

Albania Power Corporation KESH sh.a.



TIRANE

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Company Profile

Albania Power Corporation (KESH sh.a.) is a state owned company established in 1995. Since then KESH has gone through a transformation and reorganization process according to the development of Albania electricity market.

KESH is one of the most important participants in the Albania electricity market, that produces, sells and buys electricity.



Organization of KESH

Actually, KESH sh.a. is organized in two main Divisions, KESH Gen Division and Whole Sale Public Supplier Division.

KESH Gen Division licensed for the production of electricity.

Whole Sale Public Supplier Division licensed to purchase the electricity produced from KESH Gen, SPPs, IPPs and Traders and sells that electricity to the Retail Public Supplier.

Functions of Whole Sale Public Supplier Division

- WPS is responsible for buying electricity and for providing sufficient supply to Retail Public Supplier according to its requests to ensure the supply to Tariff Customers.
- WPS has the obligation to serve as the provider of last resort for all customers in the territory of Albania.
- WPS has the right to purchase from KESH Gen all the electricity produced by KESH Gen, as well as from IPPs, SPPs, Qualified Suppliers and Traders to fulfill its obligations to the Retail Public Supplier, i.e. to serve all the Tariff Customers
- WPS has the right to recover, all prudently incurred costs of procuring energy, including the cost of imported electricity as well as the costs of purchases from KESH Gen, IPPs, SPPs, Qualified Suppliers and Traders.

Functions of KESH Gen Division

- Kesh Gen shall provide ancillary services and electricity needed to cover technical losses in the transmission system.
- Kesh Gen shall provide electricity to the Wholesale Public Supplier according to its request, based in annual contracts or of different term as approved by the ERE.
- Kesh Gen shall sell electricity to the Wholesale Public Supplier at prices approved by the ERE, this electricity will be used to supply tariff costumers.
- Kesh Gen exchanges and sells electricity in the electricity market according to rules and regulations approved by the ERE.

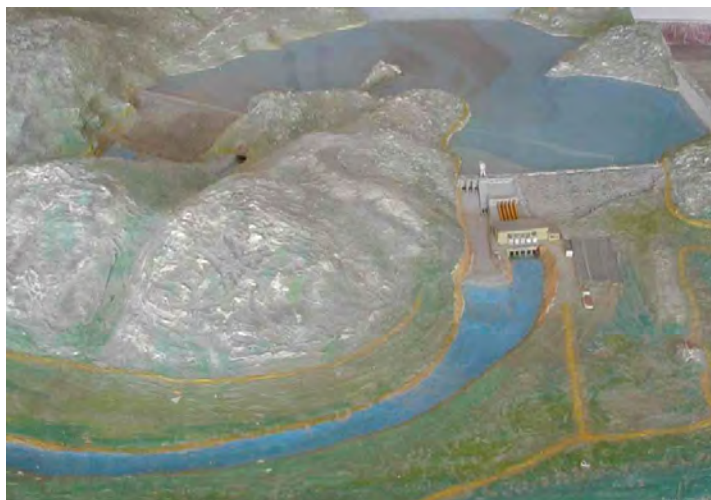
KESH Generation System

KESH generation system is entirely based on Hydro Power Plants. The total installed capacity of the power plants is 1.350 MW and an average annual production about 3.500 GWh.

The most important hydro power plants in Albania are; Fierza, the installed capacity of Fierza is 500 MW, Komani, the installed capacity of Koman is 600 MW, and Vau Deja, the installed capacity of Vau Deja is 250 MW. All this power plants are in the Drin river Cascade, altogether installed capacity is 1.350 MW.



