



THE ENERGY IN ALBANIA



Qendra e Dhimitri të Energjitik Shqipëri-EE
Albania-EU Energy Efficiency Centre

THE ENERGY IN ALBANIA (NEWSLETTER)

PUBLISHED BY THE
"ALBANIA-EU ENERGY EFFICIENCY
CENTRE " FOUNDATION

ISSUE NO 16 • SEPTEMBER 2001

Inside this Issue

- REGIONAL ENERGY PLANNING - A NEW
CHALLENGE FOR NATIONAL AGENCY OF ENERGY

- ALBANIAN ELECTRICITY POLICE AND RETURN OF
ENERGETIC ORDER

- THE FUTURE CHALLENGES OF ALBANIAN POWER
CORPORATION

NEWSLETTER

published by the

“Albania-EU Energy Efficiency Centre”
Foundation

and

supported by

SYNERGY Programme

Address:

Blvd. “Zhan D’Ark”, No. 2, Tirana, ALBANIA

P.O. Box 2426

Tel: ++ 355 4 233 835 Fax: ++ 355 4 233 834

E-mail: aleueec@icc-al.org

Internet: www.eec.org.al

REGIONAL ENERGY PLANNING - A NEW CHALLENGE FOR NATIONAL AGENCY OF ENERGY

(.....continued from previous issue.....)

This thing has brought in, especially during the winter months, a very low level of voltage in electricity supplied, which is down 150 V in household sector. The energy consumption of the household sector is divided into several parts, describing as much basic energy uses with widely differing characteristics: space heating, water heating, cooking, lighting, cooling and electrical appliances. Right now, the population in Korca Region has used in maximum fuel wood for space heating. The annually production from the closest forests is 54,000 mst/year (2000) and the cutting rate is as ten time as higher than natural yearly production from the forests. This has bring in a very bad situation: fuel wood reserves are very depleted year by year and according to some simple calculations there are only few year reserves. In Korca City some of the areas has secured space heating by a combined heat and power plant which has an installed capacity of 4 MW for electric power and 19.5 MW for thermal power, which has started operation in 1952. Due to bad maintenance and very old technology, in May 1997 it stopped working. The building conditions and the trends in the households energy and water consumption play an important role in estimating the chances of accomplishing these ambitious objectives. The issue of water is close connected with the issue of energy because the promotion of local energy

sources, such as the use of Small-Scale Heat-Only-Boilers, DH and CHP Systems (especially for the consumers which was supplied by CHP) linked with water based central heating systems, inevitably is dependent on a reliable and efficient water supply system.

Scope of Regional Energy Planning for Korca Region

According to some measurements, some parts of Korca Region has very strong winds, up to 5,000-5,500 hrs/year and an average speed of wind around 4.5-6 m/sec. So, wind energy may be used for electricity production and according to some simple calculation we might have a feasible investment. But before we take this decision, we should have good measurements and have to prepare a detailed feasibility study. In the Region there are some small hydro power plants, which are in bad condition due to bad maintenance, and almost no automatization. There are some other sites, which should be exploited, possible for construction of other hydro power plants. This will have a dual benefit: electricity will be produced locally and the technical losses of electricity will be reduced since the main power plants of Albania are located in the northern part.

At the end, let consider the biggest energy source of Korca Region, the Peat: In many countries this energy source is burned in district heating plants, thermal power plants for supplying heat and electricity. A good example of using peat even for energy generation is Ireland where 15 % of Ireland's electricity is generated from peat. Harvesting peat is largely a question of using technology to exploit natural drying by the sun and wind (and these are in great quantities in Korca Region), and than of using technology again to collect efficiently in one place peat that has been produced over many km² of bogland. All the above-mentioned ideas need to be developed more deeply especially to give reply to a very important question: are these investments for wood/charcoal/peat exploitation in Korca Region feasible? What are the investments needed for introducing efficient wood/charcoal/coal/peat stoves? What is the cost of generated electricity by burning wood/charcoal/coal/peat or cost of heat? We will give answers, go more in detail and give more specific results, which will clear more the situations for using wood/charcoal/peat for efficient energy production.

