



# Draft Design and Monitoring Framework

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Project Number: 38183-01  
June 2007

## Samoa: Power Sector Expansion 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><b>Impact</b> Access to sustainable and reliable electricity services at affordable prices</p>	<p>Consumer satisfaction ratings of EPC's services</p> <p>Complaints to EPC's consumer service division</p>	<p>Annual reports on consumer satisfactions</p> <p>Number of complaints over one year</p>	<p><b>Assumptions</b></p> <ul style="list-style-type: none"> <li>• Cost of power supply are reflected in timely electricity tariff adjustments</li> <li>• Timely payment of arrears and electricity bills by Government entities</li> </ul>
<p><b>Outcome</b> EPC improves quality and reliability and cost-effectiveness of power supply</p>	<p>System average duration interruption index baseline established and verified by Q4 2008 and reduced by 20% by 2015</p> <p>Average interruption frequency index baseline established and verified by Q4 2008 and reduced by 20% by 2015</p> <p>Cost of generation established and published by Q1 2009</p>	<p>EPC's quarterly progress reports and annual financial report</p> <p>ADB mission's back-to-office reports</p> <p>Indicators published in EPC's annual corporate plans and financial reports by FY 2009 and onward</p> <p>EPC's Corporate Plan</p>	<p><b>Assumptions</b></p> <ul style="list-style-type: none"> <li>• Effective regulation of the power sector is established</li> <li>• Effective monitoring and reporting of EPC's costs</li> <li>• Stakeholders support EPC's activities</li> <li>• EPC implements independent consumer satisfaction surveys</li> </ul>
<p><b>Outputs</b> 1. The financial performance of EPC improves</p>	<p>Consistent application of disconnection policy</p>	<p>Number of consumers in arrears by more than 30 days and number of those consumers disconnected</p> <p>Amount of accounts receivables aged more than 60 and 90 days and written off</p>	<p><b>Assumptions</b></p> <ul style="list-style-type: none"> <li>• Effective implementation of pre-payment system and cut-off policy</li> <li>• Stable or lower international fuel prices</li> <li>• Tariffs are adequate to cover all operating expenses, depreciation, taxes and interest expense</li> </ul>

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	<p>Fuel audits conducted on all EPC's diesel power stations</p> <p>Timely tariff adjustments</p> <p>EPC's collection performance improves such that accounts receivables are below 2 months of sales</p> <p>Self-financing ratio is minimum 20%</p> <p>Debt service ratio is minimum 1.3</p>	<p>EPC's monthly fuel audits</p> <p>EPC's audited annual financial compliance reports to ADB</p>	<ul style="list-style-type: none"> <li>• Introduced safeguards for fuel management are effective</li> <li>• Effective financial advisory services to EPC</li> <li>• Consumer's acceptance of prepayment meters</li> <li>• Government commitment to either utilize prepayment meters or to sufficient budgetary allocations for electricity consumption by Government entities</li> </ul>
<p>2. EPC's investment plan meets demand requirements</p>	<p>Power system capacity for energy and power meets demand requirements on Savai'i and Upolu</p>	<p>EPC's annual corporate plans and financial reports</p> <p>Project progress and completion reports</p> <p>ADB review missions and field visits</p>	<ul style="list-style-type: none"> <li>• Counterpart financing is made available on time</li> <li>• Effective project management unit</li> <li>• Timely recruitment of implementation consultants</li> <li>• Timely completion of bid documents and procurement of goods and services</li> <li>• Implementation of effective stakeholder consultations</li> <li>• Effective and timely implementation of social and environment requirements</li> <li>• Land acquisition is completed prior to commencement of construction activities</li> </ul>

