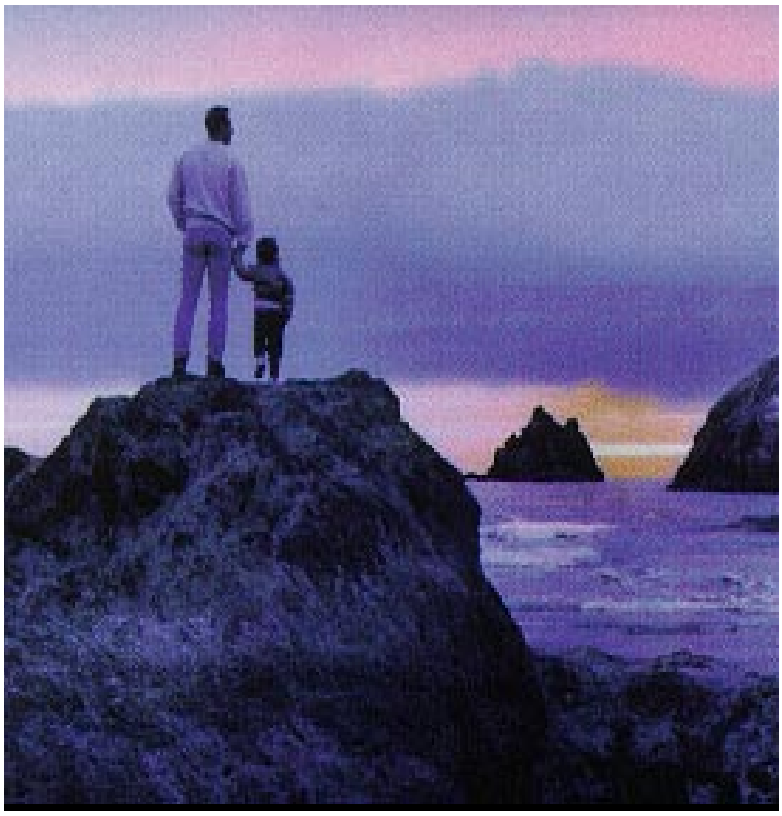

THE ENERGY IN ALBANIA

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NEWSLETTER

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THE ENERGY IN ALBANIA
(NEWSLETTER)

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THE FUTURE CHALLENGES OF ALBANIAN POWER CORPORATION

(.....Continued from previous issue.....)

- Splitting up the employee/customer relationship into tasks assigned to different persons, so as to minimise the employees collusion opportunities,
- Training and motivating personnel at every level,
- Centralising and computerising management of work-force,
- Redefining KESH tasks that are outside its core-business (e.g. tax collection),
- Carrying on meetings with KESH personnel to sensitise them to the gravity of the Company situation and requesting them to play an active role at all levels,
- Concentrating investments on the needs of KESH reorganization, with special attention on the computerization, equipment, training and incentive programs,
- No dismissal of personnel, even if the increased productivity gives place to an excess of manpower. Instead, a progressive workforce reduction can be obtained through a stop to labour turnover,
- Implementation of the Customer Matrix,
- Develop a complete strategy for loss reduction and collection improvement,
- Rebuild KESH image through a media campaign to inform the public opinion on the new overall KESH policy, computerisation and restructuring.

It is proposed to unbundle the whole core electricity business subdividing it vertically in three Divisions corresponding to the three phases of production, transmission and distribution of energy. Taking into account the relatively small dimensions of Albanian Power Utility, a slender structure is proposed, but sufficient to allow each Division a good operational autonomy in the performance of its tasks.

