

In the book “Fossil Capital”, Andreas Malm shows in a pictorial way how the history and development of the use of fossil fuels are closely connected with the development of the capitalist system of production. Namely, when the use of a steam engine on coal started in Great Britain, the energy obtained from this energy source was not cheaper than the energy obtained from the mills.

Beginning with the industrial revolution, and especially in the period after the Second World War, fossil fuels became the driving force of modern society. Despite the benefits that fossil fuels have brought, there is no unlimited amount of oil, coal and gas, and the current way of using them is unsustainable and significantly affects human health and climate change. The use of fossil fuels is the main cause of the increase in the concentration of greenhouse gases in the atmosphere, which causes climate change. Energy derived from biomass, sun, wind and water has driven human societies for centuries. Despite the fact that today it is difficult to imagine life without the use of fossil fuels, they are, in fact, used in the entire history of mankind only in the last two hundred years.

Although energy obtained from water was cheaper for those who owned capital, in the long run it was much more profitable to invest in fossil fuels. Instead of locating their factories by the rivers, where they would have to provide workers with housing and other services, the coal-fired steam engine brought them the kind of mobility that factories could build in cities where there were many unemployed, forced to compete for jobs with minimum fees. Child labor with shifts longer than twelve hours was also frequent.

This mobility brought them less risk from strikes and other potential natural and social blockades, which were possible on the rivers. These irresistible “advantages” of coal, and later oil, have led to the fact that to this day significantly more is invested in infrastructure for the use of fossil fuels than renewable energy sources.

Despite this subsidized difference between fossil fuels and renewable energy sources, which at one point made it more economically viable to exploit coal and oil than wind and sun, this decade has brought us a significant reduction in the price of obtaining energy from renewable sources. As the peak of oil production passes, and coal continues to show its deadly effects, the price of energy obtained from fossil fuels continues to rise, while the involvement of the European Union and, above all, China in the development of equipment for solar and wind energy production from renewable sources falls daily.

The costs of production from some renewable sources have almost equaled the costs of energy production from fossil fuels and are expected to exceed them in the coming years. In addition, the “invisible” costs, such as the health consequences of pollution and environmental degradation, behind the production of energy from fossil fuels are far higher

than the same costs when it comes to renewable energy sources.

Fossil fuels and food production

Modern industrial agricultural production is closely related to fossil fuels, primarily oil. Fossil fuels are used in every aspect, from production to distribution and storage of food. The so-called “Green Revolution”, or the Third Agricultural Revolution, led to an increase in food production, at the expense of increasing the use of fossil fuels.

In the industrial food chain, the first step, the production of seeds (whether GMO or not), requires the use of energy obtained from fossil fuels. That seed is then distributed to the fields where it will be planted, which requires oil in order for the transport to run smoothly. Tillage, planting and other agro-technical measures require mechanization, which uses fossil fuels. Oil is the main fuel of combine harvesters used to pick ripe fruits. Fossil fuels are also necessary for the production and transport of agrochemicals to agricultural areas. Processing of agricultural products, as well as the transport of semi-finished and final products to markets and consumers require fossil fuels for transport. It often happens that food produced in one part of the world is consumed in a completely different part of the world, which requires a lot of energy.

The success of the Green Revolution in increasing food production faster than the population during the second half of the twentieth century depended on the multiple development of plant genetics, expanded and increased use of fertilizers, growth of irrigated land, machinery, herbicides and pesticides, all based on oil (Smedshaug, 2010). Many innovations depended on low energy costs, especially oil. Cheap energy has led to the intensification and industrialization of agriculture, especially in developed countries, with capital and fossil fuels yielding very high profits with very low human work (Pimentel, 2008). The social consequence of this was the disruption of agricultural communities and migration to cities, where unemployment was a common outcome.

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