

Damir Miljevic is the author of the analysis entitled "Coal and Thermal Power Plants - A Strategic Investment or a Waste of Money?", published by the Center for Environment in November 2016.

The analysis argues that the Energy Strategy of Republika Srpska is inaccurate and that its implementation will result in indirect losses in the amount EUR 745 million over the next 30 years.

It is stated that the strategy based on coal exploitation is in contradiction to international and European treaties and energy policies based on reduction of emissions and fight against climate change.

Electricity production in Republika Srpska is based on the use of coal energy and hydro power, while other energy sources are not present or are present in insignificant part. According to data from the State Institute of Statistics, more than half of the total net electricity generation is achieved by using coal.

In the period 2011 - 2015, production from thermal power plants was not constant and was subject to fluctuations, which was probably the result of technical-technological issues power plants were facing due to their age, technical deterioration and conditions for coal mining.

Total electricity consumption in Republika Srpska amounts 3,129 GWh, which is 54.34% of total net annual production. In the structure of consumption, household consumption dominates amounting to 1,697 GWh, while only 615 GWh per year is consumed by the industry.

This shows that Republika Srpska is self-sustainable in the field of electricity generation and that existing capacities can meet all current and future needs of economy and households in the next 15 to 20 years, even in case the industrial consumption is increased four times.

1,948 GWh of the total electricity production is being exported. The electricity export in the first place depend on hydro-meteorological conditions, as well as on technical preparation of power plants and coal quality. In the last two years, the amount of exported electricity decreased both in quantity and in value as a result of price decrease in the international market. Thus, the price of 3.97 euro cents per KWh in 2015 is by 13% lower than the price of 4.54 euro cent per KWh in 2012.

The production cost of electricity in thermal power plants in 2015 amounted to 4.61 euro cents per KWh, and the average price for the whole EPRS 3,80 euro cents per KWh, appearing that that the production of electricity for export is unprofitable in case of thermal power plants.

The production cost for hydropower plants amounts to 2.57 euro cents per KWh, which is

45% lower than the price of KWh from thermal power plants.

In addition to the fact that electricity is the most expensive when produced from coal, it has the most impact on the environment, it permanently destroys resources and space and causes pollution with the lasting consequences for the population.

Analysis of TPP Ugljevik operation on impact on health shows that indirect damage, expressed through illnesses, increased mortality and leave from work might cost Republika Srpska tens of millions of euros over the next 15 years. It can also be assumed that the other thermal power plant Gacko has a negative impact on human health.

According to the author, all above mentioned raises the question of sustainability of adopted Energy Strategy of Republika Srpska up to 2030.

TPP Ugljevik started its operations in 1985. Its installed capacity is 300 MW, and efficiency 31%.

In the period 2011 - 2015, thermal power plant records production decrease of around 5% as a result of technical-technological problems and outages.

In the last two years, TPP Ugljevik has been operating with significant losses, whose accumulated amount has reached nearly EUR 15.3 million.

In the reporting period, each produced GWh of electricity made the direct loss of EUR 203, while in 2015 the production of each GWh caused direct loss of EUR 5,345.

In order to avoid the shutdown of thermal power plant, the RS government approved TPP Ugljevik to get a loan of EUR 75.9 million for the desulphurization system. Solving environmental problems will increase unprofitable production of electricity in this plant. Investing in operational efficiency and revitalization of the Mine and TPP Ugljevik, which extends the lifetime of the thermal power plant for 15 years, will have a significant effect on the increase in the electricity price in RS, i.e. it will increase the cost of production in TPP Ugljevik by 18%.

TPP Gacko started its operation in 1983 and has an installed capacity of 300 MW. Through general overhauls and revitalization the lifetime extension of power plants is planned for at least 15 years. The percentage of efficiency is 30%.

It is not realistic to expect that the TPP Gacko will achieve the production of more than 1,700 GWh per year in the following period, with constant investment in the planned amount of EUR 28.6 million.

In the period 2011 - 2015 TPP Gacko had more loss than profit and the total accumulated losses amounted EUR 14.4 million.

In the reporting period, each produced GWh made the direct loss of EUR 1,859 while in 2015 the production of each GWh caused direct loss of unbelievable EUR 6,585.

Although the costs of TPP Gacko revitalization are significantly lower than the costs of revitalization of TPP Ugljevik, almost three times, further continuation of production will have almost identical consequences for people and the economy.

EFT Mine and TPP Stanari

The latest EFT TPP Stanari in RS started trial operation in October this year. Thermal power plant capacity is 300 MW. Applied technology should meet all the environmental regulations imposed by the European directives that are in force in Bosnia and Herzegovina. Cost-benefit analysis shows that in the next 30 years the investor will pay off its investment and make a profit. Investment is also profitable for the workers who will work in the power plant as well as for the financiers. It is only not profitable for the Republika Srpska because the social benefits from investment are far less than the social costs and used resources.

Conclusions and Recommendations

Due to change of electricity price, export of electricity produced from renewable energy sources is the only one which is profitable.

Existing power plants operate with losses, forcing domestic consumers to pay more expensive electricity.

Extending the lifetime of thermal power plants and necessary investments related to rehabilitation and compliance with environmental regulations will make the operation of these additional capacities even less profitable, which will have to be compensated by the increase of the electricity price in domestic market of at least 15%.

It is necessary to rationalize production costs in the existing thermal power plants, primarily costs of labour, given that in total expenditure they are accounted for almost 50%.

Promote energy efficiency increase.

Increase the concession fee and fee for the use of natural resources for all producers of electricity from coal.

Abolish the concession for the construction of Ugljevik 3.

Consider the option of keeping and reconstructing only one thermal power plant, Ugljevik, which already has secured funding.