

ASIAN DEVELOPMENT BANK

TAR:ETM 34401

TECHNICAL ASSISTANCE
(Financed from the Japan Special Fund)

TO

EAST TIMOR

FOR PREPARING THE

POWER SECTOR DEVELOPMENT PLAN – PHASE I

October 2001

ABBREVIATIONS

ADB	–	Asian Development Bank
DSM	–	demand-side management
EIRP	–	Emergency Infrastructure Rehabilitation Project
ETTA	–	East Timor Transitional Administration
kWh	–	kilowatt
MW	–	megawatt
TA	–	technical assistance
UNTAET	–	United Nations Transitional Administration in East Timor

NOTE

In this report, “\$” refers to US dollars.

I. INTRODUCTION

1. During the World Bank-coordinated multiagency Joint Assessment Mission (October-November 1999), the Asian Development Bank (ADB) reviewed the power sector restoration and development requirements of East Timor for the short and medium term (1-3 years). Needs for technical assistance (TA) and investment projects were identified in consultation with the National Council for East Timorese Resistance, World Bank, United Nations Transitional Authority in East Timor (UNTAET)-East Timor Transitional Administration (ETTA), United Nations Development Programme, and the East Timorese civil society representatives. In particular, the need for technical assistance (TA) to develop a power sector development plan was identified.

2. ADB has been administering Grant 8181-ETM: Emergency Infrastructure Rehabilitation Project (EIRP) since April 2000. Work includes emergency rehabilitation of the rural power stations, and establishment of a power utility and its financial management system. This aims, in tandem with a rehabilitation program funded by the governments of Japan and Portugal, to reinstall power supply in the rural population centers and to reestablish viable power sector management and a tariff. Various review missions¹ have reached understandings with the East Timorese counterparts on the objectives and scope, cost estimates and terms of reference for this TA.² A framework for the TA is provided in Appendix 1.

II. BACKGROUND AND RATIONALE

3. In the referendum held on 30 August 1999, the East Timorese voted for independence over an Indonesian-controlled autonomy. After the referendum, residential, public, and productive property was systematically destroyed. In the Western half of the territory and the highland areas, much of the property of value including residential and public buildings, utilities, telecommunications facilities, and inventories of essential food and agriculture stocks were removed, burned, and destroyed. The Eastern half experienced a similar, but less comprehensive destruction with about 75 percent of residential buildings destroyed. While initially many areas were totally deserted, the population (840,000) has gradually returned to their homes in East Timor to rebuild their livelihoods.

4. In 1999 the World Bank-coordinated Joint Assessment Mission identified priority reconstruction objectives, and prepared estimates of external financing needs for all economic sectors. These have since been revised under a comprehensive budgeting process. Under the reconstruction program, the donor community mandated ADB with a lead-agency role for the power sector. The ADB-administered EIRP has implemented this role in the transport and power sectors. The objective of rehabilitating the power infrastructure is to reestablish power supply in rural areas of East Timor to enable recommencing of economic lives, to improve humanitarian conditions, and to facilitate peace and security. The Project has also commenced work to establish a legal power entity. This TA will prepare a long-term energy sector development plan, and identify ADB's strategy for the sector to support sustainable economic development and growth, and poverty reduction in East Timor.

5. In 1998, East Timor had a total of 28 megawatts (MW) of electricity generation capacity, of which 50 percent was located in Dili. The power sector was operated and managed by a

¹ EIRP review missions in May, August, and November 2000, and February, May, and October 2001 by S. Jarvenpaa, Sr. Project Economist (Mission Leader).

² The TA first appeared in *ADB Business Opportunities* in March 2001.

branch of the Indonesian national power utility, PLN. The combined peak load of the Dili system plus more than 50 of the smaller load centers was around 16 MW, and the average system load factor was 55 percent. Of the approximately 43,000 connections, over 90 percent were residential. Electricity consumption of the residential sector accounted for well over 60 percent of total energy sales, and for over 50 percent of the utility revenue. All consumers were billed; low consumption quantity was subsidized by a generous lifeline tariff.

6. The power sector suffered devastating damage during the postreferendum violence, mainly in the destruction of many district and village power stations; the complete removal of the power utility's management and planning capacity and computer and communications infrastructure; and the removal or destruction of all data, including customer records. A long history of poor power infrastructure maintenance throughout East Timor during the Indonesian period was also evident. Urgent repair and overhaul work is required to restore existing generating capacity to its full potential in Dili and the district centers.

