

## ABSTRACT

*The increase in electricity demand in Indonesia is currently inversely proportional to the available power generation sources. At present, the government is intensifying the creation of renewable energy power plants to replace power plants that use petroleum fuels and coal. In 2025, the government targets 23% of electricity generation in Indonesia must come from renewable energy power plants [1]. The results of the new power plant will be distributed to areas that have not yet been accessed by electricity. Later the electricity is expected to help community activities, especially at night.*

*One of the power plants that is intensively built is solar power plants. For big cities, the government urges and invites people to use home-scale solar panels with an off grid system to help reduce air pollution from plants used by the government that still use coal and petroleum fuels. However, people are still too ordinary with this solar power plant. What the public knows is that to generate electricity from this solar power plant requires a very large initial cost.*

*From the problem above, here I made a calculator that can be used to estimate how much energy must be generated by solar panels and how much it costs to produce electricity. From this thesis, the authors hope that people can start switching to using electrical energy derived from solar or photovoltaic panels and can also answer questions from the public that to generate electricity from solar panels is not required to be too expensive.*

*Keywords: photovoltaic, renewable energy*