

An AHP Based Approach for Evaluating Renewable Energy Source for Investment Decision

Abstract— The percentage of the population remaining to get connected to electricity has decreased from 35 % to 4.5 % in this decade. However, 1.3 million out of 29 million Nepal's population still need to be connected to an electricity supply. As most of this population lives in Karnali State, exploitation of renewable energy needs serious attention in this region as other energy sources are expensive and beyond reach. Choosing a suitable renewable energy technology that is economically feasible and environmentally acceptable is a topic of interest among researchers. Using one of the Decision Support systems helps in making easier choice for policy makers and government levels. In this case the research here-within evaluates among three renewable energy options, i.e., Micro-hydro, Solar Power and Wind power. The research shows that Micro-hydro would be best suited option in case of Jumla.

Keywords—AHP, renewable energy, decision making