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THE ENERGY IN ALBANIA

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CLIMATE CHANGE IN ALBANIA - A MULTIDISCIPLINARY EXPERIENCE

Albania as a non - Annex I Party to the UNFCCC (United Nations Framework Convention on Climate Change) is eligible for funding from the GEF (Global Environment Facility) for the preparation of the National Communications to the Conference of Parties of the UNFCCC. The preparation of the First National Communication, this learning - by - doing exercise, remains as the first accomplishments of Albania, under its commitments as a Party to the UNFCCC. According to this first study is found out that Albania is a relatively low net emitter of GHGs due to its deep reliance on hydro sources for electricity generation but the future scenarios of emissions predict higher growth rates of these emissions. In the course of three years spend for the preparation of the First National Communication, beside of the studies carried out, a considerable number of problems, constraints and lessons learnt are identified.

1. Albania and UNFCCC

Albania is a Party to the UNFCCC since January 1995 and actually has the status of non-Annex I Party under UNFCCC. The Focal Point for UNFCCC belongs to the Ministry of Environment of Albania, which is the governmental body, responsible for the environmental management and policy in the Republic of Albania. The Government of Albania has been always very active in the climate change negotiations and has contributed to that process with its inputs. Since 2001, Albania is a member of the UNFCCC in

formal consultations group, namely CACAM (Central Asia, Caucasus, Albania and Moldova), established during the COP 6, held in the Hague in 1999. The Government of Albania has taken considerable steps for the implementation of the Convention such as preparing the First National Communication, submitted recently to the UNFCCC Secretariat and compiling the National Action Plan (NAP) to address Climate Changes. Although Albania does not have any commitments for GHG emission reduction the NAP aims at reduction of the growth rates of GHG emissions and foresees measures to be applied for adaptation to the expected Climate Changes.

2. Albania's First National Communication

The preparation of the First National Communication (FNC) is enabled by the GEF funds. This process started in late 1998. A climate change office is established since 1998, when the GEF project started. This office, located in the premises of the Ministry of Environment, serves not only for the implementation of the UNDP GEF projects but is responsible for the implementation process of the UNFCCC as well, serving as a nucleus for a national secretariat/committee of UNFCCC in the future. A team of experts is established. International consultants are invited to train the teams when necessary. A Project Steering Committee oversees and supports the climate change projects. UNFCCC secretariat and UNDP-GEF National Communications Support Unit have assisted the Albanian team during this exercise.

3. Main findings from the FNC

Based on the findings derived from the First National Communication of Albania, a relatively low level of GHG emissions, estimated for the base year - 1994, is highlighted (7061.45 Gg). The main reason of that low level of emissions is explained due to the fact that 94 % of electric power is generated by hydro sources. Also a relatively low level of emissions per capita and high level of emissions per GDP is found. The main source category of GHG emissions is energy sector, which accounts for 44 % of the total. This category does not include forestry (fuel wood), which is also a source of emissions, due to the bad management of forests, contributing by 21 % to the total. Based on the predictions for future emissions it is expected that by 2020 the GHG emissions total to be raised at the level of 37.653 Gg. The abatement scenario of emissions foresees the introduction and implementation of different options focused on energy saving and energy efficiency measures, estimated quantitatively in terms of reduction potential, cost and benefit. These most potential sectors for introduction of abatement measures are power generation, residential sector and industry. The future climate scenarios for Albania predict changes such as increased temperatures, decreased precipitation and reduction of water resources and arable land. The most vulnerable sectors highlighted are water resources, agriculture energy and tourism. A national action plan, which addresses climate changes (abatement measures and adaptation options), is developed under this study. It is a part of the updated National Environmental Action Plan, already adopted by the Government of Albania.

4. Constraints

A number of constraints, which faced the process of preparation of the FNC of Albania are also identified. They are of institutional, methodological, technical and financial nature. Lack of legal framework for data reporting and a relatively low level of awareness regarding Climate Change issues in Albania, even at the policy makers level remain as main institutional concerns. Variability, reliability, availability, aggregation of activity data are technical constraints faced during this exercise. Also, lack of guidance on abatement analysis and vulnerability assessment are identified as methodological constraints.

5. Lessons learned

We recognize the importance of the GHG inventory as key exercise. At national level the GHG inventory is important for reporting purposes to UNFCCC. At the project level it is important for abatement analysis. We recognize the importance of the careful selection of the national experts, the maintenance of the team of experts. Also close collaboration of the inventory and abatement teams is very important to the process. Peer review of the components of the National Communication ensures the quality of this exercise.