Technical data of Vau Deja HPP



Active storage capacity	319 Mil m3
Type of turbines	Francis
Number of turbines	5
Rated head	52 m
Annual energy production	878 GWh
Last unit put in operation	1973
Output	250 MW
Max. flow	113 m3

Technical data of Koman HPP



Active storage capacity	430 Mil m3
Type of turbines	Francis
Number of turbines	4
Rated head	102 m
Annual energy production	1. 600 GWh
Last unit put in operation	1987
Output	600 MW
Max. flow	146 m3

Technical data of Fierza HPP



Active storage capacity	2.7 Mil m3
Type of turbines	Francis
Number of turbines	4
Rated head	118 m
Annual energy production	1.328 GWh
Last unit put in operation	1978
Output	500 MW
Max. flow	123.5 m3

Optimization of KESH Hydro Production

- The development of Albania Electricity Market has created the possibility for KESH to optimize its Hydro Production.
- The new market structure requires a better collaboration of all market participants, to have a better optimization of KESH production.
- The electricity demand of Albania is fulfilled by KESH production, KESH imports, CEZ Distribution imports to cover distribution losses, Qualified Supplier's imports to supply the eligible costumers and the generation of medium and small Hydro Power Plants .
- The Generation system is based in HPP and a better combination of the production with imports that is realized by other market participants will create more possibilities for KESH for the optimization of Hydro Production.

Projects Implemented by KESH

- The Rehabilitation of Hydro Power Plants of Fierza and V. Deja.

This project has its impacts for:

- Extension of the lifetime of the plants;
- Reduction of unplanned outages of generation units;
- Upgrading of generation units in order to reach modern technical quality standards;
- Provision of sufficient supply for domestic customers;
- Increase in energy production and optimization by implementing a modern Control and Monitoring System;
- Improvement and optimization of the utilization of the water resources in Drin River cascade;

Increase of Effectiveness after Rehabilitation

The rehabilitation project had a major impact to increase the effectiveness of HPP.

- Improvement of reliability.
- Better utilization and optimization of water resources at Fierza reservoir.
- Increase of electricity production, power generation is increased by about 4% per unit,
- Project for Fierza, and Vau Dejes HPPs enhanced the reliability and quality of electric supply throughout the installation of state-of-the-art control and automation technology.

Projects Implemented by KESH

- **Creation of a Control and Monitoring Center.**

KESH is implementing the project to create a new Control and Monitoring Center. This center will monitor and collect in real time the data of the following parameters:

- Actual status of the power plants units .
- Electricity production for each unit.
- Active and reactive power generated and injected in the transmission grid.
- Levels of the Power Plants reservoirs.
- Frequency of the system and of respective units.
- Data for weather forecast in the catchment area.

The evaluation and elaboration of this data will create better possibilities for KESH to optimize and increase the efficiency of Hydro Power Plants.

Projects Implemented by KESH

- Construction of Vlora Thermal Power Plant
 - The project of Vlora TPP includes the operation of a combined cycle power generator with a capacity of 97 MW. The project is designed to be operated with oil and gas, but initially this project will be operated with oil because the natural gas is not still available in Albania.
 - The construction of this TPP is finished, during the tests there were some problems. KESH has discussed with the company that realized the project to eliminate the problems, and now is preparing the procedure to put in operation the only Power plant in Albania, due to the difficult hydro situation in this year.

New Projects

- **Control and Monitoring Center**

The project to create a new Control and Monitoring Center will create the possibility to monitor and collect in real time the data of the following parameters:

- Actual status of the power plants units .
- Electricity production for each unit.
- Active and reactive power generated and injected in the transmission grid.
- Levels of the Power Plants reservoirs.
- Frequency of the system and of respective units.
- Data for weather forecast in the catchment area.

The evaluation and elaboration of this data will create better possibilities for KESH to optimize and increase the efficiency of Hydro Power Plants.

Dam Safety Project

- This project is designed based in the Dam Safety Survey during 2006 in the Drin River Cascade. The survey recommended a series of investments to improve the safety and the operation of the dams.
- The project will strengthen the institutional capacity of KESH to improve the water management practices and to optimize the use of hydro power assets.
- The detailed feasibility study is finished and is financed by SECO.
- The project is partially financed by World Bank, SECO, EBRD, KESH as well other financial institution will jointly finance the implementation of all components of the project.

THANK YOU