Buildings in Korca Region have been constructed with little concern for energy efficiency. Building stock is characterised by low construction standards, the lack of adequate services such as piped water and central heating, severe overcrowding due the rapid population growth in urban areas, and insufficient construction of dwellings in recent years to meet the increased need for housing. The Activity Program will propose an Action Plan with recommendations with regards the creation of alternative investment sources, and the support of schemes for using local energy sources. To achieve this, for Korca Region are needed the following actions: 1. Brief definition of energy situation of current and future consumption in household sector; 2. Brief definition of energy situation of current and future supply; 3. Creation of reliable energy data necessary for household sector, service sector and small, medium and large enterprises; 4. The role of each competitive local energy sources such as: peat, electricity, wood, small scale hydro power plants, liquefied petroleum gas, kerosene, diesel, heavy fuel oil and solar energy for meeting current and future

demand of household sector; 5. Focusing on introduction of efficient stoves in household; 6. Estimation of energy saving potential in the different end-users in household sector such as space heating, domestic hot water, cooking, lighting and other electrical appliances; 7. Estimation of the investment needs and a cost benefit short-term analysis, 3-5 years, and a programme aiming at improving the energy efficiency in building stock, service sector and small, medium and large enterprises; 8. Quantify the level of investments and the feasibility accomplishing the objectives for future supply and use of local energy sources for household sector; 9. Change and development of space heating systems and domestic hot water based on energy efficient schemes.

Benefits and Advantages of Regional Energy Planning for Korca Region

The existing building stock in Korca is responsible for more than 56 % of final energy consumption in the region. The household stock represent the most important source of energy savings. The new stock is built without any respect to the existing Building Code and the new Energetic Building Code, which is prepared recently by NAE. These circumstances are such that those responsible for housing stock need to direct their attention toward energy efficiency consumption. In order to improve in a good level the energy security of supply, long-term strategy need to be able to influence behaviours and actions, a global, mobilising approach is needed. So, for this reason the overall objective of this Regional Energy Planning for Korca Region will be: *Improving in a very good level the energy supply in Korca Region, promoting local energy sources and the least cost solution, which also should be friendly to the environment.*

The specific objectives of the Regional Energy Planning for Korca Region will be: 1. Significant increases of the use of local energy sources like wood/charcoal/coal/peat with utilisation of efficient stoves; 2. Significant increases of the investments in Energy Efficiency in household sectors; 3. Significant increase of energy supply security by using also other local energy sources: wind energy and small scale hydro power plants, which should be environment friendly; 4. Significant increases of bankable projects in Energy Efficiency Supply schemes based on DH and existing experience on CHP using wood/charcoal/coal/peat.

The outputs of Regional Energy Planning for Korca Region are:

- Define the short and middle term energy demand for the households,
- Define the potential of local energy sources such as fuel wood, charcoal, small hydropower plants, peat, wind energy and coal,
- Current environmental assessment analysis for reducing the negative impact on environment by using different energy sources,
- Quantification of the level of investments and the feasibility of accomplishing the objectives for future production and use of energy sources in household sector in order to have penetration of efficient stoves,
- Introducing the new energy supply schemes for ensuring space heating demand of public buildings such as schools,

dormitories, hospitals and socio-cultural buildings,

- Introducing energy audits for increasing energy efficiency in enterprises,

- A vital part of the Activity Plan will be the estimation of the investment needs and a cost-benefit short-term analysis, 3-5 year, and a programme aiming and improving the energy efficiency, thermal insulation of building stock, introducing DH and CHP schemes and promotion of feasible sites for local energy sources,

- Recommendation for Local Governmental Supported Funds creation, which is very important for prioritising the development of Korca's economy,