The Implementation of the New Organisation

The above measures shall be implemented through a top-down methodology, which is through the following phases:

- Approval of the modified Statute of KESH by the same Authority that had approved the Statute now in force (Council of Ministers),
- Approval by KESH Supervising Council of the Company's new Organizational Chart, according to the present document and its refinements,
- Approval by KESH Supervising Council of a document describing the powers given to KESH General Director - a draft of this document shall be submitted in the near future,
- Choice of the Operating Divisions and Staff Units Managers,
- Issue, by the General Director, of formal delegations to the Directors of Divisions and of Staff Units, entitling them to officially act on behalf of the Company - a draft of these documents shall be submitted in the near future,
- Training them (dealing with: autonomy, delegation, staff management, work organization, management by objectives, budgeting, information technology) - a draft of the training sessions should be set up as soon as possible,
- Definition, with the chosen Managers, of organizational details (Units and their tasks, premises, equipment, etc.) of his structure,
- Choice, in accord with the Managers, of second level Unit Chiefs,
- Allocation of existing employees to each Unit, and of externally recruited employees when needed, and training interventions as much as possible,
- Start-up of new Units activity.

The organisational structure described aims to give KESH a first serial of operating tools apt to enable it to face the most urgent emergencies.

It represents, therefore, a target that has to be fully operational (the reorganisation of Distribution Peripheral Units included) in the short term (running within 12-15 months). Subsequently, if and when the first redressing objectives shall be near achievement, further improvement and rationalisation steps should be foreseen, to improve technical-economical efficiency, service quality, customer-supplier relationship, generalise state-of-the-art technologies and tools, and so on.

The New Distribution Territorial Units

The Management Team has outlined that KESH Distribution Peripheral Units are scarcely functional and difficult to run structures. To face these shortcomings, it is essential to set up new intermediate level Units placed between current Units (to be lightened and simplified) and KESH central structures, able to ensure organisational change towards a quick increase in efficiency and a progressive decrease of costs. This is one among many causes of the present inability of the Enterprise to ensure a regular power supply and a correct bill collection.

The Management Team proposes a new organisation based on 12 Units, corresponding, in number and territory, to administration boundaries of State Prefectures. This solution, as any other, has both positive and negative aspects. It is deemed worth to be advanced because, considering the objectives, positive aspects appears to prevail on the negatives. It is foreseen to concretely define, in agreement with KESH, the number and size of each Unit. It is not accepted to regroup, sometimes, more than one Prefecture, when the dimensions should result too small, or to split those in thickly inhabited areas. The Distribution Division Director should formally give powers to the new Units Managers.

After an adequate operations period of the proposed structure and if deemed necessary, the feasibility of a further Units number reduction could be examined, also within a privatisation plan.

Eng. Leon KONA
Specialist -KESH
Albanian Power Corporation

DRIN RIVER CASCADE REHABILITATION PROJECT

EBRD has been established to provide financing for specific projects to foster the transition towards open market-oriented economies and to promote private initiative in the Central and Eastern European countries committed to and applying the principles of multiparty democracy, pluralism and market economics.

Within the framework of the economic cooperation between EBRD and Albanian Government, a Loan Agreement was signed between KESH and EBRD on November 22nd, 1994 and approved by the Council of Ministers. EBRD has provided the financing for Drin River Cascade Rehabilitation Project in collaboration with Austrian Government, Swiss Government and Japan Bank for International Cooperation (JBIC).

The management of the whole project is assured by a Project Management Unit conducted by KESH who is assisted and advised in this task by the Consultant - Colenco Power Engineering Ltd./ Switzerland, approved by EBRD.

The Drin River Cascade Rehabilitation Project concerns four of the country's hydropower stations (two on Drin River, two on Mat River), representing over half of the total installed capacity.

Key Parameters of the Project:

Power Station	River	Installed capacity (MW)	Number of Units	End of Commissioning
Fierza	Drin	500	4	1978
Vau i Dejes	Drin	250	5	1971
Ulza	Mat	25	4	1957
Shkopeti	Mat	24	2	1960

General Scope of Project Works

The Project includes the rehabilitation and/or replacement of:

