

## **THE 18<sup>th</sup> WORLD ENERGY CONGRESS ENERGETIC MARKET - A CHALLENGE FOR NEW MILLENNIUM**

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In Buenos Aires, in the capital of Argentina, there accomplished the 18. World Energy Congress from 21. to 25. October 2001. 3047 candidates from 99 countries took part in this congress. The largest delegations came from Argentina, France, USA, Japan, Brazil, Sweden, and Saudi Arabia (in this order). There were 470 journalists accredited.

Technical program included 113 key themes and appearances behind the round tables, 18 discussion sections with 82 discussion authors, totally there were 216 lectures given. 3 presidents of countries, president of World Energy Council (WEC), 17 Secretaries of Departments and 8 Department officers agreed to an invitation for the congress.

President of Argentina, Fernando de la Rúa, dedicated the Congress in the hall of Luna Park. A part of the opening ceremonial was opening of attendant Business and Technical exhibition, where Aribaldo Ibarra, chairman of Buenos Aires, took place. President of Argentina commented, that dialogues about energy will be the messages for maintenance for peace and that in temporary difficult times it is valuable satisfaction to see such an amount of people in congress, to which Argentina opened the door. The theme of the congress "Energetic market – a challenge for new millennium" is a stimulant and it is a real intellectual challenge. He said to the ecological point of the congress, that countries using energy enhance their effort to solve rising problems. In conclusion he assured the participants of the congress, that Argentina is a safe and peaceful country, in which the liberalization of energy is urged.

The chairman of Executive board WEC, Jim Adam, remarked in his opening speech, that contemporary there were lots of changes done in assimilation of WEC to the present times, important changes were done in the world and those were positive

changes. The activities of WEC interfere to 2 milliards of people living in poor countries, who still don't have the opportunities to use the benefits of commercial energy. Jim Adam spoke with thanks to workers of Secretariat for an excellent work by organizing of congress, from which the participants will take away lots of progressive ideas.

President of WEC Don Jordan commented, that WEC is decisive to follow the challenge of new millennium: "We are here to seek the answers for difficult questions".

C. O. Pierro, executive director of the organizational committee, exalted the good cooperation in his speech and said thanks to all, who helped by realization of congress and exhibition in Latin America. He said, that WEC seeds the sources for preventing of need of solving the mistakes which could be very expensive for the society.

Opening technical meeting of energy workers in congress and exhibition center La Rural was floated in the idea of defining the main problems of the present times, which solutions were meant to be sought during the congress.

Suggestive appearances were delivered by a lecture by Mr. Fry from Institute of Energy of UK. The topic was "Accreditation schema of energy efficiency: its task in strengthening of the orientation of UK to the energy efficiency". The aim of applying the principal of accreditation in power engineering is to offer the growth of professionalism of acting people in the energy market by relieving the state administration on the base of municipal activities of professional associations.

### **Key topics of the congress:**

Fossil combustibles will stay the most important and stabilizing component of primary consumption of energy in the following decades.

New electric generating industry forms, where traditional electric generating plants skipping to more complex service as they don't sell only the energy and power but also the green credits and financial products.

Fluctuation and unfastening of the prices of mineral oil and gas. Safety of delivery and price stability is the most important issue of each country. Quick development of liquidizing of gas will soon adapt for the global market with the petrol oil only and prices will be weakened away from the prices. Profits of producing countries depend on the position of mineral oil and gas in the main business group

whereas the growth and prosperity of consumer countries depend on liable supply and acceptable price.

Technologies of pure combustion of mineral oil, gas and coal. Production of energy from fossil combustibles with low segregation of CO<sub>2</sub> is the right economical way of spreading ecological technologies. Positive reactions are expected in case of underground gasification of coal, which are developed by technology with relatively low emissions.

Convergence of gas and electric power and multienergy services. Transmission of electric power and transport of gas are interactively completing services with regional power engineering and their regulation has to be coordinated synchronically to strengthen a development of efficient transmission systems. If a quarter of installed capacity in simple cycles will convert to combined cycles, there will be a possibility to cover the increased electricity consumption during following 4 – 6 years without additional emissions of greenhouse effect gases.

Gas and drinking water. There is a potential connection between natural gas and other critical sources as for example drinking water.

Emissions from nuclear electric power plant, large water electric power plants cause greenhouse effect. In the area of production of CO<sub>2</sub> the best form of electric energy production is the most sufficient the nuclear electric power plant and large water electric power plant. There are the lowest emissions of CO<sub>2</sub>/kWh in the countries of south and east of Europe with the highest consumption of electricity. These two kinds of sources have another advantages in the area of global calescent, cost policy and they are the factor of high efficiency which is important for the future development. In case of nuclear energy, improving of status in production of electric energy would be reached by prolonging of life cycle of electric power plants, further processing of utilised combustible and innovations of technological processes from the point of view of the construction, safety, waste management and so on. Nuclear energy industry and governments must evolve the effort to improve public acceptance of this important source of energy.

Redeemable sources of energy and distributed production based on local sources. Penetration of new technologies by utilizing of redeemable energetical sources to global power engineering is estimated for period of time of 30 – 40 years. In short time will sources like wind and geothermal energy become an appropriate supplement to large sources. Development and utilization of combustible energetical

sources and distributed production of electricity should support governments mainly in developing countries, their utilization should speed up by research and development.

Competition and efficiency. New modern technologies respond to approximately 25 % of potential increase in performance of electric power plant and from 75 % to better management and formation of service decisions. If the difference among average and top electric power plant will eliminate application improving experiences “best practice”, obtained potential of performance will bring considerable saving and reduction of damaging what could save 85 bill. USD in building and operational of new capacities and will reach the production of CO<sub>2</sub> 1 GT/r. Competition and sale will cause progress in efficiency of operation of facilities of end consumption. Frame conditions have improving tendency and could support increasing of efficiency by 20 – 30 %.

### **Conclusions and suggestions:**

The industry needs to decrease costs, increase efficiency and respect environment. Government could help to the industry with complementing of private sector its support of basic research and introducing of the new technologies, supplying of adequate protection of ownership by increasing of world wide cooperation and integration of regional markets and strengthening of competition and sale environment.

Economic growth, social progress and protection of environment are three interconnected pillars of persistent development. This is important for market reform, regulation and technological expansion. Energetical companies in these areas made a vast step forward but still have the space to improve.

Energetical sales have to focus at their long term commitments and global solution.

Internationalization of energetical services should continue. Prices of energy should reflect all real costs for their supply. Formation of total combustible cycles will enable to include also the external costs. There is a need to develop energetical infrastructures which will integrate market of energy electric energy and gas to create harmonic economical unit.

Experienced people, transparency and aspects of law are critical questions which government should react to. Governments have legal and important role in

policy of energy and forming regulations, especially in market direct reform and global energetical questions. Independency of regulation from governments and industry is the main condition for successful running of power engineering.

Market mechanism is the main task of distribution of energy resource. In some cases yet fails and the system requires adequate regulation, for example to transfer addressing or relating to problematic of environment. There are visible differences of regulation in regional levels and in institutional questions.

**Literature used:**

Materials from 18. World Energy Congress, Buenos Aires (Argentina), October 2001.