



Draft Design and Monitoring Framework

Project Number: 42182
January 2009

Proposed Loan and Technical Assistance Grant Socialist Republic of Viet Nam: Renewable Energy for Remote Communes Sector Project

A design and monitoring framework is an active document, progressively updated and revised as necessary, particularly following any changes in project design and implementation. In accordance with ADB's public communications policy (2005), it is disclosed before appraisal of the project or program. This draft framework may change during processing of the project or program, and the revised version will be disclosed as an appendix to the report and recommendation of the President.

Asian Development Bank

DESIGN AND MONITORING FRAMEWORK

Design Summary	Performance Targets/Indicators	Data Sources/Reporting Mechanisms	Assumptions and Risks
<p>Impact Promoting pro-poor and balanced economic development of remote mountainous communes and poor communes through the sustainable use of electricity and renewable energy in an affordable manner.</p>	<p>Over 20% reduction in the poverty rates in the districts to be provided with electricity under the Project by 2020.</p> <p>Addition of over 500 MW of grid-connected renewable energy including small hydro (i.e., less than 30 MW) capacity by 2020.</p>	<p>Economic reports and sector statistics of the provincial peoples committees.</p>	<p>Assumptions Provision of electricity through renewable energy sources and grid extensions will lead to broad economic development in the remote parts of targeted provinces.</p>
<p>Outcome Provision of reliable and affordable supply of electricity to remote mountainous and poor communes and replacement of thermal power generation with renewable energy.</p>	<p>5,000 households in electrified through the mini hydropower projects developed under the Project by 2016.</p> <p>Over 100,000 households in electrified through the grid extension component of the Project by 2016</p> <p>Addition of over 500 MW of grid-connected renewable energy including small hydro (i.e., less than 30 MW) capacity by 2016.</p> <p>Annual generation of 100 GWh of energy and 125,000 tons of annual green house gas emissions abated because of the Project by 2016.</p> <p>75% of the female-headed households in the targeted communes are electrified by 2016.</p>	<p>Annual project implementation reports and project completion reports.</p> <p>Progress reports submitted by Executing agencies.</p> <p>CDM assessment reports and validation reports to be prepared for subprojects during project implementation.</p> <p>Post project completion socioeconomic surveys to be undertaken</p>	<p>Assumptions The provision of electricity will result in improved income generation opportunities to the targeted communities.</p> <p>The project implementing agencies will target the poor and remote communes for electrification under the Project.</p> <p>The electricity generated through renewable energy and grid extensions is affordable to the targeted communities.</p> <p>The feed-in tariff for grid connected mini hydro plants will be adjusted to compensate for potential increases in construction cost.</p> <p>Risks: Unpredictability in hydro resource availability and impacts due to extreme climate events. Weak maintenance of the mini hydro power plants</p>

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			during the operation phase resulting in lower output.
Outputs 1. Installation of 5–10 mini hydropower projects to electrify mountainous communes. 2. Electrification of 1,000 villages through grid extensions 3. Promotion of productive use of electricity in the targeted communes	30 MW of mini hydropower capacity installed. Extension of medium voltage network by 500 km and low voltage network by 1,300 km Over 2 GWh of energy consumed in the predictive sectors in the targeted communities. Over 1,000 micro enterprises using electricity for productive uses are formed in the targeted communes.	Quarterly and annual reports and project completion reports.	Assumptions The implementing agencies have the necessary technical expertise to implement the subprojects in a timely and efficient manner due to the TA provided. Risks The communities in the targeted areas are incapable of starting business enterprises to utilize electricity for productive purposes.
Activities with Milestones 1. Micro Hydropower Systems 1.1 Selection of subprojects completed by September 2009 1.2 Detailed Feasibility Studies to be completed by June 2010 1.3 Detailed technical designs to be completed by December 2010 1.4 Bid Documents and CDM documents completed by June 2011 1.5 Procurement and contract award completed by June 2012 1.6 Complete the commissioning by December 2014 2. Grid Extension and Rehabilitation 2.1 Selection of villages and communes for grid extensions completed by September 2009 2.2 Detailed design and bid documents for grid extension and rehabilitation completed by September 2010. 2.3 Contract award by March 2011 2.4 Complete the commissioning by December 2012 3. Promoting Productive Use of Energy 3.1 Identify financial and other incentives to promote productive use of energy by December 2010 3.2 Implement the incentives program during 2011–2014			Inputs <ul style="list-style-type: none"> • ADB ADF Loan: \$151 million • Technical Assistance Grant: \$2.5 million, plus \$0.4 million from Government and executing agencies. • Counterpart funds of \$46.6 million from PC 1, PC 2 and PC 3

ADB = Asian Development Bank, ADF = Asian Development Fund, CDM = Clean Development Mechanism Facility, CEFPF = Clean Energy Financing Partnership Facility, GWh = gigawatt hour, MW = megawatt, PC = Power Company.