- Mechanical Equipment: turbine runners, governors, shaft seals and auxiliary mechanical equipment, such as pumps, as well as measures to improve flow conditions and hence efficiency of production, and the overhaul of turbines. VA TECH is the contractor for mechanical equipment, financed by Swiss Government, for Fierza HPP, and ANDRITZ is the contractor for the mechanical works of the three remaining hydropower stations, financed by Austrian Government.
- Electrical Equipment: New transformers, upgrading and testing of transformers, replacement of the excitation systems of generators and voltage control, new generator protections, rewinding of generators, auxiliary equipment, provision of emergency diesel generators, rehabilitation and upgrading of switchyard facilities. ALSTOM Power-Italy is the contractor for electrical equipment for Fierza & Vau i Dejes HPP's, financed by JBIC and KONCAR KET-Croatia is the contractor for electrical works in Ulza & Shkopeti HPP's, financed by EBRD.
- Control and Monitoring System: A new Control and Monitoring system for all hydropower stations under this Project, including CMS for turbine water flow, water levels, generator data, se quence control and other components necessary to optimize unit control and dispatching. The Contractor for CMS, financed by EBRD, is ALSTOM-France.
- Civil Works: Equipment to monitor dam structures and movement, dam stabilization measures, and measures to mitigate erosion, improvement of the reliability and operation of the gated spillways; components are also included to improve safety conditions for workers, such as rehabilitation of bridges and access to dam structures including dam galleries. The Contractor for Civil Works financed by EBRD, is TRISS -Albania.

Target and Purpose of the Project

The primary objective of the project is to rehabilitate and modernize the mechanical and electrical equipment of two hydropower plants at the Drin River Cascade (Fierza and Vau i Dejes) and two small stations at the Mat River (Ulza & Shkopeti) with a view to increasing their efficiency, production output, useful lifetime and availability. The availability of all units at these stations has declined significantly during the last few years because of the lack of resources needed to purchase spare parts for repair and to carry out preventive maintenance measures. Since the Drin River is the backbone of the Albanian power system, rehabilitation and upgrading of its power stations is a top priority for the development of the power sector.

The Rehabilitation Project will:

- Increase electricity production by using modern technology to replace or repair electrical and mechanical equipment which is at the end of its useful life,
- Increase the life expectancy of mechanical and electrical equipment,
- Enhance the reliability and quality of electricity supply through out the installation of state-of-the-art control and automation technology, with the additional benefit of UCTE standards regarding frequency and voltage control,
- Improve the safety conditions and reduce health risks faced by power station personnel,
- Up-grade the safety and stability of dam structures, which will avoid landslides.

After rehabilitation, the efficiency of the plants will be improved. That means, that the annual amount of energy production, after rehabilitation and during the remaining lifetime of the hydropower plants, is higher than without rehabilitation.

The current status of the Project is the start of the implementation activities.

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Project Engineer
DRCRP Unit - KESH
Albanian Power Corporation

THE COMPANY OF THE FUTURE WILL BE ENVIRONMENTALLY PROACTIVE OR IT WILL NOT BE

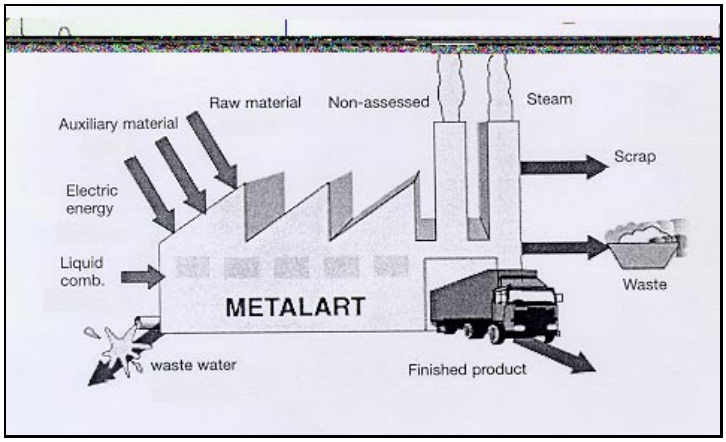
From 13 - 14 December 2001, representatives of Albania, Croatia, Slovenia and Bosnia-Herzegovina participated in the Training Workshop on Minimization Opportunities Environmental Diagnosis (MOED), organized by Regional Activity Center for Cleaner Production in Barcelona (RAC/CP) and the Croatian Cleaner Production Center. The participants from Albania were representatives from the Ministry of Environment, Ministry of Public Economy and Privatization, National Energy Agency and Institute of Chemical Technology. The aim of the workshop behind the training on MOED developed by RAC/CP was sharing of the experiences among these countries concerning the activities of their Cleaner Production Centers.

