INTERNATIONAL CONFERENCE “AZERBAIJAN 2020: RENEWABLE ENERGY AND SUSTAINABLE DEVELOPMENT”

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On 24-25 April, 2012 IEA organized and held a Conference **“Azerbaijan 2020: Renewable Energy and Sustainable Development”** in the frame of theProject “Improvement of Azerbaijan’s legislation relating to Renewable Energy Sources (RES) and Energy Efficiency (EE) and its bringing in conformity to the EU legislation” under the EU Program “Support to Energy Reforms”.

The aim of the Conference was to discuss the issues related to renewable energy development including environmental, social and legislation aspects. The Conference was attended by the minister of Industry and Energy of Azerbaijan **Natig Aliyev**, the president of Azerbaijan National Academy of Sciences **Mahmud Kerimov,** the chairman of Azerbaijan Parliament’s Ecology Committee **Valeh Aleskerov** and other officials as well as local and foreign scientists, representaties of the related governmental entities, international companies and NGOs, etc.

President of IEA FeganAliyev opens the Conference “Azerbaijan 2020: Renewable Energy and Sustainable Development”, 24 April 2012.

Conference opening

The Republic of Azerbaijan towards “Azerbaijan 2020: Renewable Energy and Sustainable Development” is in its own path to become more reliable and active member of the world community in energy saving and renewable energy sources usage.

The energy sector dominates Azerbaijan’s export, and it is essential in the development of the Republic of Azerbaijan. The large volume of energy exports contributes to a massive trade surplus of almost 50% of GDP. At the present, the International Ecoenergy Academy (IEA) is implementing an important project: “Improvement of Azerbaijan’s legislation relating to Renewable Energy Sources (RES) and Energy Efficiency (EE) and its bringing in conformity to the EU legislation” under the EU program “Support to Energy Reforms”.

The aim of the conference was to discuss the project results with local and foreign experts in the field of renewable energy sources usage, energy efficiency development, environmental improvement, social, and legislative aspects.

Below brief texts of presentations and recommendations of some of the Conference participants and the appeal to the President of the Republic of Azerbaijan Mr. Ilham Aliyev are given. Keynote speeches were made by:

N.Aliyev - ***The Minister of Industry and Energy of the Republic of Azerbaijan***

M.Kerimov - ***The President of Azerbaijan National Academy of Sciences***

V.Aleskerov - ***Chairman of Ecology and Natural Resorces Commisison***

Plenary lectures were delivered by **Gustav Grob** (president of ICEC, CMDC, Switzerland), **Daria Piciga** (Ministry of Agriculture and Environment, Slovenia), **Farhad Aliyev** (vice-president of IEA, Azerbaijan), **Yuri Tabunchikov** (president of ABOK, Russia), **Demir Inan** (president of Clean Energy Foundation, Turkey), **Geoffrey Hamilton** (Cooperation and Partnership Section UNECE Economic Cooperation and Integration Division, Switzerland),**Adam Sek** (UNECE-United Nations Economic Commission for Europe), **Berthold Breid** (Renewable Academy AG, Germany) and other scientists.

Gustav R. Grob *- President of International Sustainable Energy Organization ISEO, President of International Clean Energy Consortium ICEC, Fellow of the Energy Institute London (ex. F.IP), Chairman of ISO/TC203, Technical Energy Systems Analyses, Founder & ex-Chairman of ISO/TC197 for Hydrogen Energy, Member of American and Swiss Automatic Control Associations*
Life hon. member of Swiss Electrotechnical Association, Gold medal laureate of IEA, Baku (2012)

The title of presentation: "Clean Sustainable Energy Sources, Carriers & Storage"

Azerbaijani and foreign experts gathered at the 11th IAE conference from 23 to 25 April 2012 to discuss a sustainable energy future. Recognizing the adverse effects from the use of chemically and radioactively polluting energy sources on human health, the environment and the prosperity of nations, the conference parties saw the need for a new energy paradigm, requiring truly clean ecologically sustainable energy systems.

It was stated that the renewable energy mix consisting of solar, wind, hydro, geo, bio and novel energy systems is competitive with finite conventional mineral energy sources, considering their external, social cost. Mineral energies must be replaced within the living generation to safeguard the petroleum and natural gas resources for higher added-value uses by the chemical industry.

The polluters-pay principle must be made mandatory in all nations by levies and/or taxes, to be harmonized and enforced by the United Nations. Clean, sustainable energy systems create lots of new jobs and foster universities and research.

