

The usage of solar energy, geothermal, and wind energy is reliable and environmentally friendly, but the installation of solar panels or wind turbines is not universal due to the need for a large area of open surfaces, and high cost. To solve this problem, I decided to install sources of alternative energy on trees and get energy from the fluctuations of tree branches. Thus, during the study, I put forward a hypothesis: tree branches under the action of wind create mechanical fluctuations, which can be converted into an electric current based on the phenomenon of electromagnetic induction. The aim of the project is to create a device that would convert the mechanical fluctuations of tree branches during the action of wind into an electric current that can be used to illuminate roads, charge phones, or create a remote forest monitoring system, for industrial purposes. Therefore, for the first time, a model of tree-generator was created, which reaches the capacity of 0.03 kW and costs about 35\$. In which the phenomenon of electromagnetic induction (electromagnetic generators) is used. We obtained a patent №144866 “Stationary autonomous electric lighting system” for this utility model, the date of which is valid - 27.10.2020.