

***Analysis of Water Needs of Enhancers for Cooling Towers in The Pilot Project  
of Processing Waste Into Electrical Energy in Bantargebang, Bekasi***

Mochammad Nuruddin as supervisor

**M. Mirfanu Ishak**

Renewable Energy Engineering Study Program

Engineering Department

Jember State Polytechnic

[m.mirfanuishak@gmail.com](mailto:m.mirfanuishak@gmail.com)

**ABSTRACT**

*Cooling towers are equipment needed in an industry or power plant to supply cooling water. Cold water is initially hot water that has carried out the udap condensation process in the condenser, then lowered its temperature in the cooling tower using air media. The water cooling process in the cooling tower causes partial water loss due to several factors, namely evaporation loss, drift loss and blowdown. The research conducted on May 24 and June 4-6, 2022 obtained results, namely the average water loss based on each factor, including evaporation loss of 37.88 m<sup>3</sup>/hour, drift loss of 9.58 m<sup>3</sup>/hour and blowdown of 0.889 m<sup>3</sup>/hour, so that the makeup water required by cooling tower has an average of 48.4 m<sup>3</sup>/hour. The effectiveness of the resulting cooling tower has an average of 81.8%.*

**Keywords:** *cooling tower, makeup water and effectiveness*