7. All managerial positions within the Indonesian power authority were occupied by Indonesian personnel with the East Timorese serving in supporting functions. Following the postreferendum violence, the management of the power sector left East Timor. Currently, the power sector is managed by expatriate staff under UNTAET-ETTA.

8. The focus of restoration work to date has been on the resumption of basic services. Intensive efforts by mid-2000 restored the Dili electricity supply system essentially to its preincident condition, and the same condition was reestablished to varying degrees in the secondary town areas. End-user consumption in Dili is currently estimated at about 57 gigawatt-hours per annum, a 35 percent increase over the load recorded in Dili in 1997.³ As the peak load in Dili was an estimated 9.2 MW in August 2000, well above available capacity, rationing is presently required during the evening peak hours. The system load factor is 68 percent. At present 28 power stations are in operation out of a total of 58 in the country. Associated distribution systems have also been recommissioned. A number of the longer 20 kilovolt distribution lines designed to interconnect two or more power stations are in poor condition due to lack of maintenance. Many lines were never completed. The situation remains difficult in the smaller load centers, with 30 of a total of 58 stations still out of service. These are planned for rehabilitation under bilateral funding from the governments of Japan and Portugal and the EIRP.

9. A complete assessment of power needs in light of expected economic recovery and development, least cost options, and a detailed plan for power development is required prior to expansion of any power facilities. The existing power system is based on expensive fuel imports, which were supplied under the previous regime through subsidized pricing. Consumers largely accessed lifeline electricity pricing benefiting from cross-subsidization feasible in a large-country context. These benefits are no longer available. Power demand patterns throughout the country have also radically changed, rapid growth in power demand continues due to the activities of international aid agencies and associated growth in retail, services, and construction activities. However, the rural areas remain heavily disrupted, with severely depleted economic activity in many villages. Development prospects in the medium and long term need to be assessed to determine whether the country is likely to resume preincident economic patterns or will instead begin to evolve new directions. Social needs for electricity throughout the country must also be carefully assessed.

³ Technical losses in Dili (and in other centers) are assumed to be high at about 20 percent of gross generation, due to the generally poor state of the distribution systems.

10. Although power generation in East Timor has historically been diesel powered, other potential resources are available from solar photovoltaic cells for low-power household consumption (mainly lighting), geothermal for large central station generation, and micro- and mini-hydro for small- and medium-sized central stations. The availability and economic potential of these and possibly other technical options for power generation in East Timor (including diesel) need to be evaluated and their costs compared for each proposed power development in order to determine a least cost power development strategy.

11. The institutional structure of the power entity still needs to be established. The acute shortage of trained personnel at all levels in the sector poses a severe difficulty in restoring the proper operation of the electrical system. In particular, experienced operators, linesmen, diesel mechanics, and technicians are lacking at all power stations. A shell for an operating utility company has been formed in Dili under the management of expatriate personnel provided by UNTAET-ETTA, but does not have any local management personnel. Most costs of power sector operation and maintenance are presently borne by UNTAET-ETTA; only minor contributions are currently received from user charges.

12. Under resumed power sector operations, a large but unknown number of residential and nonresidential (commercial) customers are being served. To assist initial restoration efforts, UNTAET decided not to collect any revenue from customers for electricity services in the first half of 2000. Prior to the violence in 1999, all customers were metered and billed for electricity at a highly subsidized rate. Effective 1 August 2000, UNTAET directed that commercial customers will be metered and billed for electricity. Initial charges for electricity were made in accordance with an ADB-recommended interim tariff.⁴ A new electricity tariff for Dili (only) has been approved. This provides (i) a reduction in the connection fee to most consumers (all domestic and single-phase commercial customers); (ii) a lifeline tariff of zero for all domestic customers for the first 25 kilowatthours (kWh) per month consumed; (iii) a minimum monthly charge for all domestic consumers of \$1.00; and (iv) a charge of \$0.25/kWh for all consumption by a domestic consumer that exceeds 25 kWh/month and for all consumption per month of a commercial customer. The metering and billing program is a priority to (i) reduce the fiscal subsidy to the power operations and (ii) begin to get electricity consumers accustomed to paying regularly for their consumption.

