



Market circumstances are pushing TPP Plomin out of the Croatian energy mix harder than ever before. With today's coal prices and emissions, it makes no sense to talk about profitable production in Plomin Bay, even in HEP's excellent energy mix. The lack of base energy will have to be continuously compensated by the import of increasingly expensive electricity, which will eventually spill over into the economy.

In early July, the Croatian government announced that it was joining the International Coal-Free Energy Alliance, a group of 122 countries, cities, regions and organizations seeking to accelerate the transition to fossil-fuel-free energy production.

Proverbially uninterested in energy, the state did not announce the closing date of the only active coal-fired power plant in the country, TPP Plomin 2, which has a permit to operate until 2040.

Is it even necessary to talk about a formal Croatian "exit from coal", when the only "coal miner" works less and less anyway due to the increasing cost of production? It seems that market circumstances will very quickly eliminate it from the production mix, which is by no means good news for Croatian energy.

With an average production of about 1.5 TWh per year, which is about 10% of annual needs, this power plant next to NPP Krško has always been a solid rock in the foundations that are now dangerously shaky.

A number of circumstances conspired against HEP's coal-fired power plant. The price of coal delivered to Rotterdam rose to 130 USD / t, the highest level in the past decade, which was driven by floods in Indonesia and Australia, the closure of mines in Colombia and increased demand in Asia.

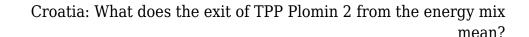
According to the estimates of Trading Economics, it is expected that coal will be traded at as much as 143~USD / t by the end of the quarter, while further price growth is estimated at 165~USD / t within a year.

A big burden on the production of electricity from coal in Europe are the prices of emission units, which have risen to almost 58 EUR / t CO2. It should be calculated that in the average year, TPP Plomin 2 delivers more than one million emission units per year to the system, while it contributes 6% to total emissions.

## **Brokerage with ETS permits**

Unlike Poland, which consumes domestic lignite, hard coal for TPP Plomin is fully imported. With the current prices, the production of electricity in TPP Plomin 2 exceeds 50 EUR / MWh, to which the cost of emission permits has yet to be added.

Last year, HEP had permits that it bought in 2019, when their price was below 20 EUR / t, and this year TPP Plomin 2 is working with permits from 2020 with a price between 25-30





EUR / t, which is already took its toll.

It is not known how much Plomin worked this year, because such data cannot be obtained anywhere. New players have entered the ETS licensing market and increased market volatility through speculative games, a trend that will continue in the coming years. Analysts predict that carbon dioxide prices could rise to 90 EUR / t CO2 by the end of the decade, with a tendency for significantly fewer permits on the market, which is why energy companies are keeping their ETS loans.

However, Croatia is selling its surpluses again and calculates that it will earn from three to five billion kuna (euros) on them, and with that money it will support HROTE's allocations for incentives for renewable sources and energy transition.

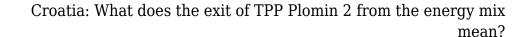
The rest goes to the Environmental Protection and Energy Efficiency Fund, and since we know the Fund spends heavily, it's not certain whether to look forward to it. Already with today's prices of coal and emissions and the current projection of the European Commission of 48 EUR / t until 2030 for ETS quotas, the time has come that there is no sense in talking about profitable production in Plomin Bay.

It turns out that we should be grateful that the state did not force HEP on the expensive project of TPP Plomin 3, which would be profitable only with a significantly lower price of coal and ETS permits up to a maximum of 30 EUR / t. If HEP had entered the project, today we would probably be talking about its privatization, and not about the energy transition that the electric power industry is trying to implement with a large number of green-colored projects.

## The issue of national security

Renewables are "kosher", no one disputes that, but one should ask what the absence of production from Plomin will mean for Croatian energy, because it is base energy that will otherwise have to be covered by imports, and prices on stock exchanges are increasing. The price at HUPX for July is at 95 EUR / MWh, and in 2019 it was at 55 EUR / MWh. And Croatia remains the largest net importer of electricity in the EU.

More precisely: "For 2019, related to the availability of power plants, HOPS has gathered information that a significant part of the total production capacity, primarily thermal power plants, cannot be used in the case of short-term energy needs. Comparing the available transmission and production capacities with the average hourly loads of the transmission system, the sufficiency of production and import capacities for providing the necessary quantities of electricity to end customers is visible. However, hydrological conditions in certain parts of the year, as well as the unavailability and price uncompetitiveness of thermal power plants, caused high imports into the Croatian power system. In some





operating situations, the availability of electricity, looking exclusively at the Croatian power system, was not satisfactory", reads the annual report of HOPS, which should be on the table of the National Security Council because it is an extremely important economic issue.

## **Electricity prices**

The high price of electricity will be stimulating in the long run only for the further growth of renewables, which have their limitations. Production from natural gas, whose futures are around 35 EUR / MWh on TTF for this year, and coal, will suffer from increasingly expensive ETS permits, pushing energy prices into the sky in the coming years, generating an economic crisis.

In an environment of heightened pandemic and climate change, is it finally time for policymakers to thoroughly question the security of electricity supply? The same electricity on which the entire future of the economy and civilization is based, if we listen to Brussels? The line minister, who easily concludes that getting out of coal is not a problem, and his boss, should certainly deal with the direction and pace at which (some believe – degenerates) Croatian energy. The public should be told how much the energy transition costs and that they will pay for the electrification of the society with a high price of energy. This element is finally slowly introduced into the equation. The European Commission's consultative document, which is pushing the "55% ready" energy package, states that carbon dioxide prices from fossil fuels should be passed on to final consumers, often mentioning energy poverty and the consequent high rise in prices of goods and services. The direction of energy in the EU is unusual when looking at the broader picture of the impact on climate change, but it is clear, it only needs to be pushed through the European Parliament and the member states. Undoubtedly, with success.

Source: energetika-net.com