6. Continuity of the process

After the completion of the First National Communication, the climate change team is working under the top-up phase, which aims at capacity building on Technology Needs Assessment. Likely the same team of experts who worked on FNC is now involved in that process. After the completion of the Technology Need Assessment, necessary funds will be requested to GEF for the Second National Communication. It is expected that the Second National Communication from Non-Annex I countries to be developed under the revised guidelines recently adopted by the COP 8 of UNFCCC. Also, another GEF project on GHG inventories has recently started. The project will initiate a regional programmatic approach, developed to build capacity for improving the quality of data inputs to national greenhouse gas inventories, using the concept of key sources of emissions for cost-effectiveness. The project will build on the expertise gained during the preparation of the initial National Communications. By strengthening institutional capacity to prepare inventories and establishing a trained, sustainable inventory team, the project will help countries to reduce uncertainties and improve the quality of inventories for subsequent National Communications. This, in turn, will allow countries to improve national strategies for reducing greenhouse gas emissions. During 2001-2002, Albania has participated in a sub-regional project namely: "Building capacities on climate changes in Balkan region", funded by the Ministry of Environment and Physical Planning of Greece. This project aimed at building capacities to consider and address climate change issues.

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THE NEW POWER SECTOR LAW - AN IMPORTANT STEP TOWARD RESTRUCTURING OF POWER SECTOR

After almost one-year discussions and debates among specialists and experts of energy sector and further more of parliamentary commissions of economy and finance, industry and energy, and law, the Albanian Parliament approved on May 22, 2002 the Law No. 9072 "On power sector". Law was drafted with the technical support and assistance provided by American consultant Pierce Atwood Attorneys under the program sponsored by USAID. The new law is based on the experience of most developed countries and it takes into consideration many provisions of EU Directives on internal electricity market. This law represents an important step toward restructuring of this vital sector for the development of whole country's economy. After full implementation, this law will put Albania in much better position for achieving the main goal of creating a modern and more efficient power sector, which will attract private investment to secure a reliable electricity supply for all customers, and will enable it to participate in regional and European electricity markets in compliance with energy policies of European Union.

1. Establishment of an independent and transparent regulator

One of the main objectives of the law is the establishment and strengthening of an independent regulator in power sector (ERE) with the aim of improving the electricity supply and service quality taking into account the environment protection and public security. This is based on the conviction that a more reliable and qualitative electricity supply can't be secured through direct and frequent interventions of the Government, but it should be based on the establishment of an independent regulator functioning steadily and properly applying well-know principles of tariff setting, licensing and other functions provided by the law.

Law envisages that the members of the ERE Board of Commissioners shall be appointed by the Parliament (Article 4) differently from the up to date practice according to which the Commissioners were appointed by the Government. Law, in the same time, provides a more protection regarding the case of removal of Commissioners from the office (article 5), which will positively affect regulator's decision-making independence. What strengthens more the regulator's independence is the fact that the law stipulates that ERE shall be financed by licensees through license and regulatory fees.

In addition of independence, the law requires from the regulator a transparent decision-making process. For this purpose, Article 9 requires an open and transparent decision-making process and sets forth the voting and quorum requirements for ERE Board decisions. This law introduces for the first time ever the concept of hearing sessions organized by ERE for different issues. Law stipulates that no person without a license granted by the ERE may operate in power sector. Articles 13 through 25 prescribe the important licensing responsibilities of the ERE in the electric sector for activities of generation, transmission, distribution, supply, export or import of electric power. The ERE is authorized to grant (Article 13), condition (Article 15), refuse to grant (Article 17), withdraw (Article 18), modify (Article 19) or transfer (Article 20) licenses under the conditions specified in the law.

2. Electricity tariffs

Law gives to the ERE the full authority to establish tariffs for services provided by the licensees in the power sector. Tariffs must be set in accordance with the tariff setting principles set forth in the law (Article 27). Such principles include (1) the protection of consumers from monopolistic prices, (2) providing licensees with a reasonable opportunity to recover the costs of providing service, (3) providing incentives for efficient operations and management practices, and (4) encouraging economic efficiency by setting tariffs at levels that reflect the costs of serving each customer category.

3. Unbundling of accounts

Law stipulates that every licensee carrying out more than one of power generation, transmission and distribution activities shall keep separated accounts (Articles 23, 33). Separated accounts are required also in case when in addition of its generation, distribution and supply activities a licensee deals with other non-electric power activities.

4. Power system

Law contains a number of provisions dealing with functioning of power system. Article 30 describes the components of the country's electric power supply system and requires that they be connected and operated as an integrated and synchronized power system. Article 31 further requires that the electric power system be interconnected with the power systems of other countries and operated in parallel with such systems in accordance with multi-or bi-lateral agreements consistent with sound interconnection standards established by the ERE.

