GREEK-ALBANIAN COOPERATION IN THE ENERGY SECTOR

SECURITY OF ENERGY SUPPLY AND THE DEVELOPMENT OF INDIGENOUS ENERGY SOURCES





CURRENT SITUATION IN ALBANIAN ENERGY SECTOR

THE TOTAL CONSUMPTION OF ENERGY

- The energy in general and it's security and sustainability of power supply in particular are becoming more and more sensitive issue in national, regional and European level and big challenges to overcome.
- In Albania the consumption of the energy for all the sectors was increased on annual basis since 1990 until to date. An exception of this trend was the period 1990-1992, where the slow down of consumption went from 2.26 Mtoe in 1990, down to 1.22 Mtoe in 1992.
- In 2007, there was an increase of the total energy consumption by 28 % compared to 1999 and the sectors that have high impact on these rate are the transport service and household.
- The consumption of the energy resources in 2007 reached the rate of 2169 ktoe from which the hydrocarbons have contributed by 1314 Ktoe, or about 60%, the electricity by 593 Ktoe, or firewood by 229 Ktoe, or about 10.4%, and the other part consists

CURRENT SITUATION IN ALBANIAN ENERGY SECTOR THE TOTAL CONSUMPTION OF ENERGY



In 2007, in respect of the total energy consumption:

- the sector of transport consumed 31.9%
- the sector of households consumed 22.5%;
- the sector of industry consumed 17%,
- the sector of services consumed

13.7%,

Graph 1: Total consumption of the energy according to east ctor of agriculture consumed sector [ktoe] 13.4%.



CURRENT SITUATION IN ALBANIAN ENERGY SECTOR THE TOTAL CONSUMPTION OF OIL PRODUCTS



Graph 2:

Total consumption of oil products according to each sector [ktoe]

In 2007, in respect of the total consumption of oil products:

- the sector of transport consumed 53.6 %;
- the sector of agriculture, including fishing consumed 17.4%;
- the sector of industry consumed 16.9%;
- the sector of service consumed 7%;
- the sector of households consumed

5.6%;



CURRENT SITUATION IN ALBANIAN ENERGY SECTOR THE TOTAL CONSUMPTION OF ELECTRICITY





In 2007, in respect of the total electricity consumption:

- the sector of households consumed 52%;
- the sector of services consumed 30%;
- the sector of industry consumed 17%;
- the sector of agriculture consumed 1%;



CURRENT SITUATION IN ALBANIAN ENERGY SECTOR SUPPLIES IN PRIMARY ENERGY RESOURCES

- Although the supplies in primary products of the country is increasing, the market of our country is remaining short of supplies in electricity as well as in hydrocarbons or other energy resources.
- Albania is facing difficulty to supply its consumers with electricity. Lack of primary energy resources, no network and gas resources, limited production and interconnection capacities and full dependence of it's power production on hydro resources, are some of these difficulties.
- The demand of electricity is much higher than domestic generation, which means that Albania is one of net importer countries in the region. It is well known that even in favourable hydrological conditions, the demand of electricity can't be covered from the domestic production.
- The average annual production is about 4.2 TWh/year and the demand about 7 TWh, which means that Albania is obligated to import about 2.5-3 TWh/year.



CURRENT SITUATION IN ALBANIAN ENERGY SECTOR

SUPPLIES IN PRIMARY ENERGY RESOURCES

- In 2007 the utility has imported more than 50% of it's consumption and also has made 17 % load shedding.
- In 2008 the supply with electricity was improved and the power utility made only 7% load shedding. This improvement came because the hydrological conditions were more favorable, but also the utility continued to import electricity, about 40% of its 2008 consumption.





CURRENT SITUATION IN ALBANIAN ENERGY SECTOR SUPPLIES IN PRIMARY ENERGY RESOURCES

The supply in oil and gas by-products to the economy is done from the import and local production.

Although the local production of the oil and gas by-products meets 35% of the needs of the economy, it does not play an important part in the local market for establishing fair equilibrium in the supplies to the sectors, as well as having an impact on not letting fluctuation of prices get out of control.





THE REFORMS PART OF SECURITY OF ENERGY SUPPLIES

To overcome this situation Albania is and will continue to be active in regional cooperation first of all in the implementation of the Energy Community Treaty provisions.

So, a program of reforms for improving energy sector performance, increasing tariffs to cover the cost, opening the market, unbundling KESH from a vertically integrated company, towards separated company according to the functions, is ongoing.

Now the Transmission System Operator (TSO) and the Distribution System Operator (DSO) are fully unbundled and after a lot of works, in the end of October 2008, CEZ was selected the winner of the tender for privatization of the DSO.

A new Market Model was aproved in March of 2008 and base in this Model the risk to supply with electricity the consumers is shares between the Public Supplier and the Distribution Company.

Also we are preparing a **new Draft of National Strategy of Energy**, **2008-2020**, **Updated**.

The scope of this draft Strategy is to develop an effective energy sector that:

 guarantees the security of the energy supply in general : Ministria e Ekonomisë particular;

NEW DRAFT OF NATIONAL STRATEGY OF ENERGY (UPDATED)

According to the Active Scenario, until 2020 it is indispensable to install an additional capacity of round 900 MW, out of which 400 MW shall be hydro power stations and 500 MW TPPs or about 180 MW less compared to



According to the Active Scenario, about 9,796 GWh shall be needed to be produced, thus 3,537 GWh or 26% less, or 180 MW less, that means 700 MEuro less, compared to what has-been foreseen in the Passive Scenario, reaching the



NEW DRAFT OF NATIONAL STRATEGY OF ENERGY (UPDATED)

- Base on what overmentioned an investment program for increasing and diversification the production capacities as well as constructing interconnection capacities, is now guiding our actions.
- In this context, one important issue in the strategy for the development of this sector shall continue to remain the legal and regulatory framework, in conformity with EU Directives;
- Now we have a complete primary and secondary legislation for construction of the new power plants based on Concession Law No. 9663/2006, amended, as well as the "Regulation on Procedures for Granting of Authorizations for Construction of Power Plants not Subject of Concession", which created a good environment for the involvement of the private, foreign or local investors.

