

Project Summary

Project Background

Energy demand in the PRC, especially for electricity, has grown dramatically in line with the rapid economic development. The PRC Government has been quick to meet such increased energy demands through a rapid increase in fossil fuel extraction and exploitation, principally with the installation of coal-fired power stations and increased imports of oil. Increasing contributions from viable sources of renewable energy are being sought as a one of the key components in realigning the PRC's future along a path of genuine sustainable development.

Project Objectives

The overall objective was to increase the proportion of power generated from biomass-derived sources in the province of Heilongjiang while improving the environmental conditions and livelihood opportunities in rural areas. Immediate objectives were:

- Technical, financial and institutional barriers and lessons learned regarding biomass resource utilization for power generation in rural China;
- Technical studies of; (a) market analysis of biomass feedstock for power generation; and (b) cellulosic ethanol technologies;
- Biomass Power Generation (BPG) strategy for Heilongjiang, optimizing the social, economic and environmental benefits;
- Targeted capacity building and best practice dissemination campaign related to advanced BPG to enable the PRC to develop additional BPG projects nationwide.

Project Activities

- Determine and report on barriers and Lessons Learned: key barriers and constraints identified were expected to include: current capacity and experience of biomass conversion equipment manufacturing in PRC; insufficient characterization of agriculture production and biomass feedstock availability in the target provinces to enable understanding of the resources quantities and geographical distributions; lack of long term biomass supply contracts to secure the stable supply of biomass resources for BPG; weak financial and investment incentives; uncooperative institutional arrangements; and de-coupling of renewable energy with the wider carbon market.
- Biomass Power Plant Technical Studies analyzed key technological barriers to biomass power generation development. Technological advances were evaluated to cover two aspects of biomass renewable energy technologies and strategies: biomass feedstock resource collection, delivery and market management; and cellulosic ethanol conversion. Results identified commercial and near commercial technologies for biomass resource collection, utilization and power generation on offer along with the equivalent for cellulosic ethanol.
- Provincial BPG Strategy: Coordinated assessments of biomass resource availability, utilization and provincial-level management allowed for the development of a rationalized short, medium and long term strategy for BPG in Heilongjiang.
- Capacity Building and Output Dissemination.

Services Provided

- Analysis of key barriers and constraints
- Biomass power plant technical studies
- Preparation of a provincial biomass power generation strategy
- Capacity Building

PR China

Development of Biomass Power Generation in Rural Areas

Client

Asian Development Bank (ADB)

Duration

06/2008 - 11/2009

Personnel

- 5 internat. STE (5 PM):
 - biomass power generation expert
 - biomass feedstock market analyst
 - biomass resource assessment specialist
- 38 PM pool of national STE

