

**DESIGN ANALYSIS OF THREE SUDU VORTEX SAVONIUS
TURBINE FOR WATER POWER PLANT**

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ABSTRACT

Hydroelectric power (PLTA) is a plant that relies on the potential and kinetic energy from water to produce electrical energy. The Savonius rotor works because of the different forces between each blade. This rotor can be utilized in river flow at a speed without having to take up a lot of space and this rotor is able to obtain a fairly high power coefficient in water flow. The Savonius rotor consists of three main parts, namely: plate, shaft and blade. Direct current generators have basic components which are generally almost the same as components of other electrical machines. Broadly speaking, a direct current generator is a means of converting mechanical energy in the form of rotation into direct current electrical energy. Mechanical energy is used to rotate the coil of conductor in a magnetic field.

Keywords – hydropower, Vortex Savonius Turbine, and Generator