Technical Assistance Report

Project Number: 46486
Policy and Advisory Technical Assistance (PATA)
October 2013

Republic of the Union of Myanmar: Enhancing the Power Sector’s Legal and Regulatory Framework
(Financed by the Government of Norway)

Asian Development Bank
CURRENCY EQUIVALENTS
(as of 9 September 2013)

Currency unit – kyat (MK)
MK1.00 = $0.0010
$1.00 = MK968.35

ABBREVIATIONS

ADB – Asian Development Bank
ERA – Electricity Regulatory Authority
kV – kilovolt
MOEP – Ministry of Electric Power
O&M – operation and maintenance
TA – technical assistance

TECHNICAL ASSISTANCE CLASSIFICATION

Type – Policy and advisory technical assistance (PATA)
Targeting classification – General intervention
Sector (subsector) – Energy (energy sector development)
Theme (subthemes) – Economic growth (promoting economic efficiency and enabling business environment, widening access to markets and economic opportunities, and policy reforms), private sector development
Location (impact) – National (high)
Partnership – Government of Norway

NOTE

In this report, "$" refers to US dollars.

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I. INTRODUCTION

1. The Government of the Republic of the Union of Myanmar requested the assistance of the Asian Development Bank (ADB) to assist the Ministry of Electric Power (MOEP) in updating the Myanmar Electricity Law (1984) and the Electricity Rules (1985) so that they reflect current international standards and create an enabling framework for introducing an electricity regulator and corresponding institutional arrangements. The revision and implementation of a new electricity law and electricity regulations will support the government’s reform agenda for the power sector by (i) providing an improved regulatory framework for gradual future sector unbundling (generation, transmission, and distribution subsectors); (ii) encouraging greater private sector participation in generation projects and enabling third-party network access; (iii) establishing rules and regulations for small independent power producers to promote off-grid electrification; (iv) implementing rural electrification programs; and (v) introducing an electricity regulator consistent with internationally recognized good practices. The government concurs with the impact, outcome, outputs, and key activities as presented in the design and monitoring framework in Appendix 1.¹

2. Responding to the government’s ongoing major reforms toward a democratic system and market-based economy, ADB adopted in early 2012 a phased approach to re-engagement with Myanmar, involving significant preparatory analytical work and country dialogue in the first half of 2012. ADB has prepared an initial energy sector assessment that calls for promoting energy efficiency and developing a pricing mechanism for electricity as part of the overall public sector reform program.² The technical assistance (TA) is aligned with ADB’s interim country partnership strategy, 2012–2014, with the objective of re-engaging in the country and improving access to reliable and sustainable utility services.³

II. ISSUES

3. Myanmar’s energy policy framework centers on (i) maintaining energy independence, (ii) promoting wider use of new and renewable energy sources, (iii) promoting energy efficiency and conservation, and (iv) promoting the use of alternative fuels in households. Seven ministries are responsible for energy matters. The two main energy-related line ministries are the Ministry of Energy (overall energy policy and the oil and gas sector) and the MOEP (hydropower, coal-fired power generation, gas-fired power generation, mini-hydro, and power transmission and distribution).⁴ The government established the National Energy Management Committee and the Energy Development Committee in January 2013 to strengthen coordination among the seven ministries with a view to improving resource planning and oversight of investment in energy sector development.⁵

4. The power sector in Myanmar is governed by the Electricity Act 1948 (as amended in 1967), the Myanmar Electricity Law (1984), and the Electricity Rules (1985). This legislation

¹ The technical assistance (TA) first appeared in the business opportunities section of ADB’s website on 21 January 2013.
⁴ The other five ministries with responsibilities for energy matters are the Ministry of Mines (coal mines); the Ministry of Agriculture and Irrigation (biofuels, micro-hydro for irrigation); the Ministry of Science and Technology (renewable energy); the Ministry of Environmental Conservation and Forestry (fuelwood, climate change, and environmental safeguards requirements); and the Ministry of Industry (energy efficiency).
⁵ In April 2013, ADB provided technical assistance to the Republic of the Union of Myanmar for Institutional Strengthening of National Energy Management Committee in Energy Policy and Planning in the amount of $1,350,000 (TA 8356-MYA).
needs revision to reflect current international best practices in power sector governance. There is also a pressing need to develop grid codes and model power purchase agreements for small and large power generation projects. These rules and draft models do not exist in Myanmar and will have to be based on current international best practices with appropriate guidelines and requirements to allow private independent power producers to connect with the Myanmar national grid.

