

Serbia: The future of energy security, reality check

Categories : [News Serbia Energy](#)

Date : April 21, 2015

In the modern world, energy policy represents a strategic priority of every country and it is an integral part of the country's development strategy.

The security of a modern state depends on energy stability. The state objective should be oriented towards satisfying energy needs in all operating conditions. Today, more than ever before, there is a need for predicting energy risks and threats, by eliminating the consequences after their occurrence, as well as through prevention.

In the energy sector, objectives are established in accordance with the country's political, economic and industrial objectives. The needs for energy resources and the interests in possessing the ownership over stable energy sources are the factors determining the energy policy.

In Serbia, the annual needs for primary energy amount to around 16 million tons of oil equivalent (toe). Coal, which participates in the primary energy with more than 50 percent and is predominately used for electricity generation, is the most important natural resource for Serbia's energy security.

In 2013, around 71 percent of the total electricity generation within the EPS was generated in thermal power plants, whereat the share of coal from Kolubara basin amounted to 53.6 percent and the share of coal from Kostolac basin to 17.3. The high share of coal in energy generation provides high energy independence, compared to the majority of countries within the region, but it also entails some other issues, among which environmental impact is the most important.

The age of thermal capacities is also an issue. The service life of the thermal power plants TENT A1 and A2, "Kostolac" A1 and A2, "Morava", "Kolubara" and Panonske power plants amounts to 45 years on the average, whereas the average age of power plants within the EPS amounts to more than 25 years. The good news is that, after a break of two and a half decades, Serbia will get a new thermal power plant - block B3 in Kostolac, with the capacity of 350 megawatts.

The capacity of plants using hydro power amounts to 2.835 megawatts, which represents almost 40 percent of the country's total capacities. This is important for the country's energy security, but the problem is that these plants are also old, and thus, the last hydro power plant was built 27 years ago.

Serbia has a significant capacity for constructing small hydro power plants, with around 900 potential locations and the potential generation of 1.800 megawatt-hours per year.

When it comes to renewable energy resources, including hydro power, their potential is

estimated at 5.6 million toe, which means that they could cover around one third of the country's energy needs. Only a small portion of these potentials is used, and it is quite certain that Serbia will not fulfil the obligation undertaken within the Energy Community – to increase the share of renewable energy resources to 27 percent by 2020. It is symptomatic that Serbia represents the only country within the region that still does not have any wind parks.

The needs for oil and gas are mostly satisfied through imports. In the country, there is one gas supplier and one gas input, so Serbia, the same as the large part of Europe, depends on the deliveries of this energy generating product from Russia, due to which it can be said that, in this field, its energy security is threatened. When it comes to oil, the country's energy dependence has exceeded 75 percent within the last six years in succession.

The vulnerability of the Serbian energy system was clearly demonstrated last year during the May floods, which inflicted enormous damage, primarily in the Kolubara coal basin. The mine Tamnava West Field was stricken most severely, 178 million cubic meters of water having flown into it. On this occasion, modern equipment and machines were submerged, their value amounting to 250 million euros, if new machinery were purchased. It was only in the last days of 2014 that this mine, which used to provide 50 percent of production of "Kolubara", started operating because of which a significant vacuum was created in the regular supply of thermal power plants with the coal from Kolubara.

In addition to the direct costs incurred due to the flood – the pumping out of water and silt, the recovery of submerged machinery, the reconstruction of the river beds of Kolubara, Peštan, Lukavica and the dam Kladnica, as well as of the access roads – the costs of electricity imports should also be included, 20 million euros having been spent for this purpose only in the first two months after the flood, as well as the costs of coal imports during the winter, which was organized so as to compensate for the coal from "Kolubara". The estimated investments in the mine recovery amount to 55 to 70 million euros.

The twenty-first century does not leave a lot of space for the risks and threats in the energy sector not to be recognized, prevented or brought under control within the shortest period of time and with minimum consequences. This means that the state has to be one step ahead of the possible risks and threats with prepared measures of prevention and elimination of the consequences of risk.

The floods have indicated towards the importance of preventive measures in case of extreme weather conditions, so as to provide a stable operation of energy system.