13. Implementation of the metering and billing program has been slow for various reasons. Under a Portuguese-funded program, the billing system containing about 600 commercial customers has been established: bills up to February 2001 have now been issued with revenues recorded at the electricity account at UNTAET-ETTA Treasury totaling approximately \$600,000 at the end of September. The poor collection rate is due to a general lack of (i) credibility of the current sector management, (ii) deterrents for nonpayment, and (iii) flow of funds mechanism through UNTAET-ETTA that leaves the power services management without the essential management information. The Power Utility Development Project under the EIRP is (i) reviewing power entity management and development requirements including corporate planning, management, mandate, strategy, functions, operations, staffing, and financial management; (ii) preparing a corporate development plan and implementing its first phase; (iii) establishing the financial management and customer service functions; (iv) establishing a comprehensive metering and customer connection survey; and (v) implementing immediate billing and revenue collection procedures. This work will be completed at the end of 2001.

⁴ Developed in ADB. 2000. *East Timor Power Sector Pricing Study*. Manila.

14. Support for preparing a long-term development plan is proposed to examine various power supply and generation options, and expansion of the electrification grid using least-cost technology, transmission, and distribution augmentation under a 20-year time frame. The first phase of the study will assess technical and economic viability of alternative energy sources in light of the medium- and long-term demand growth scenarios. Once completed, emphasis of the master plan will be on improving social services and the quality of life in rural areas by proposing electrification methodologies that will best support community development activities.

III. THE TECHNICAL ASSISTANCE

A. Objectives

15. The TA will support the first phase of preparation of a power sector master plan utilizing least-cost methodology for the development and expansion of the power system in East Timor. The objective is to formulate a least-cost and technically optimum strategy for developing and expanding the power networks throughout East Timor to support the country's economic and social development.

B. Scope

16. The TA scope includes (i) preparing a detailed and comprehensive technical survey of the energy sector in East Timor, (ii) determining a least-cost development strategy for the power sector that facilitates economic development and poverty reduction, (iii) preparing a 20-year technical master plan for the sector based on a demand growth model, and (iv) preparing a technical and economic feasibility study for prioritized investment requirements. The TA will apply knowledge of best practice in the energy sector, and focus on affordability and sustainability of the proposed power system. It will also address poverty reduction, effective delivery of social services, and support to commerce and trade.

C. Cost Estimates and Financing Plan

17. The total cost of the TA is estimated at \$400,000 equivalent. This includes international consultant remuneration and per diem, international and local travel, communications, office equipment, supplies, and contingencies. UNTAET-ETTA has been advised that approval of this TA does not commit ADB to finance any ensuing project. ADB will fund the TA on a grant basis from the Japan Special Fund, funded by the Government of Japan. Detailed cost estimates are provided in Appendix 2.

D. Implementation Arrangements

18. The TA will be carried out by a firm of international and domestic consultants to be engaged in accordance with the ADB's *Guidelines on the Use of Consultants* and procedures acceptable to ADB. The TA will require about 13 person-months of international and 6 person-months of domestic consulting services in the fields of power system demand estimation; power sector economic analysis; power utility operations and procedures; power system engineering in electrical distribution and in all relevant generation technologies, including diesel, solar photovoltaic, geothermal, wind, and hydropower potential. The team should be particularly skilled in assessing technical and economic viability and sustainability of power services for rural communities and their needs for electrification, and propose community-level service delivery mechanisms that will be most effective in sustaining the delivery of appropriate rural power services to meet social development needs at least cost. The consultant will coordinate

all field investigations with UNTAET-ETTA, with other donors, and relevant nongovernment organizations active in the sector and in rural development. The outline terms of reference for consulting services are in Appendix 3.

19. The Department of Economic Development of UNTAET-ETTA will be the Executing Agency for the TA. It will coordinate closely with the Ministry of Finance and other relevant offices under UNTAET-ETTA to ensure effective liaison and discussion during implementation. A steering committee comprising the Department of Public Works and Water, Ministry of Finance, and the Development of Commission, and the Office of the UNTAET-ETTA Administrator, will be established and convened on a regular basis to guide and support the TA activities, and to provide guidance to the consultants.

20. The TA will be carried out over six months, commencing in December 2001 and ending in June 2002. The consultants will submit an inception report, a midterm report, a draft final report, and a final report. The consultants will organize a minimum of three tripartite meetings for UNTAET-ETTA, the TA stakeholders, the consultants, and ADB to consider the reports. The consultants will also convene donor coordination meetings among external funding agencies and the TA in connection with the scheduled tripartite meetings.