5. The power sector in Myanmar is currently under the responsibility of MOEP, which, as well as being responsible for power sector policy, includes (i) development, implementation, and operation and maintenance (O&M) of all large hydropower plants and coal-fired thermal power plants; (ii) construction and O&M of transmission and distribution systems throughout the country; (iii) O&M of gas-fired thermal power generation plants; and (iv) planning, implementation, and O&M of mini-hydropower plants.6

6. The MOEP consists of seven departments: the Department of Hydropower Planning, the Department of Hydropower Implementation, the Hydropower Generation Enterprise, the Department of Electric Power, the Myanmar Electric Power Enterprise, the Yangon City Electricity Supply Board, and the Electric Supply Enterprise. The Department of Hydropower Planning plans hydropower projects for implementation by local provincial enterprises, by joint ventures with foreign investors, or by the department itself. The Department of Hydropower Implementation has four institutes responsible for design, investigation works, and mechanical works; and seven engineering construction companies capable of constructing and installing large hydropower projects. The Hydropower Generation Enterprise operates and maintains all of the MOEP’s hydropower stations and participates in O&M of power plants under joint ventures. Despite its name, the Hydropower Generation Enterprise also operates the country’s only coal-fired power plant, which has a nominal capacity of 120 megawatts.

7. The main function of the Department of Electric Power is power system strategic planning. The Myanmar Electric Power Enterprise is responsible for the development, construction, and O&M of transmission networks; and O&M of gas-fired power plants, including gas turbines and combined-cycle gas turbines. The transmission network covers the existing 66 kilovolt (kV), 132 kV, and 230 kV voltage levels; and the planned 500 kV system (currently being constructed). The distribution systems consist of lower voltages of 33 kV, 11 kV, 6.6 kV, and 0.4 kV. Two distribution enterprises—the Yangon City Electricity Supply Board and the Electric Supply Enterprise—operate the distribution systems. The Yangon City Electricity Supply Board is responsible for electricity supply to consumers in Yangon City. The Electric Supply Enterprise covers the rest of the country, comprising 17 states and divisions, including off-grid generation and distribution; it is also responsible for planning, implementing, and operating off-grid mini-hydropower and diesel stations. The Yangon Electricity Supply Board and Electric Supply Enterprise also implement system improvement and expansion of distribution systems.

8. The MOEP is responsible for policy and oversight as well as regulation of the power sector; and is vested with all planning, operating, and management responsibilities for the sector. In the absence of a distinct regulatory framework to support the functional unbundling that will need to take place soon, the MOEP will need clear directions on how this could be achieved through a revised electricity law. The MOEP has a draft concept note on power sector policy that outlines a reform strategy to (i) rationalize power sector institutions and functions, (ii) gradually commercialize the institutions, (iii) develop a regulatory framework through an electricity law, (iv) gradually adopt cost-based tariffs, (v) promote private sector participation, (vi)

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6 The MOEP No. 1 and the MOEP No. 2 were merged as the MOEP in September 2012.
increase rural access to electricity, (vii) undertake demand-side management, and (viii) update the law and regulations on health and safety and sector-related offences. Policy has tended to be developed through the process of drafting the new law, rather than through wide consultation with concerned ministries and stakeholders whose inputs are then captured in law.