Methanol produced from clean energy was presented as the fuel of the future, reducing Greenhouse gas emissions. Electric vehicles fed by methanol converters or advanced batteries reduce the energy consumption considerably compared with combustion engines.

Better energy systems efficiency reduces the adverse effects of energy emissions and saves money as promoted by ISEO and many energy efficiency NGOs, but missing in IRENA.

The importance of international ISO and IEC standards was stressed with an invitation to partake actively in technical committees like ISO/TC203 on energy systems analyses and the specialized TCs on photovoltaics, wind and hydro power of IEC. It was also pointed out that the illegal and misleading energy unit Toe (ton oil equivalent) must be banned from renewable energy statistics to be replaced by the legal SI energy units Joule (J) or multiples of Wh (kWh, MWh, TWh).

A major part of the multi-billion defence budgets should be re-chanelled into clean, sustainable energy systems for the survival on Earth, rather than financing oil wars, wasting fossil and fissile resources and taxpayer's money.

Better coordination among national and international clean, sustainable energy organizations is needed as a counterweight to lobbies of non-renewable polluting energy like the biased WEC in London or the International Energy Agency IEA in Paris, representing only industrial nations with their incomplete energy statistics, neglecting the millions of non-commercial renewable energy systems and endangering the health and environment. The International Ecoenergy Academy IEA must spread its ecological credo around the world in

synergy with UN-accredited NGOs like ISEO and the virtual International University of Sustainable Life (IUSL) in Geneva, Switzerland.

The 11th IEA ecoenergy conference is appealing to all nations to speed up the progress for the development of a truly clean sustainable energy future, in a concerted effort according the eight principles of the Global Energy Charter for Sustainable Development, as proclaimed at the UN Summit in Rio de Janeiro in 1992, reiterated at its 10th anniversary in Johannesburg in 2002 and at the 2012 World Sustainable Energy Conference in Geneva with its appeal to the 20th anniversary of the Rio summit in June 2012, and the Secretary General of the United Nations.

Prof. Yuri Tabunchikov - *President ABOK, Russia, Foreign Expert of the Project*

The title of presentation: "Green Building-New Ecologically Sound and Energy Efficient Habitat of Human"

Green building is a construction of buildings as inhabitancies of the human, which meets the requirements of comfort, energy efficiency, ecological compatibility and environment protection, according to the principles of sustainable development. The "Green" building estimation quality is carried out on the basis of rating systems which contain criteria of stability of inhabitancy.

Generally the rating system represents a set of quantity and quality of indicators characterizing the level of comfort, energy efficiency, ecological compatibility, environmental protection. Also, the availability of any near to the building a park zone, sports and children's playgrounds, places for automobile and bicycle parking, distance from public transport stops and etc.

At the present, there are more than fifty rating systems exist worldwide, which applied to buildings in the international practice (designing, building and operation). The variety of rating systems explains the distinction of standard approaches, national features and priorities in the field of energy, ecology, a climate, economy at the developing countries.

Recommendations for Azerbaijan

Green construction is one of the most promising directions for development not only in the construction complex, but also in the social environment of the environment.

In order to evaluate buildings according to the green construction system necessary for Azerbaijan will design standard "Green construction. Residential and public buildings. Rating system for environment sustainability evaluation." This Standard contains requirements for energy efficiency and environmental performance of buildings, as well as for a building in general as the human environment.

There are certain priorities demands must be meet in ecology and energy efficiency for Azerbaijani conditions.

Evaluation of a building as human environment is related not only to the construction facility itself, but to other parameters, including the meaning of "human environment", namely: availability of parking zones, sport and children's facilities, parking spaces for cars and bicycles near the building, distance to public transport stops, etc.

Green buildings, as human environment, are attractive for investors, designers, utility equipment manufacturers and housing owners.

Requirements for green buildings are sufficiently high and cannot be met by the traditional design principles based mainly on typical solutions. As a result we need to arm designers, builders and operators with new creative knowledge.

3. This standard is not the "final word" of the construction business development in Russia, but a road map that the construction industry must follow.

Adam Sek *- Regional Adviser on Energy, Sustainable Energy Division UN Economic Commission for Europe, Renewable Energy Barriers in CIS – UNECE Recommendations for Azerbaijan, Foreign Expert of the Project*

The title of presentation: "Renewable Energy as a Tool for Sustainable Development in UNECE Region".

Given the commitment of Azerbaijan to improve the ecological situation, ensure sustainable socio-economic development and implement green technologies State Program on Energy Efficiency, State Program on Development of Fuel and Energy Sector, National Program on the Use of Alternative and Renewable Energy Sources and National Program on Ecologically Sustainable Socio-Economic Development and other important legislative acts were adopted.

