

Information on international scientific conference

INTERNATIONAL CONFERENCE
ENERGY AND ECOLOGY INDUSTRY 2018 – EEI2018
University of Belgrade, 2018. October 10-13

Conference website: www.eei2018.org

Organizer:

The Academy of Engineering Sciences of Serbia (AESS)

Co-organizers:

Faculty of Mechanical Engineering in Belgrade
University of Belgrade

Patrons of the conference are the three ministries of the Government of the Republic of Serbia (Ministry of Education, Science and Technological Development, Ministry of Mining and Energy and the Ministry of Environmental Protection), SANU- Serbian Academy of Sciences and Arts, IAHR- International Association for Hydraulic Research, WESS - Serbian World Energy Council Committee and the Chamber of Commerce of Serbia.

Sponsors and patrons are significant energy companies from Serbia and from abroad:

- PE Electro Power Industry of Serbia
- ANDRITZ Hydro
- HYDRO-TAH
- Energotehnika Južna Bačka
- World Wision
- VOITH Hydro
- Elektromontaža
- Mitsubishi/Hitachi
- ELNOS Group
- IMP-Institute Mihailo Pupin
- ENERGOPROJEKT –Entel
- ENERGOPROJEKT - Hidroinženjering
- CMEC-China Machinery Engineering Corporation
- ENERGETSKI PORTAL

The conference EEI2018 was held within the framework of the celebration of 20 years of establishment of the Academy of Engineering Sciences of Serbia (AESS).

In its 20-year long history of the Academy AESS has become a major scientific and research institution, which has 121 full members and 69 correspondent, 9 honorary and 64 foreign members with extensive academic and professional experience. AESS has 6 departments: the biotechnical science, mining and geology science, of electro technical science, of mechanical science and technology and metallurgical science, as well as 11 interdepartmental committees. AESS is a member of European Council of Applied Science Euro-CASE and cooperates with the relevant European institutions. AESS has recently signed an agreement on mutual cooperation with the National Academy of Engineering of China.

Energy and Ecology, interrelated areas have become extremely important also for further economic development, so that scientists, engineers and researchers are now focusing on

improving the technological processes, reconstruction of existing facilities to increase their efficiency, reliability and security while constantly providing better conditions for environmental protection. Accordingly, in applied sciences significant financial resources are invested and adequate research results are achieved.

The International Scientific Committee consisted of representatives from: Austria, Czech Republic, France, Croatia, Italy, Japan, China, Macedonia, the Netherlands, Norway, Portugal, Romania, Slovenia, Montenegro, Spain, Switzerland, Sweden, etc.

EEI2018 international conference dealt with the following topics:

Strategic planning in the energy sector

The Main Energy Resources

Energy Production and Optimization

Environmental Protection

Technological Challenges

Systems of Electric Power and Gas Energy

Experimental and Theoretical Research

Management Systems

Operational Research and Maintenance.

Despite the fact that the Program Committee conducted a rigorous selection of works, the conference announced a total of 48 scientific papers, 91 authors; it was attended by over 100 participants from 15 countries from 5 continents from Australia to America.

The presentations have been classified into 8 sessions: 5 Keynote lectures, 5 Invited papers, 6 hydroelectric power and energy accumulation, 6 thermo power plants, 6 Renewables, 6 Energy networks, 6 Protection of environment and 8 in the session energy supply.

The condition of energetics

Energy safety is a part of overall safety of every state, and security of supply along with the lesser dependence on energy imports are important objectives to increase the independence of the countries and the people. Energy has a huge impact on the entire economy.

Energy is under significant and growing influence of major global and European challenges related to climate change, increasing the share of renewable energy integration, market reforms

and the need to increase energy efficiency. These changes, usually labeled as energy transition, seek for an active role of the state, of science and of practice in the management of the transition processes.

Thanks to the conquered and upgraded technologies, the energy from the available resources can be gained under economically favorable conditions. The world is developing clean technologies for coal, which can provide a return to the use of fossil fuels.

Integration problems of manufacture of intermittent renewable energy sources into the electric power systems, while the technology for the removal of CO₂, SO₂ and NO_x from combustion of coal and natural gas are in the stage of training. Undertakings and implementation of measures for environmental protection and energy transition steps have far-reaching positive social effects, but also energy costs that make the energy dependent on the investments.

Financing development and energy transition in Europe is made from part of the price of energy. In Serbia, the price of electricity is a social category, its own development is small, key technologies are imported, while the construction of renewables significantly relies on private investors. In the absence of the necessary direction and with failures in the application of regulations, initial experiences in the application of market mechanisms and private investments, include adverse effects

Serbia has significant experience in the exploitation of available hydro potential and reserves of lignite in which in the foreseeable future can meet the demand for electricity. But Serbia does not have the technologies that underpin the energy transition.