

## **ABSTRACT**

During this time in Indonesia, the processing of the remnants of the good garbage in the form of plastic, leaves, and rubbish originating from wood sawdust is only allowed to pile up just like that and burn the pile of garbage causing air pollution. In addition to the problem of waste processing, Indonesia is also experiencing a crisis of energy sources whose availability has declined from year to year and there is currently no alternative energy source that can replace existing energy sources. So the purpose of this research is to utilize the remnants of waste into pellet materials and utilize these materials as renewable energy sources. Where the use of pellets into energy sources must go through several stages, namely the gasification process that occurs in the Gasifier Reactor and the process of conversion into electricity in the Genset Engine (Generator).

**Keywords:** pellets, sawdust, gasifier reactor, generator engine, gasification