The major goal of the very programs is to effectively and efficiently use alternative and renewable energy sources in order to develop and advance clean energy production. Ensuring sustainable socio-economic development in Azerbaijan by stimulating adoption of modern renewable energy technologies is of utmost importance. In this regard, starting from 2011, the resources of the State Oil Fund, as well as Government budget of the Republic of Azerbaijan will be used to implement renewable energy projects in the country. The Government of Azerbaijan intends to raise the overall level of using alternative and renewable energy sources by 15% till 2015.

Recommendations:

In order to ensure successful implementation of the above-mentioned ambitious plans it is important to identify, analyse and address the range of possible political, regulatory, institutional and financial barriers to the deployment of renewable energy technologies. The UNECE recommendations in this regard are as follows:

- To ensure appropriate coordination of renewable energy activities on the national level(Why National Renewable Energy Agency was not attending the Conference??);
- To make sure that the existing policies are enforced. To adopt the bottom up approach in this respect (to examine the cases of lack of secondary legislation);
- To identify how to enhance investment climate for the development of renewable energy sources(lack of economic incentives: funds, energy finance facilities, feed-in tariffs or fiscal incentives, ESCOs);
- To extend regional cooperation on the development of renewable energy sources (joint RES projects, synergies in RES national programs, joint cross-border infrastructure projects, joint capacity-building programs);
- To analyse the impact of energy subsidies on renewable energy development in Azerbaijan(low energy prices & tariff changes issues, examining the need of tariff changes to enhance renewable energy contribution to the energy balance of Azerbaijan);
- To ensure electric power grid access (TPA, to provide information on the national power grid master plan development to the energy actors and potential investors);

- To analyse the cases of inadequate returns for project finance (RES investment projects in rural and peri-urban areas are not attractive for the investors, to examine the need for public private partnership scheme);
- To analyse the scale of the detrimental impact of global economic downturn on RES development in Azerbaijan and to adopt appropriate measures.
- To identify the barriers and challenges to the transfer of modern energy technology needed for RES development;
- To ensure transparent procedures for authorization, public procurement and tendering;
- To enhance the development of the cooperation of key renewable energy institutions/actors in Azerbaijan with appropriate international organizations (including IRENA, UNECE, UNFCC, UNIDO, IEA, EU, World Bank, EBRD, ADB, OECD, EPC CIS etc.).

Geoffrey Hamilton - *Chief, Cooperation and Partnerships Section, United Nations Economic Commission for Europe (UNECE), Economic Cooperation and Integration Division*

The title of presentation: "Importance of the Good governance of PPPs in Sustainable Energy"

Renewable energy can be best delivered through new forms of financing such as **Public-Private Partnerships** (PPPs). PPPs harness strengths of the public sector expertise in regulations and control with the private sector's strength in innovation, management and financing. PPPs can be described as public sector projects managed and financed and identified by the private sector, encompassing different variety of modules. There is now a successful track record of renewable energy projects being undertaken using this model. The development of the model further requires close attention to the 'governance' of projects, that is, transparent procedures, a strong legal framework and accountability of the project to citizens. Such principles are found in the UNECE Guidebook of good governance in PPP. The author concludes by describing the UNECE PPP initiative, consists of the Toolkit of best practices, guides and centre of Excellence established under the UN to provide support to government like Azerbaijan, which are interested in embarking on the PPP journey.

However certain principles need to be developed related to the good governance of specific projects.

Recommendations:

Key recommendations for the government of Azerbaijan in promoting and developing PPPs:

I would to focus our recommendations in 3 main issues that lead to successful implementation of PPP projects, which are the (1) legislative framework: (2) institutional framework; and (3) developing public sector capacity in PPPs.

PPP Legislative Framework.

Investors in PPPs need predictability and security in legal frameworks, which means fewer, simpler and better rules. In addition, the legal framework needs to take account of the beneficiaries and empower them to participate in legal processes, protecting their rights and guaranteeing them access in decision-making. However, to date the current legislation of Azerbaijan does not permit the PPP module to be used in the country, namely there are no any clear PPP procurement rules, no sectors are defines that can be developed through PPP, not even mentioning about the opportunity of 'step-in' of lenders in the project.

Azerbaijan therefore could make use of UNECE expertise in PPP legislation, by sending its current legislation for UNECE's review and will receive detailed recommendations for improvement. . Azerbaijan may also make use of UNECE initiative by itself establishing a 'specialist cente' in an appropriate PPP sector. This action will help it to accelerate its PPP programmes and the same time raise its profile to prospective international investors.

