

TECHNICAL ASSISTANCE COMPLETION REPORT

Division: PAHQ

TA No. and Name TA 3985-SAM: Preparing the Savai'i Renewable Energy Project			Amount Approved: US\$300,000	
			Revised Amount: N.A.	
Executing Agency: Electric Power Corporation (EPC)		Source of Funding: JSF	TA Amount Undisbursed US\$6,868.14	TA Amount Utilized US\$293,131.86
Date			Completion Date	
Approval	Signing	Fielding of Consultants	Original	Actual
15 November 2002	26 November 2002	4 August 2003	30 September 2003	8 July 2005
			Account Closing Date	
			Original	Actual
			30 September 2003	12 December 2005
Description				
<p>Local renewable energy development is an important element underpinning the Government's strategy for economic growth and social development in Samoa. In Upolu, the capital island, around half of the power supply is provided by hydropower. However on Savai'i, the bigger outer island, power supply is exclusively produced by diesel power plants.</p> <p>In 1991, the system peak demand on the island of Savai'i was only 800 kilowatts (kW) and in April 2002, it was 2,688 kW. During this period, the Savai'i system achieved a compounded annual growth rate of 11.65%. In December 2001, two new diesel generators totaling 1,600 kW capacity were installed, increasing the total generation capacity of Savai'i to 2,060 kW. However, the generation capacity was inadequate to sustain the proposed new town in Saloelaga and a cannery on Savai'i. There was an urgent need for the Electric Power Corporation (EPC) to increase the generation capacity in Savai'i's power system.</p> <p>Due to the increased energy demand from 1991 to 2002, the Government requested assistance from the Asian Development Bank (ADB) to provide reliable and environmentally-sustainable power supply to Savai'i by developing the hydropower potential of the Sili river basin. The proposed project was expected to supply electricity using local renewable resources at the lowest economic cost and reduce the need to run diesel power stations in Savai'i, with considerable savings to EPC in imported fuel costs.</p>				
Objectives and Scope				
<p>The technical assistance (TA) was to establish a least-cost power development plan including water resources of the Sili River basin for adequate power generation on the island. The objective was to assess the social, institutional, and environmental aspects and recommend development strategies to explore the possibility of private sector participation in the sector. The TA was also expected to carry out a feasibility study to develop a sustainable small-scale hydro project suitable for financing by ADB and other external funding agencies.</p> <p>The implementation of the TA was undertaken in two stages: (i) assessment for a potential least-cost power supply system in Savai'i, and (ii) development of a sustainable hydropower project suitable for financing by ADB and other external funding agencies.</p> <p>The objectives and scope were relevant and appropriate. The participation of government stakeholders in implementing the TA was generally satisfactory.</p>				
Evaluation of Inputs				
<p>The TA utilized 9 person-months of international consultants (consisting of a hydropower engineer/team leader [4 person-months], economic and financial analyst [3 person-months], and a social and environmental impact expert [2 person-months]), and 3 person-months of national consultants for community development and social analysis, recruited through a firm. The terms of reference, and the budget for travel and workshops were adequate. However, due to land tenure and acquisition issues, the consultants were redirected to investigate another site within the Sili water basin. As a result, further consultation/participation work was carried out under TA 5972-REG: Promotion of Renewable Energy, Energy Efficiency, and Greenhouse Gas Abatement Projects.</p> <p>The economy and productivity, and client response on the inputs provided were generally satisfactory, as confirmed by the performance evaluation reports for the consultants. The performance of ADB and EPC, the Executing Agency, were also satisfactory.</p>				
Evaluation of Outputs				
<p>The Sili water basin is the most important watershed in Savai'i. The water basin is composed of three main streams: Vaiola and Lata on the western part and Vaitai on the eastern part. Its water has been earmarked both for supplying fresh water to the population as well as for power generation.</p> <p>Initially, the consultants were directed by the Ministry of Works to investigate the Vaiola and Lata streams, and these streams were identified to be potentially viable for hydropower generation. However, during local consultations due to perceived environmental concerns, some villagers strongly opposed the proposed project. Consequently, the Government/EPC redirected the consultants to investigate the Vaitai stream, which is located on land owned by different villages, and a potential site was found to be better than the previous sites.</p>				

The TA identified a run-of-river hydropower project to produce 7.5 gigawatt-hours (GWh) per year, substituting over 2 million liters of diesel oil annually, and would have substantial social and economic value to the country. The TA produced a feasibility report, including the draft Report and Recommendation of the President (RRP) for a proposed hydropower project.

The Government was satisfied with the quality and timeliness of the outputs delivered by the TA. Unfortunately, the proposed loan was not processed due to non-resolution of the land issue.

Overall Assessment and Rating

Partly successful. The TA was successful in identifying possible sites for hydropower development but it was not successful in securing the buy-in from the local communities. It was successful in delivering the project outputs (feasibility study), but not in its final outcome (an ensuing loan).

Major Lessons Learned

The project failed to proceed as planned mainly due to political and social sensitivities. A better understanding of the local political and social dynamics could have reduced the uncertainties. A rigorous community consultation and information awareness program that could sufficiently address the environmental and land issues associated with power projects in Samoa has to be instituted.

Recommendations and Follow-Up Actions

EPC still needs assistance in developing a strategic power sector road map to address its investment needs to meet growing electricity demand in both Upolu and Savai'i islands. Within this framework, the proposed Savai'i hydropower project could be revived if the land issues are adequately addressed. It is important, as a first step, to engage early in community consultations and awareness regarding the need for land for potential power development.

Prepared by Luigi Bodda Designation Senior Project Economist