

# ENERGY STRATEGY AND POLICY OF KOSOVO

## *-White Paper-*

### Table of Contents

1. Introduction
2. Key directions for the development of Kosovo energy sector
3. Consolidated Strategy objectives – Executive summary
4. Indigenous energy resources
5. Strategic Development objectives and action plans for energy sub sectors
  - Electric power system development
    - Creation of regional electricity market
    - Power sector restructuring
    - Regulatory Framework
  - Lignite mining
  - District heating
  - Petroleum sector
  - Natural gas
6. Energy efficiency
7. Technology transfer and development
8. Investment plan
9. Implementation plan for the energy strategy

## PREFACE

Kosovo is looking forward to renewed economic growth, increased opportunities, and an enhanced quality of life arising in part from the development of the energy sector.

In order for this vision to be achieved, the development directions need to be identified and plans developed for their active pursuit. This is one of the principal functions of the energy strategy and policy.

The main objectives of the Energy Strategy and Policy (ESP) are to provide short-term plan for rehabilitation and stabilization of energy sector and directions for the medium to long-term reconstruction, development and expansion of the energy sector in Kosovo. It will also map the evolution of the power sector towards improved corporate governance, commercialization, competition and privatization.

*Improved corporate governance, commercialization, competition and privatization*

Purely from the view point of the objectives, this strategy is similar to that in number of other countries, but the actual situation in Kosovo, makes it different from several aspects:

- Poor state of the facilities inherited after the conflict;
- Kosovo industrial activities brought almost to a full halt, and future of the many enterprises, thereby energy demand, highly uncertain;
- Against such a state of the industry, the energy sector is the most important industrial employer now, and most promising bearer of the immediate economic development;
- Strategy is to be developed, adopted and even, at least partially, implemented jointly by custodian of the energy sector assets and local Government, with the uncertain time horizon for determination of the Kosovo final status;
- Governance institutions in energy sector are still fragmented and without a strong central body (energy ministry or similar) to coordinate the activities with development plans in other sectors, and focus the efforts towards a common goal – prosperity of the people of Kosovo;
- Present situation in power sector (following accidents at the Kosovo B and in lignite mine) is particularly grave and requires urgent and immediate actions to stabilize the power system;
- Due to the problem of non-payment the power sector in particular suffers from the lack of resources, and is dependent, for the time being, on international financial support for implementing any rehabilitation or development plans;
- At the moment, power sector relays basically on only 2 thermal power plants, and one of these will reach the end of economic life by the mid of time frame of this Strategy.

This background creates a sense of urgency and higher than usual uncertainty against which the strategy must provide clear direction for future development of energy sector. In the short term, the urgency is to stabilize the power sector. In the medium term the urgency is created by the fact that roughly half of the generation capacity will be lost in the next 5-8 years or so, therefore preparations to replace them must start immediately.

The uncertainties are augmented by lack of economic development plans and unclear time horizon for determination of the Kosovo final status and other uncertainties normally associated with a time frame of 20 years.

In spite of these facts, Kosovo does not have a time to wait nor luxury to prolong deliberations because if some key decisions are delayed, the future situation, not only in energy sector, may worsen.

Strategy development involves making choices about where we want to go and how we want to get there, and providing an immediate action plan on how to proceed with implementing the key strategic and policy decisions.

The Strategy Green Paper, completed in December 2002, provides some in depth studies and analyses concerning Kosovo's energy development options, summarized from various studies, and particularly from the most recent World Bank ESTAP project, complemented by the comments and additional analyses during the Strategy preparation process. The background papers and references in this volume provide detailed information on various energy sectors, and on Kosovo's plan on how to deal with challenges and take advantage of the opportunities within these sectors.

This White Paper on the Energy Strategy and Policy presents an integrated description and action plan of the important strategic directions that when approved will guide the province future energy development.

# ENERGY STRATEGY AND POLICY OF KOSOVO

## 1. Introduction

Energy plays an important role in all our lives. Kosovo economy and quality of life were severely influenced by the past events, and the future outlook and prosperity will be significantly influenced by how wisely we use our energy resources, and how diligently we plan for our energy future. The Kosovo energy strategy will play an important role in helping us rebuild the Kosovo economy and improve the quality of life.

## 2. Key directions for the development of Kosovo energy sector

The actual situation in Kosovo, as outlined in the preface, gives some constraints and opportunities, as well as requests for immediate attention. Several technical studies have analyzed the situation in energy sector and offered some options for future sector development, against which strategic directions must be decided upon, and the objectives of energy strategy and policy must be defined.

The **key policy directions** that determine strategic development of energy sector in Kosovo are:

- Security and reliability of energy supply;
- Integration in and cooperation with the energy sectors within South-East European region;
- Using lignite as the major local resource for power generation, at least in medium term;
- Adhering to the EU energy and environmental directives and regulations;
- Improving energy efficiency in all energy sectors and end-use sub sectors;
- Reducing environmental pollution in general, and air pollution in particular;
- Providing a regulatory framework for gradual liberalization privatization of power sector;
- Introducing competition into the power sector by attracting a strategic IPP investor;
- Recognizing mining and power sector as the main engines of economic development, employment, and export revenue providers;
- Attracting private investments for development of gas and oil interconnection pipelines and local infrastructure;

### 3. Consolidated Strategy Objectives

#### Strategy overview

The energy sector expansion must bring the long-term benefits to the growth and strength of Kosovo economy, and provide greatest employment and business benefits possible.

