

In extreme situations, pollution can be very deadly. Thus, during the Great London Smog, which lasted only 5 days, 12,000 people died. In Serbia, during 2017, almost 10,000 people died as a result of polluted air. Air pollution becomes especially important during the Kovid-19 pandemic when people with respiratory problems are at risk. Pollution levels in Serbia during the heating season are dangerous to human health. Unfortunately, the Government and President Vucic do not see this as an important problem, nor do they seem to understand its causes. Thus, at the beginning of the year, the president stated that "the air is worse the higher our standard is". Which is exactly wrong because the biggest pollution is created by the cheapest heating sources for households.

This, as in previous winters, the public in Serbia is upset due to the very high air pollution caused by the burning of harmful and prohibited substances, such as raw lignite and tailings with a high percentage of clay. They are significantly more harmful than ordinary coal, which was predominantly burned before the disintegration of the SFRY, as Vigor Majic, the director of research center Petnica, explains.

The ban would mean that the government would ban (and effectively enforce that ban) the excavation and trade of tailings, which would lead consumers to use more expensive and environmentally friendly forms of heating. The problem with bans is that in a situation where you are banning goods that are in high demand, people have an incentive to illegally procure those goods and offer them to many customers. It is therefore difficult for bans to abolish the trade in any goods other than perhaps nuclear weapons. Good examples are the drug trade anywhere in the world or the attempt at prohibition in the United States a hundred years ago. Prohibitions on the production and trade of some goods in principle move these activities from legal to illegal flows.

Taxation would mean that the government would increase sales taxes on heating energy sources that lead to pollution. If tailings and crude lignite heating became more expensive than alternative heating due to the increased tax, people would adapt and start using heating types that have now become relatively cheaper, while doing less damage to the environment. This proposal also faces two problems. The first concerns the possibility of successful taxation. If the government does not strictly control the mines and the amount of excavated lignite and tailings, as well as the subsequent sale and distribution, these pollutants could be found in household furnaces again through illegal flows, and the problem would not be solved. Moreover, a half-implemented measure would lead to pollution remaining the same and tax revenues declining due to illegal trade. We come to the second problem if the government successfully overcomes the first problem. Namely, many alternative types of heating also require costs for changing radiators. If households



switch to district heating, electric heating, or pellets, it is necessary to buy and install installations for that type of heating. That investment would include the connection to a heating or gas pipeline, the purchase of radiators and ancillary installations, or the purchase of radiators that use electricity or pellets. Each of these investments represents a large cost for the average household in Serbia, whose financing must be planned in advance if it is financially feasible at all. Households that would not be eligible for such costs would try to procure old energy sources again, preferably at old prices, which would undermine the government's efforts to solve the problem of pollution caused by the combustion of pollutants such as lignite and tailings through taxation.

With subsidies, the government can encourage households to switch to cleaner heating by financially helping households to bear the high initial costs of replacing radiators. This practice is widespread in the countries of the European Union and China. Governments and local governments are allocating funds to help people install environmentally cleaner and more energy efficient home heating systems. While in Serbia we are not even trying to reach the environmental standards that existed in the SFRY, the world is making great strides.

There are also serious studies in the world on the economic viability of such solutions. For example, professors Liu and Mauzeral from Princeton University analyze the economic costs of the mentioned program of the Chinese government in the region around Beijing. The aim of their research is to compare the total costs on an annual basis, for each of the offered options. The total costs include the costs on an annual basis for the heating body and for the consumed energy sources. Thus, they conclude that without subsidies, refined coal-fired furnaces are the most favorable. Their annual costs are twice as high as those incurred when using ordinary coal. The costs for electric and gas heaters are three to five times higher. For this reason, it is very important that households receive subsidies to be able to bear this cost increase. It should be borne in mind that in Serbia this difference would be even greater, because lignite, and especially tailings, are cheaper than ordinary coal. In the case of subsidies, the annual costs depend on the amount that the authorities are willing to offer. In the mentioned study, the authors state that in all researched districts, the subsidies were such that it paid off the most for households to use the mentioned improved coal-fired stoves. The exception is Beijing, whose generous subsidies have led to inverter air conditioners becoming the most favorable type of heating, which are also the most energyefficient option on offer. Additionally, inverter air conditioners pay off more in larger households. It is also possible to reduce heating costs by investing in the external insulation of households.



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