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			<ul style="list-style-type: none"> <li>Effective demand-side management measures</li> </ul>
<p>3. Operational efficiency of EPC improves</p> <p>4. Effective regulation of the power sector is established</p>	<p>Transmission and distribution of technical system loss baselines are established and verified by Q4 2008 and are reduced by 10% by Q4 2010 and 20 % by Q4 2012.</p> <p>Baseline for non-technical losses established and verified by Q4 2008 and reduced by 10% by 2010.</p> <p>Electricity Act to govern the power sector established by end of 2009</p> <p>Amendments of the EPC Act consistent with the Electricity Act by end of 2009</p> <p>Regulatory Authority established by end 2010</p>	<p>EPC's corporate plans</p> <p>Project completion reports</p> <p>ADB review missions and field visits</p> <p>ADB reviews and approvals of bid documents</p> <p>EPC annual performance and monitoring reports to the Board of Directors and Ministry of Finance</p> <p>Parliament consideration of the draft Electricity Act</p> <p>Parliament consideration of amendments to the EPC Act</p> <p>Government communication with ADB</p>	<ul style="list-style-type: none"> <li>SCADA system installed and operating</li> <li>Transmission and generation investments implemented on a timely basis</li> <li>Political commitment to power sector reforms</li> </ul>
<b>Activities with Milestones</b>			<b>Inputs</b>
<p>1. The financial performance of EPC improves: 2007 -</p> <p>1.1 Uniform application of disconnection and write-off policies implemented from 2007 and onward</p> <p>1.2 Utilization of pre-payment meters from Quarter 1 2009 and onward</p> <p>1.3 Financial advisor to EPC recruited by Q2 2008: Intermittent implementation period to Q3 2010</p> <p>2. Implementation of the investment plan to improve EPC's operational efficiency, meet electricity demand and improve reliability of power supply: 2008–2015.</p>			<ul style="list-style-type: none"> <li>ADB ADF loan financing: \$26.61 million</li> <li>ADB ADF grant financing: \$15.39 million</li> <li>JBIC financing: \$38 million</li> <li>Government counterpart financing: \$9.10 million</li> <li>EPC counterpart financing: \$10.9 million</li> </ul>

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<p>2.1 <u>Project implementation preparation</u></p> <p>2.1.1 Fielding of project manager and establishment of the project management unit by 10 September (advance activity)</p> <p>2.1.2 Recruitment of implementation consultants by November 2007 (advance activity)</p> <p>2.1.3 Bid documents issued for core subprojects by November 2007 (advance activity)</p> <p>2.1.4 Contracts issued and contractors fielded in Q1 2008 (core subprojects)</p> <p>2.2 <u>Implementation of core subprojects</u></p> <p>2.2.1 Construction of the hospital upgrade project commences Q1 2008: commissioning in Q4 2008</p> <p>2.2.2 Supply and installation of prepayment meters commences Q1 2008: Sequentially commissioned from Q4 2009</p> <p>2.3 <u>Implementation of candidate subprojects</u></p> <p>2.3.1 Identification of feasible subprojects and preparation of feasibility reports</p> <p>2.3.2 Preparation of bidding documents</p> <p>2.3.3 Contracts issued and contractors fielded for detailed design and/or construction of subprojects</p> <p>As part of the implementation of subprojects under the investment plan EPC will prepare and submit quarterly progress reports, updates of the investment plan, and financial projections to ADB and Government.</p> <p>3. Establishment of effective regulation of the power sector: 2008</p> <p>3.1 Regulatory advisor and legal experts recruited and fielded by Q3 2008</p> <p>3.2 Submission of concept paper for Parliament consideration: Q4 2008</p> <p>3.3 Drafting of Electricity Act: Q4 2008 – Q3 2009</p> <p>3.4 Drafting of amendments to the EPC Act: Q4 2008 – Q3 2009</p> <p>3.5 Submission of legislations for consideration by Parliament: Q1 2010</p> <p>3.6 Establishment of the regulatory authority and appointment of regulator: 2010</p>			<ul style="list-style-type: none"> <li>• ADB TA financing: TBD</li> <li>• AusAID TA financing: TBD</li> <li>• Private sector participation: TBD – based on identification of specific generation projects suitable for joint venture and/or full private sector investments</li> </ul>