

## **Climate change and energy in the Balkans**

Reducing fossil fuel use and CO<sub>2</sub> emissions into the atmosphere is imperative to curb global warming and related climate change. However, Western Balkan countries are planning to build new thermal power plants.

The relation between the global warming of the planet and the negative effects of climate change has long been a scientifically valid fact. The transition from fossil fuels to renewable energy (RES) is being imposed as a necessity to stop the process of global warming of the planet. The stumbling block and the main reason for underinvestment in RES development have so far been the costly cost of producing energy compared to cheaper fossil resources. However, a new report from the International Renewable Energy Agency (IRENA) suggests that by 2020, things will change radically. The report predicts that RES costs will at least equate to fossil fuels or even be less.

According to IRENA, electricity costs from fossil fuels today are \$ 0.05 to \$ 0.17 per KWh in the G20. By 2020, it should be \$ 0.03-0.1 per KWh in the solar and wind energy sectors. If that really happens, there will be no justification for preferring fossil fuels. Of course, if we do not take into account the interests of the fossil fuel industry and the operation of their lobbies, they will certainly strive to slow down the energy transition process.

### **Losses due to inefficiency**

Most Western Balkan countries are electricity importers because their capacities do not meet domestic needs. A large proportion of imports is due to the high percentage of losses in the distribution system.

Kosovo and Albania top the list with a total of 32 percent of electricity loss, followed by Montenegro with 18 percent and North Macedonia with 15 percent, followed by Serbia with 14 percent and Bosnia and Herzegovina with a dozen percent of losses. The total amount of energy lost in the system is about 10.12 GWh, which is almost twice the expected amount of energy from all new thermal power plants under construction.

In terms of energy efficiency, the countries of the Western Balkans spend on average about three times more energy than EU countries, partly because of outdated energy infrastructure and partly because of the energy inefficient structure of industry and uninsulated households.

The energy strategies of the Balkan countries do not take energy waste seriously. Instead of elegant and less expensive solutions, the expansion of dirty technologies is being imposed. While developed advanced countries are slowly “emerging” from the use of fossil fuels,

countries in the Balkans seem to be doing just the opposite.

An item that fundamentally changes the justification for investing in fossil energy is the cost of carbon dioxide emissions. All trends show that the cost of emissions will increase year by year at an extraordinary rate. The current price of one tonne of CO<sub>2</sub> on the European market is around 20 euros. Since last year alone, the price of emissions has increased by as much as 176 percent.

According to the scientists, the approximate cost to curb the planet's warming to 1.5 degrees is \$ 40 to \$ 80 per ton. Therefore, a further rise in the price of emissions is expected.

### **The Balkans “locked” in coal**

The planned thermal power plants in the six Western Balkan countries are estimated to produce about 23,867,292 tonnes of CO<sub>2</sub> annually, according to feasibility studies. If we take the current price per tonne of 20 euros, the cost of emissions for the planned thermal power plants will be almost half a billion euros annually. Therefore, it can be assumed that planned thermal power plants will bring higher costs than benefits in the near future.

On the other hand, IRENA's report on the potential of renewable energy in Southeast Europe shows that the region has a capacity of 723 GW in renewable energy sources, of which 532 GW is wind energy and 120 GW in solar energy, that is, there is more than sufficient potential for RES to meet the overall energy demand of SEE countries. An analysis by the World Economic Forum already shows that solar energy is twice as cheap as coal. However, instead of an energy turn, the inhabitants of the Balkan countries are very likely waiting for the process of the so-called “Coal locks”. This term refers to the further development of infrastructure that relies on the use of fossil fuels. The results of such a strategy in the future carry with them more expensive electricity and endangered human and environmental health.

According to numerous analyzes, the Western Balkans is highly exposed to climate change. Estimates say that in the territory of Serbia alone, the damage caused by climate change so far amounted to about 5 billion euros between 2000 and 2014.

### **What is at stake?**

The results of a study on climate change in the Western Balkans indicate that temperatures here are rising faster than the global average. The consequence is increased frequency and duration of heatstroke, which will result in more frequent droughts and fires. Agricultural production will suffer a great deal of damage, in the form of declining yields and declining

quality.

On the other hand, water resources and their natural regimes of regulation are endangered. Due to more frequent and longer periods of heat stroke, the mortality rate and new forms of the disease are rising.

According to some estimates, the total health costs caused by air pollution from thermal power plants in the five countries of the Western Balkans are up to € 8.5 billion annually. Thermal power plants in the region emit 13 times more sulfur dioxide and 30 times more particulate matter, which are proven to cause heart and respiratory diseases.

An important consideration when designing an energy strategy should be the external costs that a particular project entails. However, health costs arising from air pollution from thermal power plants appear to be below the radar of on-call decision makers.

The effects of climate change manifest over a long period, making it difficult to perceive them directly. In addition, the consequences of CO<sub>2</sub> emissions are cumulative. Total accumulation is what raises the temperature and the more it is discharged, the less likely it is that the current temperature rise will be curtailed.

The method of pushing under the carpet, which is often practiced in the region, in the case of climate change, will not work. The effects of climate change have already become a “tangible” reality. The time for change is less and the stakes are increasing.

Source: Climate and energy transition of the Balkans