In this context, I would like to focus shortly on some new generation projects that are in the implementation phase and some others, which are under the procedures, because the others energy issues of the sector were presented by my collegues.

PROJECTS IN GENERATION UNDER IMPLEMENTATION

Construction of Vlora Combined Cycle Power Plant

Co financed by World Bank, EIB and EBRD, fuelled by distillate oil, 97 MW and production is 700 GWh/year. It is under implementation and is foreseen to be put in operation by May 2009.

Kalivaci HPP, on Vjosa River

The development of this project is under a BOT concession agreement.

Installed capacity is 93 MW and production 360 GWh/year. It is under implementation and is foreseen to be put in operation in the end of 2011.

- □ So far, are given in concession 50 small HPP's, with
 - Total installed capacities 216 MW;
 - Total annual electricity production 700 GWh;



NEW HYDROPOWER PLANTS

- Construction of Ashta HPP on Drin River watershed.
- Construction of HPPs on Devoll River Cascade.
- Construction of Skavica HPP on Drin's River.
- Construction of HPPs on Vjosa River Cascade.





NEW HYDROPOWER PLANTS (HYDRO POWER PLANT OF ASHTA)

- □ **The Ashta Hydro Power Plant (HPP)** is located on the Drin river cascade.
- The Drin river, is the biggest river in Albania. It's located in the north of the country and already are in operation five hydro power stations, two in Macedonia and three in Albania.
- Ashta HPP will be the most downstream project along the Drin river cascade. It will therefore benefit from the regulated flow from the upstream reservoirs and will operate as a run-of-river plant.
- In December 2006, the government of Albania retained the International Finance Corporation (IFC) to structure and implement the development of a hydropower plant ("HPP") in Ashta under a private-public partnership (PPP) arrangement.
- The Bid Evaluation Committee qualified Verbund of Austria as the winner company for this project and the Concession Agreement was signed – September 30th. The contract was signed with the winner company by November of 2008.
- Bid price achieved: 5.9 eurocents per kWh
- Investments: 166 M Euros.
- □ Installed capacity: 48.2 MW.







NEW HYDROPOWER PLANTS (HYDRO POWER PLANT OF SKAVICA)

- Skavica HPP is also a big project; The installed capacity is 350 MW and the energy production 1,05-1.1 TWh/year.
- Based on the Albanian Concession Law No 9663/2006, the Consortium TGK Group Italy presented at METE an unsolicited proposal for the construction in form of BOT concession, HPP of Skavica, on Drin River Cascade.
- The Skavica reservoir allows planning the energy production through the optimization of the water recourse use. More electricity, 200-300 GWh, can be produced from the downstream power plants of Fierza, Komani and Vau Dejes.
- The reservoir will be entirely located in Albanian territory;
- Also for this HPP we will develop a private-public-partnership (PPP) arrangement.
- In November 2008 was launched the prequalification process and on November 17, 2008, 6 companies were presented.
- □ The Evaluation Committee selected all the companies.

NEW HYDROPOWER PLANTS (HPPs ON DEVOLL RIVER CASCADE)

- The Devoll cascade is a big project; the installed capacity is about 319 MW and the electricity production is foreseen 985 GWh/year
- Based on the Albanian Concession Law No 9663/2006, EVN AG, an Austrian Company, presented at METE an unsolicited proposal for construction several HPPs on Devoll River Cascade, in form of BOT concession.
- On November 11, 2007, METE opened an international concession Tender, in BOT form, for the exploitation of the full hydrological potential of the Devoll Cascade.
- 12 foreign and Albanian companies have expressed their interest, while only
 2 of them participated in the tender: EVN AG, an Austrian company and the
 "Landsvirkjun & Kurum Holding", a company already operating in Albania.
- The Bid Evaluation Committee qualified EVN AG as the winner company for this project.
- After a long time of negotiations the contract was signed on 19 December of 2008 with Austrian company EVN AG and Norwegian company Statcraft for construction of three HPPs: i) HPP Lozhan-Grabove Pn = Ministria e Ekonomisë Tregtisë dhe Energietik

NEW HYDROPOWER PLANTS (HPPs ON VJOSA RIVER CASCADE)

- Vjosa River is the second largest river system in Albania. Its upper catchments include areas in Greece's Northern Mountains, with high precipitation.
- □ Vjosa river is 272 km long and annual average inflows is about 195 m3/sek
- Until now, the hydroelectric potential has not yet been exploited, except Kalivaci HPP.
- The latest river development study (1990s) was established by our Hydrogeotechnic Institute. The study defines 8 plants with total capacity about 500 MW and production of 2.2 TWh.
- Albanian Government using World Bank funds has undertaken a consultant service project for preparing a feasibility study and project definition for the production potential over various rivers in Albania mainly to river Vjosa.
- In February 2008 a Bid was opened to select the winning bidder and after the evaluation process the winner was selected.
- SOGREAH, a French company was selected to carry out the study for the assessment of production potential of Vjosa River.
- Base in the contract the final feasibility study shall be completed in the end of January of 2009.





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