



If we produce sufficient quantity of coal of satisfactory quality which will be competitive in European's coal market, with economically justifiable price and if we raise the environmental standards every day.

As well as social responsibility, we can remain competitive energy source for electricity production, said Slobodan Mitrovic, Executive Director of Coal Production Technical Affairs in PE EPS, at the expert meeting "Coal – contested energy source" held last week, which, to mark miners', was organized by internet portal Balkanmagazin and PE Electric Power Industry of Serbia, under institutional auspices of the Ministry of Mining and Energy of the Republic of Serbia.

During the sanctions in the 1990s, later during the bombing in 1999, and recently during the floods one of the few, if not only system that has always functioned was the electricity production, by virtue of a stable, continuous and in all conditions reliable coal production. Coal provides the highest stability in electricity production, which is without competition (for our conditions), even compared to the big hydro power plants, and not to mention the energy obtained from the wind or Sun.

Besides that, the facts that 70 percent of electricity is generated by coal burning and that coal is unique strategic energy source and resource that Serbia have, bring into question louder calls to the public to reduce, or even in extreme cases to stop electricity production from coal due to greenhouse gas emission and effects on global climate changes. At the expert meeting "Coal – contested energy source" held last week, which, to mark miners' Day (August 6), was organized by internet portal Balkanmagazin and PE Electric Power Industry of Serbia, under institutional auspices of the Ministry of Mining and Energy of the Republic of Serbia, it was said that for around 25 terawatt hours of electricity (of 35 terawatt hours of electricity, which is annually production of EPS, in total) must dig 40 million tons of coal from 2 basins, 150 million cubic meters of overburden should be removed, and 52 million cubic meters of water should be pumped out. Behind all this stand around 13.000 employees in MB Kolubara and about 1.800 employees in OCM Kostolac. Our coal "poor" in sulfur

Slobodan Mitrovic, Executive Director of Coal Production Technical Affairs in PE EPS, emphasized that Serbia has already renounced 76 percent of its coal deposit in Kosovo and Metohija.

"Geological coal reserves in Serbia are about 16 billion tons in total, and we use 2,82 billion tons. If anyone in Europe has renounced of coal, that's us. Currently, we produce electricity from 17 percent of reserves, because 76 percent have remained in Kosovo, and the remaining 14 percent is located in Kolubara, 3,3 percent in Kostolac, 3,1 percent in Sjenica i



Stavlje and 1,4 percent in underground exploitations", said Mitrovic, adding that it should be worked on operational and organizationalefficiency improvement, because "we have the largest reserves in coal, and it's our major treasure. Our coal has a relatively low sulfur content, low stripping ratio and will constitute a significant potential in future, no matter how much we will work on green energy. We need support of all relevant Ministries, because this generation of mining is loaded like no other in Europe. There is a lot of liabilities that are still undone, and this generation is trying to catch up. Also, at the same time, we maintain production and we are trying to ensure the stability of the power balance. We are also preparing for the future, to meet the level of the highest environmental standards in coal production, as well as to increase the social responsibility."

Social responsibility is not only reflected in ecology, but also in new jobs creation. For example, 15.000 employees in mining department of EPS imply tree times more employees in the local energetic and construction machinery.

We have equipment that is 50 years old, but also equipment that we acquired during last 10 years. By 2000, we made efforts to survive, we fight for every ton, so we delayed with investments. After 2000, we recognized priorities, we put the energy sector as the first priority, and therefore investments in coal are deferred for later period. And a part of equipment purchased for mining and new mines have the productivity such as European ones. A part of equipment on mines, which is 40 years old cannot have that productivity", stated Mitrovic.

Undoubtedly, at least according to Mitrovic, coal will still remain an energy source for future generations, as it was in the past.

"We have to do all the time retaining sufficient quantities of coal of satisfactory quality. That is also what bothers this generation.", said Mitrovic, explaining that core of coal deposits are exploited, and now it is turn to exploit coal deposits of lower quality, due to the quality management will be important. Nowadays, we are implementing a project on western part of Kolubara basin, and we are preparing to do the same project on the eastern part. If we produce sufficient quantity of coal of satisfactory quality which will be competitive in European's coal market, with economically justifiable price and if we raise the environmental standards every day, as well as social responsibility, we can remain competitive energy source for electricity production in Serbia, which is important for achieving stability of power balance. I am sure that employees in mining sector will have responsibilities and the force to fulfill operational and organizational changes of process optimization."