Future Aspects and Chances of the Implementation of Regional Energy Planning

The Activity and the Outputs at the end of it should be disseminated to those interested and to those who are responsible for management of energy consumption in Korca region. The main Albanian institutions, which are connected with this Activity, will be: National Agency of Energy, Municipality of Korca, Ministry of Public Economy and Privatisation, National Environmental Agency, KESH, Regional Environmental Protection Agency of Korca Region, Buildings Department of Ministry of Public Works. We believe that this dissemination will improve the level of awareness of decision makers, users, and public institutions regarding building stock and energy supply systems in the region and will create a culture in favour of energy efficiency and optimal use of local energy resources in this very important part of Albania. Also, it will give possibility for preparation of different bankable projects, which will be presented to different financial institutions for implementing them. That will be the final goal of this project and in same time our main challenge.



Dr. Eng. Besim ISLAMI
Vice Chairman
National Agency of Energy

ALBANIAN ELECTRICITY POLICE AND RETURN OF ENERGETIC ORDER

Electricity crisis is the most important challenge for the Albanian Government and all the necessary measures are taken to resolve it. Since more than a year, the Albanian Electricity Police is carrying out its duty as an executive organ, specialized on electricity legislation, electricity administration and proper use from juridical and natural persons. Its activity covers now all the territory of Albania concluding the first phase of its establishment.

Electricity Police is now an organized and specialized unit, making part of the governmental administration, which controls the relative legislation fulfillment by the structures dealing with electricity administration and use, controls and protects the electricity networks from unauthorized interventions and damages, controls the procedures for new connections, controls of

the procedures for electricity utilization, technical documentation, etc. It also controls the supply with electricity and measuring systems in buildings, enterprises, institutions, etc.

The Second Phase of Activity

The energetic situation has changed compared with the past years and there are improvements reflected in the reduction of blackouts. In macro-energetic terms, it can be said for sure that losses are reduced and billing & collection are increased. On the other hand power crisis is less severe and there is an improvement compared to previous months. This is also the conclusion of some international institutions and donors. Anyhow the situation remains exceptional. The achievement of target parameters for this year and furthermore the electricity demand fulfillment will be in the focus of the second phase (during the second half of the year). This phase, coordinated also with KESH (Albanian Power Corporation), is crucial and will include a set of activities in all fields namely investments, legal issues control, structural organization, and especially electricity payment.

The activity of the Electricity Police will be now more wide, evident and severe in cases of electricity abuse and theft. It has begun with the measuring units control in Tirana suburbs, rural area of Korca, Tepelene, Memaliaj, Shkoder, Velipoje, Vlore, Berat, Diber, Kukes, Bulqize, etc. and radical change of the situation is expected. Soon, the action will be extended in all the territory and will be especially focused in the districts with bigger problems, non-payment and theft. Until now, according to well-organized plans, have been organized controls in most big consumers. There are thousands of controls with many sanctions taken for those consumers not in order with the law, electricity use and payment, etc. The result is an increase in the billing of more than 3 million kWh. During a short period of time, the Electricity Police is reorganized taking its final form from legal and administrative viewpoint. Through this reorganization, human and material mobilization, based on right interpretation of the duty, the inspectors have strengthened their attitude toward the law implementation.

For a better performance on its activity, the Electricity Police is studying and implementing new measures of control in all the consumers, private, residential, state, etc. A special attention is paid to unmeasured billing, to the electricity distribution cabins, laboratories of electricity meters, several feeders with abnormal losses. Such a practice will be followed continuously in the future. Recently, in order to face the difficult hydro-energetic situation in the country, the Prime Minister ordered the establishment of special units for each Prefecture. The Electricity Police was assigned special tasks in this organization toward electricity use and administration.

Activities according to the Action Plan for the Albanian Power System

The Action Plan for the Albanian Power System includes the main objectives of the Albanian Government for the coming months and in the same time it includes the priorities of the work of the Electricity Police during 2001 and further. Special tasks defined for that purpose are fulfilled in all the branches and in many cases the results have overcome the targets. In figures, the control is done in 42 thousands residential houses,

private and other consumers; there are interrupted 28 thousands double and abusive connections to the grid; 13 thousands of these connections are legalized through new contracts, in collaboration with the Electricity Enterprise Branches; there are prosecuted and taken several legal actions against the abusers in 3 thousands cases and a considerable sum of money is enashed. In the same time there are evidenced 8 thousands debtors, most of which were considered as "difficult" by Electricity Enterprise Branches and are forced to pay their debt. For the first semester of this year the balance between expenditures and incomes from performing the duty of the Electricity Police is positive.

