

Serbia is ranked third among the Energy Community countries when it comes to the emission of greenhouse effect gases. It consumes 2.7 times more energy per unit of product compared to the average of the OECD countries. Serbia has the greatest participation of coal in comparison with other Energy Community countries. Two thirds of electricity are generated from coal. The rest of production is achieved by hydro power plants and one percent by gas-fueled CHP plants.

The Serbian capacities of 3.935 MW are organized in three state-controlled regional entities - Nikola Tesla, Kostolac and Panonske Thermal Power Plants. Oil production has doubled in the previous ten years, whereas the production of gas has been considerably replaced with importing. Serbia's dependence on gas, imported from Russia, through Ukraine and Hungary, reaches 80 percent, which makes it extremely vulnerable to price shocks and jeopardizes the security of supply. The oil company NIS is co-owned by the Russian company Gazprom Neft (65.5 %) and the Serbian Government.

The Government has announced that, by 2025, they would close down outdated thermal power plants and build several new coal-fired power plants: Nikola Tesla B3 and Kolubara B (2×750 MW), New Kovin (2×350 MW), Štavalj (300 MW) and Kostolac B3 (350 MW).

By 2020, Serbia is planning to invest more than 3.8 billion euros in coal-fired thermal power plants, 3.8 billion euros in large hydro power plants and 0.6 billion euros in renewable resources.

In 2011, the share of renewable resources in the overall consumption amounted to 17.8 percent, mostly from large hydro power plants - Đerdap and Drinsko-Limske HPPs. The Government is planning to upgrade the existing hydro power plants and to construct several new - Great Morava (150 MW), Ibar (103 MW), Upper Drina (250 MW), Middle Drina (320 MW), the Pumped Storage HPP Bistrica (680 MW) and the Pumped Storage HPP Đerdap 3 (600 MW).

In September 2014, a solar power plant started operating in Beočin. The investment is worth 2 million euros, of which 1.4 million euros were provided through a loan from Erste bank.

The use of renewable energy resources must be increased to 27 percent in final consumption, which is an obligation under the Treaty Establishing Energy Community. The investments could activate the potential of 4.3 Mtoe. Of this, biomass accounts for 2.7 MtoE; hydro potential for 0.6; geothermal resources for 0.2; wind for 0.2 and solar energy for 0.6 Mtoe.

Energy consumption per capita is four times bigger than in Germany, with losses in the electric power system reaching even up to one fifth of the final consumption. In October 2013, Serbia adopted the second National Energy Efficiency Plan so as to fulfil the obligations under the Treaty Establishing Energy Community. The aim is to reduce the final consumption by 9 percent by 2018. So far, the Government has only been analyzing the

savings potential in buildings and implemented the training program for energy efficiency experts. As reported by GIZ, private and public support measures are not well coordinated. In 2012, the total emission of CO₂ amounted to 25.806.330 tons. Serbia is planning to construct 2.85 GW of additional coal-fired capacities. The construction costs have been estimated at 6.7 billion euros, to which 419 million euros should be added annually for the costs of carbon-dioxide. The modernization and replacement of old plants in accordance with the provisions of the Industrial Emissions Directive requires the investments of 2.7 billion euros by 2018.

In the report, it is concluded that Serbia has a large potential for the development of renewable resources, and that further investments should be aimed in this direction, considering the future EU membership. 2.5 billion euros would be saved by replacing the planned new coal-fired plants with renewable resources. Serbia imports one half of energy and with the steady trend of consumption increase, it has to solve the energy efficiency problem urgently, through a better coordination of policies and activities, a significant financial support and coherence between private and public investments. Electricity losses amount to 215 million euros annually.