IV. THE PRESIDENT'S DECISION

21. The President, acting under the authority delegated by the Board, has approved the provision of technical assistance, on a grant basis, to the United Nations Transitional Administration in East Timor-East Timor Transitional Administration, in an amount not exceeding the equivalent of \$400,000 for the purpose of preparing the Power Sector Development Plan - Phase 1, and hereby reports such action to the Board.

TECHNICAL ASSISTANCE FRAMEWORK

Design Summary	Performance Targets	Monitoring Mechanism	Assumptions/Risks
<p>A. Goals A least-cost and technically optimum strategy for the development and expansion of the power networks throughout East Timor to support the economic and social development of the country</p>	<p>(i) A least-cost development strategy for the power sector to facilitate economic development and poverty reduction (ii) A 20-year sector master-plan (iii) A technical and economic feasibility study for prioritized investment requirements</p>	<p>Technical assistance (TA) performance report Reports prepared under TA</p>	<p>Commitment of the United Nations Transitional Administration (UNTAET)-East Timor Transitional Administration (ETTA) to support a systematic approach to sector development Effective donor coordination</p>
<p>B. Purpose A technical long-term sector development plan</p>	<p>Preparation of a least-cost development plan Preparation of technical feasibility study</p>	<p>TA reports Project processing and approval</p>	<p>Consultative collaboration between the consultants, UNTAET-ETTA, and East Timorese civil society</p>
<p>C. Outputs A least-cost development plan and a technical feasibility study for programming investments</p>	<p>International standard long-term technical strategy document and feasibility study with a focus on poverty reduction</p>	<p>Review reports of the Asian Development Bank (ADB) TA reports</p>	<p>Timely mobilization of consultants in accordance with ADB's procurement guidelines Efficient consultation process with all stakeholders</p>
<p>D. Inputs Technical assistance for preparation of the feasibility study</p>	<p>Award of consulting services contract for total estimated value of \$400,000 to prepare the technical energy sector masterplan, investment proposals, and development program for improving energy sector management by 31 Dec 2001</p>	<p>Time- and quality- bound delivery of consulting services, outputs, and reports</p>	<p>Effective consultant selection process Effective consultation with stakeholders</p>

(Reference in text: page 1, para. 2)

COST ESTIMATES AND FINANCING PLAN
(**\$**)

Item	Total Cost
Asian Development Bank Financing^a	
1. Consultants	
a. Remuneration	247,000
b. Per Diem	54,600
c. International Travel	24,000
d. Local Travel	14,400
e. Domestic Consultants	6,500
2. Miscellaneous	
a. Communications	2,000
b. Report Preparation	6,000
c. Office Supplies	2,000
3. Government Participant in Contract Negotiations	6,000
4. Contingencies	37,500
Total	400,000

a Financed by the Asian Development Bank from the Japan Special Fund, funded by the Government of Japan.
Source: Staff estimates.

(Reference in text: page 4, para. 17)

OUTLINE TERMS OF REFERENCE FOR CONSULTANTS

A. Terms of Reference

1. The consulting firm's assignment includes the following:
 - (i) Identify counterpart staff in consultation with the power service of East Timor Transitional Administration (ETTA) as counterparts to join TA activities, and prepare pragmatic terms of reference, work plans with output deliverables, and contracts for these.
 - (ii) Review all available records and evaluations of the present power system as prepared by ETTA, Electricite De Portugal, Asian Development Bank (ADB), Grant 8181-ETM: Emergency Infrastructure Rehabilitation Project, and others; and become thoroughly familiar with the power sector throughout East Timor including the generation and distribution systems in all power centers; available data on the customer base and demand patterns in each center; and all ongoing projects, plans, and developments in the sector. Become familiar with all past power development studies, including past studies of indigenous resource potential for power generation and demand-side management (DSM) (if any).
 - (iii) Assess and identify constraints in the physical condition of existing generation and distribution facilities (including customer connections), and recommend improvements as required; rank and group all operating centers in order of quality of service, with particular reference to daily operating hours (i.e., 24-, 18-, 12-, and 6-hour per day centers), and recommend upgrading or downgrading service quality in each center as appropriate for local economic conditions.
 - (iv) Prepare load forecasts for each operating power center covering power and energy demand and growth in customer connections (by relevant category) for 5, 10, and 20-year planning horizons, with detailed identification of economic activity and growth assumptions, identified power-consuming project investments (e.g., new hotels, processing facilities, etc.), and relevant demographic trends and social developments; assess the social utility and economic potential of expansion of electrification in all operating centers and in nonelectrified areas of the country.
 - (v) Prepare a detailed cost analysis of diesel power generation in all operating power centers; assess alternative fuels (light and heavy fuel oils, bunker, coal, etc.) and alternative sources of power generation applicable to each power center, including solar photovoltaic, wind, geothermal, hydro, and others as appropriate, including hybrid options (e.g., solar-wind-diesel) if appropriate; assess the potential of DSM programs to reduce the economic costs of power supply in each center and recommend specific DSM methodologies and projects applicable to the residential and nonresidential customer classes as appropriate; and prepare detailed cost estimates of alternative power generation and DSM programs for comparison with diesel electrification providing equivalent service.
 - (vi) Assess the economic and social significance of electrification in all existing rural power centers and in nonelectrified areas throughout the country; assess the potential of electrification in all rural areas to improve living standards, reduce

