

Biomass Energy in Asia:
A Study of Selected Technologies and Policy Options in the Philippines

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ABSTRACT

The biomass project under ARRPEEC-II in the Philippines assessed the surplus land available for biomass production to be from 0.66 to 1.94 Mha in 2010 under different scenarios. The annual energy potential of plantation biomass was estimated to be from 56 to 306 PJ. For non-plantation biomass resources, estimated total energy potential for years 1997, 2005 and 2010 are 561, 658 and 779 PJ, respectively. GHG abatement costs through substitution of fossil fuel systems by modern/improved biomass energy systems were estimated. Substitution of oil-fired combined cycle power plant by rice husk-fired power plant proved attractive with a saving of 28 US\$ per tonne of carbon dioxide equivalent (CO_{2e}) abated, while substituting an LPG stove by a biogas-fired stove was estimated an abatement cost of US\$ 118 per tonne of CO_{2e}.

Barriers to the deployment of improved cookstoves and biogas technology were identified and ranked based on a survey participated by relevant stakeholders. The Analytical Hierarchy Process (AHP) was adopted for barrier ranking. High initial cost and lack of local availability of high performance devices are the main barriers to the deployment of improved cookstoves. Lack of access to information and high adoption/transaction cost are the main barriers to deployment of biogas technology in the Philippines.