The strategy must balance social obligations with a firm commitment to improve the environment while fostering economic growth.

In that respect, the Energy Strategy for Kosovo is like road map that gives the directions for the most significant places. It shows how we can use our energy resources to achieve economic and social benefits in an environmentally responsible manner.

The Energy Strategy is a living strategy, designed to be realistic and flexible with the respect to future events and time frames. The strategy short to medium term focus looks ahead to 2008, and the long term vision extends from 2009 until 2020.

Kosovo prosperity, standard of living, and quality of life will be greatly influenced by how we produce, consume and distribute our energy resources. We need to use energy more wisely, expand energy technologies through research and development, and ensure that we have the infrastructure required for growing energy sector and economy.

The energy strategy provides a window of opportunity for Kosovo to address wide range of economic and social goals.

The strategy provides the framework by which we can seize this opportunity for the benefit of Kosovo people.

#### ***Main energy policies that the strategy affirms include the following:***

- the priority for the people and businesses in Kosovo is electrical energy supply that is secure, reliable, affordable and produced in an environmentally responsible manners.
- reliable energy data and indicators are needed to develop demand forecast and a least cost generation expansion plan. Creating and developing necessary institutions (department of energy, statistical office, etc.) is crucial to effectively implement a balanced policy. Therefore the Energy Strategy focuses on the immediate improvements in this sector, and actions that will assure sustainable development of power sector in the future when Kosovo A plant will reach the end of economic life;

- ❑ coal is the only indigenous resource, efficient and abundant, and the main fuel that generates Kosovo's electricity, and will be for many years to come. The strategy continues to encourage the use of local coal for electricity generation in an economically appropriate and environmentally friendly manner.
- ❑ the strategy also proposes the specific actions to **improve** the quality of environment by reducing air emissions
- ❑ through regional integration and cooperation the strategy seeks to open the opportunities for export growth and expansion of power sector as the engine for the economic growth;
- ❑ an adequate transmission infrastructure is vital to a growing generation system. Its is an essential precondition for developing a robust, competitive market based system. Therefore appropriate measures for strengthening the transmission system are integral part of the strategy.
- ❑ the strategy introduces a framework for competition in the power sector through policies that permit new generators (IPP) to access the transmission system. The corresponding regulatory system is still in its infancy, so the strategy support creation of efficient and effective regulatory environment.
- ❑ the Strategy promotes decentralized electrical generation and greater use of renewable energy sources by encouragement of renewable electricity production by small power producers (SPP).
- ❑ to help investors understand opportunities in Kosovo energy sector, the Strategy will support marketing effort to package all provincial regulations and tax provisions that are available in the energy sector. Specific promotional tools need to be developed, by bundling existing and planned regulations and tax programmes and incentives into Kosovo Energy Industry Growth Plan.
- ❑ the Strategy continues to support the district heating system as an important way of diversification of the energy sources for heating;
- ❑ energy efficiency and renewable energy are recognized and promoted as an important policy for conserving the primary energy, protecting the environment, promoting actions on the demand side of energy sector and diversifying end users supply options;
- ❑ making significant gains in energy efficiency depends to a large extent on consumers making energy-efficient choices. Public education is a key factor in this. The Strategy supports programs to promote improved energy efficiency in residential, commercial, industrial and transportation sectors.

### **Strategy objectives – executive summary**

Will contain key strategy objectives from each Strategy Chapter.

## KOSOVO'S NATURAL RESOURCES AND POTENTIAL IMPACT ON ENERGY DEMAND

Based on exploration and status of energy resources Kosovo has large reserves of lignite (est.11,5 bn t), low water potential (1982 TWh/a), minor resources of nuclear matter, geothermal sources with low temperature and a potential zone of natural gas.

Kosovo has varied geology and a remarkably rich metallogenic endowment that has supported a long mining history. Major estimated reserves are as follows:

### Zinc-Lead-Silver in Trepca Complex

Mine	Estimated Resource			
	Million Tonnes	Zinc %	Lead %	Silver g/t
Belo Brdo	3.70	7.8	8.7	120
Cmac	2.36	3.5	11.7	NA
Stantrg	9.00	4.3	7.0	112
Ajvalija	1.20	18.8	9.6	126
Novobrdë	2.30	7.5	4.9	136

### Bauxite

Total reserves at 18 sites are 1.7 Mt. Additional resources estimated to 4-5 Mt.

Specification: Al<sub>2</sub>O<sub>3</sub> 45,0-51,0%; SiO<sub>2</sub> 1,5-3,5%; Fe<sub>2</sub>O<sub>3</sub> 30,0-38,0%; TiO<sub>2</sub> 1,8-2,6%;

CaO 0,05-0,06%

### Nickel

Resources of approximately 14 million tones at 1,3% Ni and 0,07%Co. There is a good exploration potential trend.

### Magnesite occurs as:

- Veins hosted by serpentines, reserves in Goles 1,7Mt at 46% MgO
- Strata bound replacement of dolomites in Strezovci some 2,8Mt at 38-45% MgO.

Considering Kosovo's rich natural resources mining sector may develop over the Strategy time horizon. Mining and then processing of mined ore may generate additional demand of 100-200 MW of electric power.

In the past, consumption of two largest mining and processing companies was 80-120 MW in Ferro-Nickel and 30-50 MW in Trepca complex varying according to the level of production output.