As regards power generation activity, the law stipulates that the generators must be licensed by the ERE (Article 34) and are entitled to the rights provided by, and the obligations imposed by Article 35. Generators are obligated to maintain reserve capacities of fuel and generating capacity at levels determined by the Council of Ministers to be appropriate for that type of production facility (Article 36). As to generation, this law introduces two new concepts, those of auto-producer and independent power producer (IPP), which may be connected to the main grid according to the Grid Operation Code to be adopted by the ERE. Law stipulates the establishment of one transmission system operator (TSO), which will not only own transmission assets but will operate the transmission system and electricity market which is expected to be established soon (Article 41). The transmission system shall operate in accordance with conditions and requirements of the Grid Operation Code. Contrary to the transmission system operator, the law provides for no limits regarding the number of operators engaged in distribution activities. Distribution networks must be operated by distribution companies licensed by the ERE and must provide electric service within the service area specified in the license in accordance with this law and the Distribution Operation Code to be approved by the ERE no later than December 31, 2004 (Articles 43-44).

Regarding the electricity supply activity, the law stipulates that this activity shall be performed by the licensed distribution companies for mandatory (tariff) customers and by a qualified competitive supplier licensed by the ERE in case of customers enjoying the status of the eligible customers (Article 45). However, it should be emphasized that introduction of status of the eligible customer is conditioned from the approval of power market rules and the liberalization process is expected to be very gradual. Law provides for a minimum annual consumption threshold to get the status of the eligible customer an amount of 100 GWh, which actually can be reached by 2-3 big customers. Law also stipulates that this threshold may be lowered over time consistently with the opening of the electricity market.

5. Electric power market

Law contains a number of provisions regarding establishment and development of a competitive market in power sector in compliance with EU Directives. Law entitles the ERE, in collaboration with other energy stakeholders, to propose to the Council of Ministers by December 31, 2003 an appropriate market model, and after the model approval, to start preparation and adoption of market rules (Articles 53-54). Law requires from ERE, that all codes and rules, including interconnection rules, to be in conformity with the international standards and regional market requirements, including transit protocols and the Energy Charter Treaty requirements (Article 55).

6. Conclusions

Restructuring process and reforms undertaken by the Albanian institution in power sector encounter in this law a solid base to move forward toward liberalization and soundness of this sector. The success or failure of implementation of this law is very closely related to the preparation and adoption of all secondary legislation making applicable this law, as well as the will and commitment of all energy sector stakeholders to face the greater challenges this sector sets for them.

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PROJECT "ISSUES ON MODULAR PV SYSTEMS IMPLEMENTATION"

Main target in European energy/environmental strategy for the next decade is the expansion/increase of renewable energy sources (RES) contribution in energy balance of total European Union (EU). This contribution has to reach 12 % until 2010. For this reason the Campaign for the promotion of 12 % RES puts the following specific targets:

- PV Systems (roofs and facades)	1.000 MWp,
- Solar Collectors	15.000.000 m²,
- Wind turbines	10.000 MW,
- Biomass (CCHP generation)	10.000 MWth,
- Biogas	1.000 MW,
- Biofuels	5.000.000 Ton.

According to EU White Paper for RES, solar photovoltaic electricity generation is very much a recent and close-to-state-of- the-art renewable energy technology. Costs have fallen dramatically with a 25 % cost decrease over the past 5 years, but are still significantly higher than for electricity generated from conventional fuels. The EU currently accounts for about one third of annual, more than 100 MWp, worldwide photovoltaic module production and use. The European industry has built up a leading position in the field of photovoltaic incorporation in buildings. Europe also has the lead in applications of photovoltaics in developing countries.

1. Project Description

The project "Issues on Modular PV Systems Implementation: Technical, Economical and Social Aspects" is a project financed in the framework of Albanian-Greek Scientific and Research Cooperation. The Albanian representative institution is the Albania-EU Energy Efficiency Centre, while the Greek representative institution is the Aristotle University of Thessaloniki, Energy Sector, Department of Mechanical Engineering.

The main objective of this project is to demonstrate the technical performance, economic competitiveness and operational viability of stand-alone modular PV systems for isolated private and public users. The project will facilitate good commercial prospects with further market assessments for PV applications, with common benefits for both partners. The project will contribute to the enhancement of the living and working conditions of people in isolated areas, to stabilize the rural population in these regions, providing important economical benefits for agriculture and SME development (agricultural, tourist, etc.).

Especially for Albania, some of the targets of the project will be the improvements in electricity security of supply, environment protection, poverty reduction, agriculture business promotion and rural areas development. On the other hand, the project will demonstrate the great importance of the utilization of PV systems and will help the testing of real possibilities of this technology. The project will contribute to the dissemination of this environmental friendly technology in Albania.

Until now anyone who was interested on using PV systems had to cover an additional cost of the design, construction and installation of the system by an expert engineer and technicians. With the present project all the above problems are surpassed, as every interested person will be provided with instructions and designs which will specify the technical, operational and quality characteristics of a stand-alone, modular PV system (up to 10 kW).

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

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