(Reference in text: page 5, para. 18)

poverty, and create income opportunities for village residents; and provide definitive measurements of such impacts; (emphasize the use of nondiesel power generating alternatives using indigenous energy resources, e.g., solar, as economically viable and technically appropriate).

- (vii) Assess requirements for and feasibility of creating community core groups and village-level institutional structures for day-to-day operation and maintenance of recommended rural power developments in conjunction with or in place of the national power utility.
- (viii) Assess the feasibility of private sector involvement in all aspects of power sector operation and maintenance, with reference to improvements in quality of services or reductions in cost; recommend appropriate means and structures to secure recommended private sector involvement in such activities;
- (ix) Review relevant prefeasibility and feasibility reports, and inspect and assess any existing hydropower generation facilities in East Timor; specify restoration requirements (if any) and estimate costs; investigate promising micro- and mini-hydro sites on rivers in East Timor (including impoundment and run-of-river types) and provide preliminary estimates of development potential and economic benefits.
- (x) Review relevant prefeasibility and feasibility reports, investigate and assess promising sites in East Timor for geothermal development, and estimate power potential and development costs.
- (xi) Assess the existing high voltage distribution system in all operating centers, and the feasibility and economic potential of interconnecting two or more power centers to reduce the need for independent generation facilities in each center; assess the feasibility and economic potential of creating a national power grid considering improvements in reliability, efficiency, power quality, and potential operating cost savings; assess and recommend efficient voltage levels for any recommended interconnections; assess the overall functioning and efficiency of the existing high and low voltage distribution system in all centers; and recommend measures to reduce line losses (both technical and nontechnical).
- (xii) Review and assess existing procurement practices, including fuel procurement, and recommend improvements as appropriate.
- (xiii) Determine a least-cost and demand-sensitive power sector expansion and improvement program covering short-term (5 years), medium-term (10 years), and long-term (20 years) power needs, and develop a detailed plan for power sector development. The plan should assess and include investment in diesel and appropriate alternative generating technologies; as indicated in item (iv) for each center or grid system.
- (xiv) Conduct analyses of the environmental impact of the recommended development plan for each center or grid system in accordance with ADB's *Guidelines on Environmental Assessment of Power Projects*.