The fulfillment of the tasks defined by the Action Plan for the Albanian Power System is a big and a qualitative step forward for the activity of Albanian Power System. The Albanian Prime Minister, in the meetings of Governmental Committee for Energy has defined and ordered important tasks to the Electricity Police, which fulfillment is a guarantee for the successful overcome of energy crisis and continuous improvement of energetic order.



Urim BAJRAMI
Spokesman
Albanian Electricity Police

THE FUTURE CHALLENGES OF ALBANIAN POWER CORPORATION

Actual Situation

The difficult actual situation of Albanian Power Corporation (KESH) has several reasons:

- For each 100 kWh put into its grid KESH is able to bill only 55 and collect only 36,
- The consumption increase is not due to industry development, but to the use and often to the waste of energy by customers who do not pay for it,
- The consumption increase has produced an overload of the whole electrical system with consequent increase of losses and deteriorating the quality of supply,
- The energy demand has obliged KESH to import from abroad at a price greater then selling price.

This situation has further deteriorated in last months due to the continued consumption increase. This, combined with low level of water in dams has forced imports to jump to never before reached levels, saturating the transmission lines capacity. It is estimated that the level of imports in the year 2000 will be 20 % compared to 7 % in 1999. The increased energy imports even if partly-subsidised by the Government, have an impact on the overall financial situation of the sector because the cost of imported energy is higher than the selling costs to the customers. There was a net loss for 1999 of 1.3 billion Leks following a net loss of 2.8 billion Leks for the previous year. The financial situation since the end of 1999 has deteriorated

even further. The recently installed Management Team recognise the severity of the situation that has been depicted and recommends an emergency strategy and a set of measures:

Emergency Strategy

The actions that should be immediately undertaken are:

- Intervention by the Government on State-owned Companies to obtain the payment of debt against KESH,
- Intervention of the Government to define the pending debts towards KESH coming from value added tax and similar items,
- Strong and effective co-operation between KESH and Electric Police determining the respective tasks, responsibilities and operational procedures,
- Wide and immediate use of the new possibilities offered by law to prosecute all private debtors and to obtain all the advantages from the psychological aspects. Sensitising the Judiciary in order to stimulate the implementation of KESH requests; definition of internal procedures to accomplish the new tasks in the peripheral Entities,
- Solution of the problem of temporary connections (e.g. new customers in unauthorized buildings) by means of regulatory adjustments and any other suitable intervention,
- Implementation of a media campaign to inform the customers about KESH new policy concerning the three above listed arguments,
- Speeding up meter installation in collective or single boxes by means of the implementation of the Norwegian and Japanese agreements and of any further agreement that will be possible to achieve in the near future,
- Focusing on the maintenance of KESH electric systems with a special attention to the routine maintenance of the distribution network,
- Concentration of financial resources on the latter two issues to provide manpower, vehicles and equipment.

Short and Medium Term Measures

The measures proposed aim the reorganisation of KESH on the following guidelines:

- Giving KESH all the features of a real Joint-Stock Company fully independent from the Government,
- To put an end to financial subordination to the Government and to give to the General Director the standard powers of a utility Chief Executive,
- Establishing Divisions, giving them full responsibility for each industrial cycle phase (generation, transmission and distribution),
- Establishing "corporate" service units for enterprise's specialised governance functions,
- Enhancing the KESH headquarters control on its periphery, regrouping the distribution entities in a smaller number of territorial units,
- Establishing an integrated and computerized system of procedures for each activity line with a special emphasis on the billing system,

(.....continued on next issue.....)

Eng. Leon KONA
Specialist
KESH - Albanian Power Corporation