization of the economic feasibility and the minimization of environmental impacts:

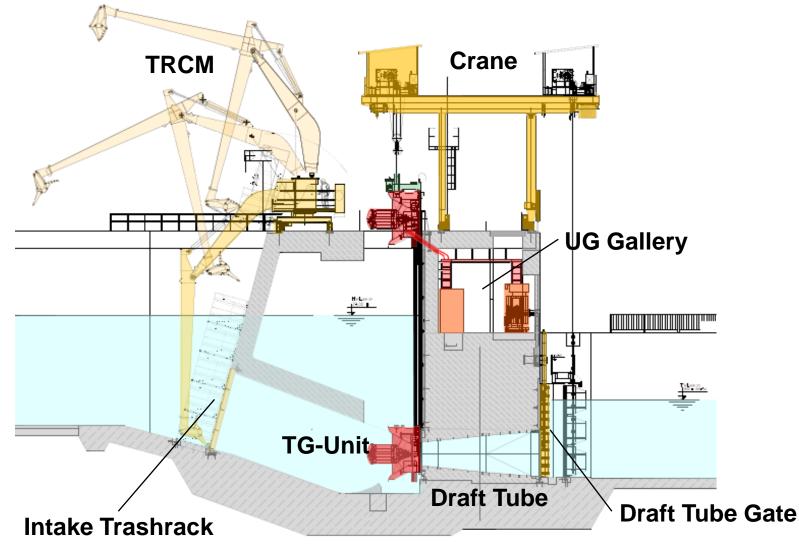
A thorough technical and economic assessment of available hydropower technologies by comparing a conventional solution featuring bulb turbines with a two plant arrangement using the HYDROMATRIX® system favoured the Hydromatrix® system for the Ashta Project.

Hydromatrix® technology:

- > HYDROMATRIX® is a modular system, by which a number of small turbine-generator units (TG –units) are installed in Modules forming matrix-type configurations. At HYDROMATRIX® plants, each Module consists of one or more identical TG-units. The Modules are interfaced by integrated or separately installed draft tubes.
- > One of the great advantages is the fact that only a low tail water depth is required and therefore a shallow foundation of the power house structure is possible.
- > The possibility to remove the TG-units during flood periods and for maintenance is another important feature and allows the Ashta HPP's to be constructed in a very short time period when compared to conventional run-of river hydropower plants.

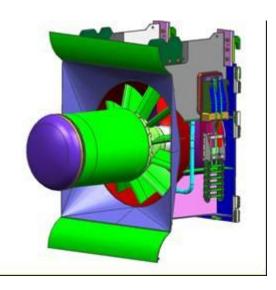


HYDROMATRIX Plant arrangement / section of Ashta 1 Power house



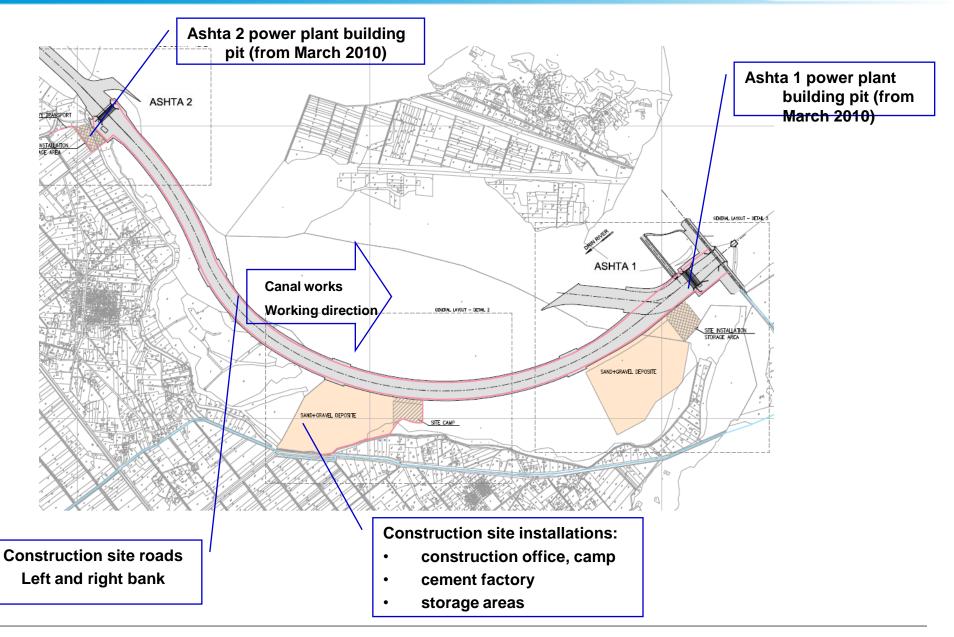
HYDROMATRIX unit design

The design of the Turbine Generator (TG) units is derived from the classic concepts for small, compact hydro bulb turbines and was further developed to address a need for high reliability, low maintenance and easier grid interconnection.



- \rightarrow Unregulated propeller turbine (AI-Br)
- Directly driven synchronous generator (Permanent Magnet Technology)
- \rightarrow Mechanical face seal
- → Roller type bearings, oil sump lubrication
- Welded module frame structure for lifting and cable connection
- Modular switchgear located in underground gallery of dam wall
- → Flexible concept minimum maintenance

CONSTRUCTION SITE – OVERVIEW OF ACTIVITIES





Ashta 1 Hydropower Plant

- \rightarrow Building pit: establishment of the slotted wall and anchor completed.
- → Inlet: placement of foundation piles for the wing walls. Start of cement works in August 2010.





HPP Ashta 2

→ Placement of the building pit circumvallation completed, works on slotted wall almost completed, pre-excavation works started.

- \rightarrow Commencement of foundation works for high voltage pylons (110 kV).
- \rightarrow Establishment of area for construction site installations.





CONSTRUCTION PROGRESS

Canal between Ashta 1 and Ashta 2

→ Excavation work and embankment inc. employment of riprap on the upstream face in progress.

 \rightarrow Displacing of bentonite mats in the channel on the right bank.