RAC/CP is the unit of support for the MAP (Mediterranean Action Plan) in matters related to the prevention of industrial pollution and cleaner production. MAP was adopted in 1975 by the states of the Mediterranean region and the EU, within the framework of the UNEP aiming the environmental protection. Its activities are based on the Barcelona Convention, signed in 1976 and revised in 1995, and on 6 specific protocols. Cleaner Production Centers in three above-mentioned countries besides Albania where does not exist any, vary from a consultancy type (case of Slovenia) to a highly governmental supported one (case of Croatia) and somehow a type in between (case of Bosnia). Regardless their inner problems, they

seem to be very important organisms with a clear scope: environmental protection through promotion of cleaner production and the reduction at source of waste of pollutant emissions in collaboration with the competent environmental authorities in their countries. MOED is one of the very important instruments they use to enable companies they came into contact with to assess the advisability of going ahead with a project, the aim of which was the reduction at source of pollutant waste and emissions. This is particularly valid for small and medium enterprises (the majority in our societies) for which a headlong jump into the demands of an ISO 14000 or EMAS certificate may prove traumatic.

What is MOED? MOED is the assessment of the industrial activity to detect potential opportunities for preventing and reducing pollution at source, and for providing the business with sufficient data for it to orientate its policy towards cleaner practices and technologies that are technically and economically feasible. MOED is not an environmental audit, not a project in detail, but a very flexible tool used by experts that are familiar with the industrial activity in question and how it interrelates with the environment. The ultimate aim of the MOED is to detect possible technical and organizational alternatives for reduction at source and recycling. These should appear in the final document, adapted according to each business, which should at least incorporate the following points:

- Introduction and background,
- General description of the economy,
- Description of the industrial premises,
- Description of the activities, manufacturing processes and areas under diagnosis,
- Description of waste flows generated,
- Recommends minimization alternatives,
- Summary of the alternatives,
- Other Considerations,
- Appendices: diagrams of processes, used protocols, work sheets, etc.



Example of a MOED balance of material and resource consumption in a production company

The energy factor represents one of the key elements to be taken into account in the MOED and one, which is generally forgotten. In industry, this almost always falls into two main groups: thermal and electrical energy. The energy data that must be included in the MOED are:

- The type of energy used,
- The amount consumed,
- The cost per unit and total expenditure.

While many different types of alternative can be proposed, it is important to structure them and give priority to reduction at source over recovery and recycling at source:

1 Reduction at source,
- Product redesign,
- Process redesign:
  - Good housekeeping practices,
  - New technology,
  - Material substitution (raw and secondary materials),

2 Recovery and recycling at source.

For every minimization opportunity the following is included in MOED:

- A description of the alternatives proposed. Comparison with the process,
- A justified quantitative estimate of the reductions that may be achieved,
- An estimate of technical feasibility,
- An estimate of economic feasibility.

In the Workshop were presented many wise examples (case studies) where MOED has worked out to propose different opportunities to the companies that were technically and economically viable for reducing the environmental impact of their activities. Furthermore, this was even associated in many cases with raw materials savings, auxiliary materials savings, energy savings and water savings, making the companies managers even more interested towards MOED. Cleaner Production Centers play a key role in promoting and carrying out MOED, building capacities and training experts throughout the countries concerning cleaner production technologies.

Albanian Ministry of Environment through its important document NEAP-Immediate Measures has committed itself towards the establishment of the Albanian Cleaner Production Center in the five years to come. This is very important if we think upon the existing outdated technology that characterizes the Albanian industry, their associated environmental problems and the increased role of SMEs in the Albanian economy together with their poor capability towards environmental expertise as well. The Albania -EU Energy Efficiency Centre might serve as an example concerning the functioning type of the expected Cleaner Production Center. The experience of other countries will be used as well. Meantime, the enforcement of legal framework in the environmental protection field is a key factor that will ask companies to pay for their waste or emissions, making the likelihood of recovery worth studying, leading to the necessity of the Cleaner Production Center and other bodies which offer consultancy on the field of environmental protection. The company of the future will be environmentally proactive or it will not be.

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