- (xv) Conduct a full economic analysis of the recommended development plan in accordance with ADB's guidelines, including appropriate sensitivity analyses of key economic parameters including changes in the assumptions underlying the short-, medium-, and long-term load forecasts; fuel price changes; levels of urban and rural economic activity; and others; include a full assessment of the short-, medium-, and long-term implications for the cost-recovery tariff in real terms.
- (xvi) Recommend appropriate staffing levels and structures for the East Timor power utility and other organizations that in the future may be involved in power generation, distribution, or sales, required to meet the objectives of the recommended plan.
- (xvii) Carry out willingness-to-pay surveys and compare these in light of the proposed services level under the proposed plan, adjust the plan as necessary. Identify all recurrent cost implications and operations of the system under the long-term plan. Identify cost recovery possibilities, review and recommend tariffs, and assess the affordability and willingness to pay, as well as recommend a policy of lifeline tariff for low consumption levels, if appropriate. Participate in ADB-led policy dialogue on these issues;
- (xviii) **Technical Specifications.** Prepare technical specifications including terms of reference for the proposed prioritized program, civil works, equipment, and consulting services required; and establish the contract packages for civil works, equipment, and consulting services, under ADB's *Guidelines for Procurement*.
- (xix) **Recurrent Maintenance.** Identify an appropriate recurrent maintenance program including a recommendation for funding maintenance of the proposed facilities. Prepare delivery mechanisms for the maintenance program addressing the organizational, technical, financial, human resources aspects, and coordination. Involve ETТА and other relevant agencies, as appropriate.
- (xx) **Cost Segregation.** Investigate the cost of locally available and imported materials required for construction purposes, as required; estimate construction, installation, equipment procurement, and maintenance costs of the proposed facilities; and disaggregate cost estimates into components, taxes and customs duties, equipment depreciation, spare parts, materials, labor, and overhead, etc. as well as by general items, civil works, electric works, installation, and equipment.
- (xxi) **Land Acquisition.** Determine land acquisition issues and costs, if any, and assist in preparing a land acquisition program, as required, under the long-term development program. Prepare a program of user, landowners, beneficiary, and affected community consultations; develop a consultation mechanism; and help ETТА's Department of Infrastructure execute an effective beneficiary consultation and public awareness program.
- (xxii) **Feasibility Study.** Undertake a project feasibility study for the proposed investments under the long-term development program. The study will include an economic and financial evaluation, in accordance with the ADB's *Guidelines for Economic Analysis of Projects*; evaluation of the environmental and social costs and benefits for each project over the intended life of the investment; and

preparation of the financial and economic net present values of the proposals and other feasibility indicators, and the sensitivity tests for major parameters such as costs, demand, and benefits. Calculate financial and economic values for all parameters.

- (xxiii) **Project Implementation.** Identify appropriate implementation arrangements for the proposed program, including a project management unit, schedules, roles and tasks for agencies involved, action programs for establishing project implementation resources including counterpart resources, the steering committee, financial management of the project, and coordination of ETTA, Department of Infrastructure, Central Fiscal Authority, and other departments as necessary; and assess the capacity of the Department of Infrastructure and power supply operation to provide project management and contract administration for the investment program.
- (xxiv) **Masterplan.** Prepare a sector development plan, a master plan, that provides (a) a sector analysis, including an overview of its physical, institutional, human resources, financial, corporate, and social characteristics; (b) a detailed and comprehensive long-term integrated investment program with feasibility indicators and priority investment proposals, (c) feasibility studies for the priority investment programs with all viability indicators as well as due diligence documentation required for projects eligible for ADB funding, (d) related long-term institution building framework and specific technical assistance (TA) requirements, and (e) technical and economic performance indicators with benchmark data and a system for monitoring the agency and services delivery performance over time.

B. Reports

2. The consultant will submit the following reports in English to ETTA (five copies) and ADB (four copies). The consultant will organize a minimum of three tripartite meetings to consider the inception, midterm, and draft final reports, and TA progress and status. In connection with these meetings, the consultant will arrange consultation meetings with other aid agencies operating in the sector. The consultants will prepare and circulate minutes of these meetings, and incorporate comments in the TA reports and activities, as appropriate.

- (i) **Inception Report.** This brief report will be submitted within four weeks of the start of the TA. It will outline, in accordance with the terms of reference, the consultants' approach, methodology, and work plan, as well as cost implications for consulting services. The report will provide a bar chart of all activities under the TA, and recommend changes to the implementation arrangements, and a list of equipment to be procured as required.
- (ii) **Monthly Progress Reports.** These brief reports will inform ETTA and ADB of achievements under each item of the terms of reference; identify emerging difficulties in implementation, if any; and outline proposed solutions. The reports will provide, in clear presentations, the status of the terms of reference, performance status, and personnel schedule with accomplishments under each item of the terms of reference, as well as plans for the next month's work. These reports will adopt a uniform format facilitating monitoring and will update the bar chart on all activities under the TA.

- (iii) **Midterm Report.** This report, to be submitted at midpoint of TA implementation, will summarize all recommendations and concepts developed under the terms of reference up to the submission date. It will also provide in-detail background to the sector, and identify issues and decision-making requirements, if any, to facilitate TA progress.
- (iv) **Draft Final Report.** To be submitted on TA completion, this report will summarize the TA activities and recommendations and provide recommendations on each item under the terms of reference in detail with action plans.
- (v) **Final Report.** This report will be submitted by the consultants one month after receipt of the comments on the draft final report from ADB and the Government.