

The role of wind power plants in electricity production in Serbia is still at the beginning, but renewable energy and wind power are becoming more interesting topics. It is because the energy crisis and climate change, and Serbia demonstrate the need to increase their share in the total balance of electricity production. Design and operation of wind power plants is a relatively new and unknown field in the professional and general public of Serbia and therefore a multitude of auxiliary aspects not precisely regulated by laws or engineering practice.

The production of electricity from wind power plants contributes to reducing carbon dioxide emissions, but requires an assessment of different environmental impacts. Especially relating to the protection of birds and bats, noise produced by wind turbines generating units. Reducing emissions of carbon dioxide can be of significant value if installed capacities reach a respectable value. Prevention of minimizing negative impacts on the environment, especially on the fauna and residential zones, demands the implementation of feasibility analysis. The goal is to identify potential conflicts that would then be followed by field analysis and monitoring of existing species of birds and bats and their habitats, as well as software simulation of the expected noise level. During this process, it is necessary to comply with legislative regulations and good practice examples, and it is to be engaged staff with proven experience. The results are used to optimize the designed solution that would, in the final design solution, should have satisfactory production characteristics, and that the least negative impact on the environment.

Correct and analytical approach can avoid mistakes which would lead to reductions of production and use of compromise solutions which comprise the compliance of complex parameters obtained from research works and existing software tools.