However certain principles need to be developed related to the good governance of specific projects, which are discussed in the UNECE guidebook on good governance in PPPs.

PPP Institutional Framework

The implementation of PPP projects requires the establishment of proper focal institutions and empowering them to undertake PPP projects. This is an important measure to boost the confidence of potential investors. Whether foreign or national investors, they will need to know which state agency or organizations is empowered to award the PPP contacts and which organizations will be contracting authorities. This is vital not only to investors, but also for the government agencies as well, since before starting the PPP projects in the country, they would need to know how to communicate with other agencies involved, such as the ministry of finance, if the government is willing to provide any financial guaranties, and the ministry of economy, which usually hosts the PPP unit in most countries with vast PPP experience. Therefore, it is highly recommended for the Government of Azerbaijan to establish relevant insititions that will be responsible for the coordination of different line ministries, undertake the roster of ongoing PPP projects, be a hub on PPP information in the country, and others.

Developing Public Sector Capacity in PPPs

One important measure to ensure successful implementation of PPP project in the country that relevant line ministries before announcing the tender on particular PPP projects is to conduct thorough assessment of the project's feasibility, which includes economic and financial aspects, such value for money or potential revenue and bankability, among others. For this it is important that the Government of Azerbaijan pay high attention of developing the capacity of its people, especially dealing with PPP projects, namely in stages such as, project identification, undertaking tendering procedures, in negotiating contractual arrangements, as well monitoring the ongoing project and transfer of the project back to the management of the government. These and other recommendations explained in detail in the UNECE's Guidebook on promoting Good Governance in Public-Private Partnerships, if followed can develop the country's policy on PPPs.

Francisco Boshell - *Technology Standards Analyst IRENA,*

The title of presentation: "IRENA Activities for Accelerating Renewable Energy Deployment"

Recommendation:

The Republic of Azerbaijan is already untaken important actions with the aim of accelerating the deployment of renewable energy in the country, e.g.:

- Scientific studies concerning renewable energy resources and potential in the country,
- Required reforms to energy legislation and regulations,
- Arise awareness of benefits of renewables, via Conferences as this one.

In order to maintain and take advantage of this momentum, Azerbaijan may wish to consider, inter alia:

- The development of sectorial energy roadmaps that will guide and streamline the efforts and action on the area of renewables,
- Conduct sound and comprehensive barriers and challenges analysis concerning the deployment of renewables, similarly as the Renewables Readiness Assessments methodology from IRENA, in order to set concrete and effective actions to overcome those barriers,

- Continue its efforts to establish partnerships with international and regional organisations and agencies, as IRENA, in order to share best practices in policy, technology and institutions, and facilitate capacity building,
- Conduct studies on the tangible benefits of a renewables robust strategy for Azerbaijan, e.g. jobs creation, use local resources in a more cost-effective manner,
- Continue strengthening its institutions that will administer and ensure a stable energy strategy in a long-haul,

Ratify IRENA's Statutes.

Darja Piciga *- Ministry of Agriculture and the Environment of the Republic of Slovenia*

The title of presentation: "Towards a Low Carbon Strategy of Slovenia: Learning and Innovating for Global Challenges"

According to the OECD Perfomance Review, Slovenia is among the first countries that have already drawn a comprehensive strategy for a transition to a low carbon society, defining the low-carbon society[1] as a society (or economy), of which the greenhouse gas emissions are lower than the absorption capacity of the global ecosystem, and at the same time based on the principles of sustainable development. Draft Strategy for the Transition of Slovenia to Low-Carbon Society by 2050, submitted in September 2011 by the Government Office of Climate Change to public consultation and revised in March 2012, proposes the vision of Slovenia in 2050 as a highly integrated and inclusive society with an excellent business sector and a high quality of life, space and natural environment. Thus, the global climate change problem has been taken as the starting point for developing a general strategy of sustainable development, which integrates the sustainable energy policy as the key pillar, thus representing a promising approach for learning and innovating to adequately address the complexity of contemporary global challenges.

The strategy focuses on reducing emissions through green growth (including green tax reform), adaptation and supporting horizontal strategies (innovation and education, local and regional initiative, awareness and communication, active role in international community). The strategy further sets objectives and policies for 13 specific thematic areas, with more or less accentuated energy component: Energy, Transport, Low carbon technologies, Buildings, Industry, Services, Agriculture, Solid waste