THE TENTH BAKU INTERNATIONAL CONGRESS “ENERGY, ECOLOGY, ECONOMY”

The Tenth Baku International Congress“Energy, Ecology, Economy” held on 23-25 September 2009 in "Gulustan" Palace.

A number of delegatesfrom all over the world were invited to this anniversary forum. Specialists of well-known scientific centers of USA, Japan, France, Germany, Norway, Turkey, Iran,Russia, Georgia and other CIS countries came to Bakuto participate in it.

The 10thCongress topics included:

1. Energy development and global environmental problems

- Impact of conventional fuels on natural environment and living resources
- Global warming, climate change, ozone depletion and disasters
- Control of atmosphere air.

2. Sustainable energy development

- Energy saving
- Environmental friendly technologies
- Alternative energy resources
- Hybrid energy systems
- Prospects of hydrogen energy
- Legal and regulatory framework for renewable energies (RE)

3. Environmental problems of the Caspian Sea and Absheron peninsula:

- Impact of the development of oil-gas fields on the regions’ landscapes, flora and fauna, and people health
- Safety and environmental problems of oil-gas pipelines and engineering-communication systems.
- Radiation safety.
- Water and land resource protection. Soil remediation
- Waste management and utilisation

The Congress Opening Ceremony was attended by state officials, ambassadors of foreign countries, guests, representatives of international companies, NGOs, mass media and civil society.

Gold Medal was also awarded to minister of Industryand Energy N. Aliyevfor his contribution to International Baku Congresses “Energy, Ecology, Economy”and to chancellor of Azerbaijan Architecture and Construction University G.Mammadovafor her continued activities devoted the development of science and education

Plenary reports were presented by the president of International Ecoenergy Academy prof. **F. Aliyev**(Azerbaijan), prof. **T. Dixon** and **B. Osmanoglu** (USA), prof. **E. Hering** and **H. Dettinger** (Germany), dr. **Y. Ueno (Japan)**, dr. **T. Tupy** (Germany), dr. **B. Rubesa** (Norway), prof. **N. Begalishvili** (Georgia), prof. **N. Yusifbeyli**(Azerbaijan) and **A. Masoudi**(Iran). In addition, the Congress Programme included 120 research reports and 29 posters of local and foreign specialists.

Along with the traditional Baku congresses,IEAregularly organises scientific-practical seminars, workshops and conferencesto discuss the results of the implemented projects, to provide information about new technologies and methodsonecosystem protection, energy savingand alternative energyresource development, etc. Dozens of important conferences and seminars were held by the Academy including:

- Scientific-technical Conference “State, problems and perspectives of oil and gas production in Azerbaijan oil and gas fields”,1996;
- Scientific Conference “Corrosion problems and protection”,1996;
- International Scientific Practical Workshop “Industrial and environmental safety of oil and gas operations in the Caspian Sea”, (in cooperation with Russian Lukoil company) 1998
- International Scientific Practical Workshop “Protection of the biosphere and contaminated land recultivation”, (in cooperation with EU TACIS programme) 1998;
- International Scientific Practical Workshop “Climate change. Renewable energy resources. Energy efficiency”,2000;
- International Scientific Practical Workshop “Environmental problems of industrial wastes’ anthropogenous impact on Absheron peninsula” , 2002;
- Scientific-practical Conference “Creation and development of an infrastructure for the use of alternative energy sources in Azerbaijan Republic”, 2004;
- Seminar “Seismic risk study in Baku city” (in cooperation with Japanese Kobe University), 2006;
- Potentialities and perspectives of alternative and renewable energy source use in Azerbaijan, 2010;
- International Conference “Azerbaijan 2020: Renewable Energy and Sustainable Development ”, 2012.

Seminar “Seismic risk study in Baku city” held on 16-17 October in Baku to discuss the results of project“Study on seismic disaster prevention/mitigation basic plan in Baku city” implemented jointly by International Ecoenergy Academy and Japanese Kobe University under the support of Ministry of Education of Japan.

its foundation,IEA participated in the development and implementation of a number of projects of state importance.The main projects developed and implemented are:

- Basics of Azerbaijan Energy Development for Period through 2010
- Application of Solar Collectors in Power Supply
- Feasibility Study of Wind-Electric Conversion Systems for Offshore Oil Platforms in Azerbaijan (in cooperation with Trento University, Italy)
- Automated Energy Supply, Conditioning and Regular Microclimate Controlling Systems
- Assessment of Radio-Ecological Situation in the Absheron Peninsula in Association with Oil&Gas Exploration and Production
- Key Directions of National Scientific Programme “Radon” for 1998-2010 years
- Remediation of the Absheron Oil Contaminated Soils
- Assessment and Monitoring of Toxico-Radio-Ecological Situation during Oil & Gas Fields’ Development in the Caspian Contract Area
- Ecotoxicological Regulation of Discharges to the Caspian Sea
- Protection of Population from Harmful Impact of Radon and Radio-Nuclides
- Assessment of Current Environmental Situation on Zykh-Govsany Oil Field in the Absheron Peninsula

- Air Quality Control in Azerbaijan (in cooperation with DBG company, Germany)
- Seismic Risk Study in Baku City (in cooperation with Japanese Kobe University)
- Feasibility study of Azerigas Modernization Project for Integrated SCADA System (in cooperation with Toyo Engineering Corporation and Osaka Gas Engineering Co. Ltd.)
- Hydro-Hydrogen Pilot Project for Guba-Khachmaz Region, Azerbaijan Republic (in cooperation with UNIDO-ICHET)
- Use of Hybrid Alternative Energy Systems in Mountainous Khinalig Village, Guba region, Azerbaijan

