

THE ENERGY ALTERNATIVE POTENTIALS IN CIANJUR-SUKABUMI AND KUNINGAN AREA, WEST JAVA, INDONESIA

Emi Sukiyah, Ildrem Syafri, Nana Sulaksana and Adjat Sudradjat
Faculty of Geology, Padjadjaran University

ABSTRACT

The energy generation in West Java is based mainly on the combustion of hydrocarbon. Some important dams were already built, however due to the spatial problem competing with the population, the construction of new dams are not feasible. Therefore the small scale damless hydroelectric generations might contribute to the energy needs and reduce the dependancy on the energy generated from hydrocarbon.

The geomorphologic condition of West Java is favourable for small scale hydropower generation. Medial axis uplifting of the island has provided the differential elevations producing the heads for the power generations. The geomorphologic cataracs resulted from the altenation of pyroclastics and lava flows enhance the development of the heads.

Cianjur and Kuningan areas representing south and north of West Java, were taken as samples to investigate the small scale hydropower potentials. The result shows that as many as 42 locations with the total heads of 1,792 meters were inventorized. The total differential elevations of the heads might yield approximately 19,340 Watts. The area covered by the potentials was estimated to be 8,700 km² with more than 20 rural growth centers.

Keywords: small scale damless alternative energy, geomorphologic condition, south and north West Java, rural growth centers.

INTRODUCTION

West Java is located in western portion of Java Island. It surrounds Jakarta, the capital city of Indonesia which is also the center of economic activities. The industrial zones flock in the vicinity of Jakarta due to the comfortable infrastructure. Energy is the most important element to run the manufacture which is easily available in the area. On the other hand the industry has drawn the labours from entirely parts of the country, particularly from Java island to settle down in the western part of Java. The population of