Enough coal for next 70 years



According to current rate of coal consumption, this energy source can be stable raw material for electricity production in following 70 years. Branko Jevtic, Director for Sector of Process Development and Coal Production in PE EPS raises the question whether coal contestation is appropriate to our situation.

"We face with several tasks – to produce coal within several standards, primarily to provide stable electricity supply, which will be economically, and, within environmental standards. We should recall economic problems that Electric Power Industries of Yugoslavia and Serbia dealt with, economic sanctions, bombing, and, eventually, floods. We were stable electricity supplier, in all these conditions. Coal production supplied thermal power plants in every single minute, and it was out of question whether we could generate sufficient quantity of electricity. We are lucky to have coal with relatively good characteristics, primarily, due low quantity of Sulphur, which is extremely important for environmental standards", consider Jevtic.

According to his words, rumors on the reduction of electricity generation from coal are somewhat rhetorical – if we take into consideration trends in Europe.

"In one moment, sudden decrease in coal production has happened, but it stopped. Changing coal with renewable energy sources was the main reason. It has been stopped, even in richer countries, because someone has had to pay for that. By applying new technologies and purification, coal is no more black,", said Jevtic.

According to Jevtic's words, development goals of EPS' mine basins will be the permanent production, quality management, efficiency increase and ecology.

"We have stable production with present cast mines, but coal is non-renewable resource, so we should monitor its quantities. In Kostolac basin, with already known investments, we make conditions for annual production of 12 million tons of coal, and with power plant we have the entire cycle, including equipment that meets environmental criteria. In Kolubara basin, annual production of coal is 27 to 32 million tons, what provides us to influence on organization and reducing of laborcosts", pointed Jevtic.

As miners often point out, in constant pursuing of tons and cubic meter and fulfilment of quantitate tasks, we did not arrive to pay attention on coal's quality.

"We look like intervention brigade, we are asked only tons and cubic meters", explains Mitrovic. The Republic of Serbia has never enabled to EPS difference in price which will be sufficient for investment cycle, thus, it was neither time nor money for ecology and paying more attention to quality.

However, things little change – quality management system is introduced on the field Tamnava West, while asdocumentation for Drmno is ready and will be implemented the



following year. For the other part of Kolubara basin, documentation is currently prepared, and quality management system will be introduced there in two years.

Quality management actually means that will be less rejected coal, what is significant on the ecological side, because of coal's auto ignition. On the other side, power plants' operation is facilitated, because filtration and desulphurization systems can be installed to maximizethese effects.

By applying new technologies, environmental problems, noise problems, dust, re-cultivation will be solved; demoted areas are returned to the original function... Process automation and the introduction of production system also increase production profitability.

Coal is strategic raw material

"Coal is strategic raw material and we should certainly count on it, and everything else is debatable in the World and, much more, in our country. Coal does not like the one who does not have it, the one to whom is concurrence and the one who does not know to work with it. Besides wind park and solar plant is always standing thermal power plant, which will generate electricity when there is no wind or Sun", stated Jevtic.

EPS reached its maximum in coal production and technology application, up to 1990. According to Jevtic, the company is returning to these levels and the neighborsrecognize company again as someone who is familiar with mining, but also as someone who can make and apply technologies.

"We are trying to buy new technologies, but we still have good know-how in mining sector. Certainly, we are trying to learn new things as much as possible, because the most profitable investment is staff training. Loans are unavoidable but not preferred. When it comes to ecology, we have pre accession funds, which we will certainly use. As far as new technology, for example, we have the latest technology in Tamnava west field. We will modernize technology by using experiences from foreign countries. We tend to procure the latest equipment, and to modernize old equipment as much as we could. It is done through interchange of services and knowledge. All interested parties can come in our company and what we dispose with. I think that we regained our status in the neighborhood as someone who is familiar with mining but also with mechanical engineering, electrical engineering and all the rest", pointed out Jevtic.

Due to nature of mining job, especially coal digging, the relation between company and local community is always delicate and important. Once upon a time, there were mining rents that mines paid to the Community, but nowadays that method is abandoned. However, since 2008, PE Kostolac has started paying coal rent and environmental tax, and the city of Pozarevac has obtained 4,5 billion dinars in that period. According to Zoran Vukovic,



employed in Direction for coal production in EPS, there was an environmental fund and development fund, up to 2013, though which these funds should be placed into structure development and influence remediation in local communities in immediate surroundings of workers.

"Local communities received about 65 million dinars out of these 4,5 billion, up to 2016. Nowadays, we have situation that local self-government encourages frustration of local communities, and we have never had the worst communication with them", explained Vukovic.