A number of projects have been developed upon request from clients, including:

- "Development of Large-Scale Electronic Maps (1:10000) of Oil-Contaminated Soils of the Absheron Peninsula". The Project was implemented within the framework of Action Plan under the Presidential Decree from 28 September 2006 (client-SOCAR)
- "Environmental Impact Assessment and Development of Ecological Passport of Two Administrative Districts of Baku" (client – "Lukoil-Azerbaijan" JSC)
- "Assessment of Current Environmental Situation on Zykh-Govsany Oil Field in the Absheron Peninsula" (client – "Lukoil-Azerbaijan" JSC)
- "Building Radiation Safety" – within the project on Development of Azerbaijan Republic's State Construction Standards and Norms (client- Azerbaijan State Committee for Construction and Architecture)
- Quality Assurance for Radio-Nuclide Studies along the Chirag-Sangachal Pipeline, around Chirag 1Y, GChA, and GChA-6 Oil Wells (client- BP Azerbaijan)
- Environmental Monitoring of Asbestos Disposal Sites (client- ERT Ltd., UK)
- Radioecological situation assessment on the Absheron peninsula caused by oil field exploration and development (client –SOCAR)
- Study and development of a technology for the cleaning of the produced water and sewage from oil, oil products and phenols in Offshore Oil and Gas Production Association (client –SOCAR)
- Environmental monitoring on "Kelameddin-Mishovdag" Contract area (client -"Karasu" Operating Company).

A big deal of works was carried out under the project "Development of Large-Scale Electronic Maps (1:10000) of Oil-Contaminated Soils of the Absheron Peninsula" implemented within the framework of Action Plan under the Presidential Decree from 28 September 2006.

"Hydro-Hydrogen Pilot Project" developed on the basis of cooperation with UNIDO-ICHET is one of the important steps of IEA towards renewable energy development.

The Niyazoba Hydro-Hydrogen Project will be located in Niyazoba village, Khachmas district of Kuba-Khachmas region, Azerbaijan Republic.

The main purpose of this project is to demonstrate perspectives of using the energy generated by intermittent renewable sources such as hydropower. Two hydropower stations each 1 MW are planned in Niyazoba village in the Kuba-Khachmas region of Azerbaijan Republic due to the difficulties of matching energy generation with local electricity demand. 1500 kWt will be

enough to meet local requirements. The excess of energy produced at hydropower plants – 500 kWt will be stored for the production of hydrogen by electrolysis for later use. The long term goal of the project is to demonstrate the compatibility of hydrogen technologies with renewable energy generation, and act as a model for further cogeneration plants.

Kuba-Khachmas region is situated in the Northern part of Azerbaijan bordering with Russian Federation. This is one of the large agricultural regions and recreation centers of the republic in the Caspian coast. According to newly adopted governmental program on the development of tourism and recreation zones, one of the 5 tourist routes is situated in this region. Based on the above mentioned, we can say that significant demand will be for hydrogen in Kuba-Khachmas zone in the future.

One of the projects is developed to use of hybrid renewable energy systems in mountainous Khinalig village of Guba district.

Khinalig is one of the remote Caucasus villages situated in the highest mountain zone of Azerbaijan on the middle line of the Great Caucasus, which separates Russia and South Caucasus. Being a unique travel place of Azerbaijan, Khinalig also is an ancient research site from culture and tourism viewpoints. It has distinguished nature including ancient land of fire, rocks and wonderful forests that make this village an attractive recreation zone (at 2 hours distance of Baku city in the northern part of Guba district). Khinalig people differ from other Azeri people by their specific language, tradition and culture.

The primary goal of the project is to supply heating and electricity demand of Khinalig village through hybrid renewable energy systems.

In 2009-2010, IEA participated in the Civil Society Project: Advocacy Campaign “Effective Utilization of Renewable and Alternative Energy” in Azerbaijan.

The project was implemented under USAID support.

On July 14, 2010 IEA organised and held an International Conference “Potentialities and perspectives of alternative and renewable energy source use in Azerbaijan”to discuss the project results.

IEA participates in the UNECE project “Development of the Renewable Energy Sector in the Russian Federation and in CIS countries: Prospects for Interregional Cooperation”.The purposeof this project is to promote interregional cooperation to overcome the existing barriers to the development of renewable energy resources.

In 2010-2011, under the EU ERSP the International Ecoenergy Academy implemented a project “Improvement of Azerbaijan’s legislation relating to Renewable Energy Sources and Energy Efficiency and its bringing in conformity to the EU legislation”.

Draft laws and standards regulating development of non-traditional renewable energy sources and energy saving were developed. Among them there are draft laws “On Energy Saving and Increasing Energy Efficiency” and “On utilization of Renewable Energy Sources” and 23 secondary legislation documents needed to ensure the implementation of these laws. In addition,

a package of proposals on the amendments in 17 of the existing laws were prepared and submitted to Azerbaijan government.

The main regulations and standards developed under the project are:

- Regulations proposed for solar energy use;
- Air change norms for residential and public buildings;
-Regulations on the methods and rules of energy efficiency increasing in transport;
- Regulations proposed for energy performance of buildings;
- Complex intelligent systems for low-rise buildings and cottages;
- Regulations on heat consumption calculation for existing residential buildings;
- Methods proposed for energy consumption calculation of buildings (BEC –Az);
- Terms and definitions used in the legislation related to wind energy development;
- Guidelines for the rating of economic efficiency of heat supply investment project.