9. The government recognizes that foreign direct investment will be required to achieve projected investments in the power sector. A framework to attract build–operate–transfer investments will need to be adopted. Notable features of such a framework include guaranteeing the convertibility of local currency into foreign currency, permitting the mortgaging of project assets, specifying tax levels, and allowing risk sharing by the government and private investors. However, various shortcomings continue to impede rapid development of build–operate–transfer projects in the power sector, principally the (i) lack of a comprehensive and transparent regulatory framework, (ii) need to modernize the legal and financial system and legislation, (iii) lack of a modern law governing private sector investment, and (iv) lack of experience in and capability to facilitate long-term foreign investment in infrastructure. The government recognizes the importance of these issues and is taking the first steps to strengthen power sector legislation by introducing an updated electricity law.

10. A draft electricity law has been prepared by a working committee under the supervision of the Minister of the MOEP to provide a broad framework for the development and regulation of the power sector. This committee is composed exclusively of MOEP staff. At the MOEP’s request, ADB provided assistance to engage a short-term legal expert to assist the MOEP in developing the draft. The draft has been submitted to the Office of the Attorney General for comments. This will be followed by interministerial consultations, after which the draft will be approved by the cabinet and submitted to Parliament. The current draft law is quite general. It identifies the institutions and reforms that will be required, and outlines principles and concepts for allocating tasks among agencies. It creates a framework for licensing and contracting for new projects, and establishes an electricity regulatory authority (ERA) to regulate tariffs and investment programs and oversee the introduction of technical codes and standards. Initially, the ERA will be a division or department within the MOEP.

11. The electricity law is expected to serve as the foundation for the regulatory framework. At the same time, its usefulness will be limited until it is operationalized by drawing up supporting secondary legislation and setting up the ERA as envisaged under the law. The ERA is expected to play a central role in the strategic development of the power sector (least-cost system expansion; investment planning and financing; fuel and electricity pricing; retailing of electricity in rural areas; and cross subsidization among others) and overseeing implementation of the strategy with its regulatory powers. The government sought ADB’s assistance in drafting and operationalizing the proposed electricity law, including initial capacity building on the principles of electricity regulation.

12. To increase the rural electrification ratio and the supply of electricity to rural areas, the MOEP also requested ADB’s assistance in preparing a new rural electrification law and implementing regulations to streamline the role and function of the ministries, including the state government, and to prioritize the necessary investment and government budget allocation.7

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7 The country’s average electrification grew from about 16% in 2006 to 26% in 2011. Yangon City has the highest electrification ratio (67%), followed by Nay Pyi Taw (54%), Kayar (37%), and Mandalay (31%). The remaining rural areas are still poorly electrified, averaging about 16%. 
III. THE TECHNICAL ASSISTANCE

A. Impact and Outcome

13. The impact of the TA will be power sector reforms initiated. The outcome will be the legal and institutional framework accepted by the government.

B. Methodology and Key Activities

14. The TA will have the following outputs: (i) the draft legal and regulatory framework and institutional arrangements of the power sector are developed; and (ii) institutional arrangements for the establishment of the ERA are finalized. The TA will be carried out in three phases. Phase 1 will include (i) continuous support to the MOEP during the consultation process until the promulgation of the draft electricity law; and (ii) a review of the new electricity law after promulgation and the identification of remaining issues to be included in future revisions of the law, including related regulatory reform models and a proposed rural electrification law. Phase 2 will include (i) drafting of implementing regulations under the revised electricity law and the proposed rural electrification law; (ii) developing a competitive power market as a long-range goal; and (iii) defining the institutional arrangements for establishing the ERA, including its location, organization structure, and staffing. Phase 3 will include drafting of implementing rules and regulations necessary for operating the ERA.

C. Cost and Financing

15. The TA is estimated to cost $900,000 equivalent, of which $850,000 will be financed on a grant basis by the Government of Norway, and administered by ADB. The Government of Myanmar will provide counterpart support in the form of counterfeit staff, office space, reports and documents, secretarial assistance, local communication facilities, and other in-kind contributions.

D. Implementation Arrangements

16. The MOEP will be the executing agency. The TA will establish a steering committee composed of representatives from (i) the generation, transmission, and distribution departments of the MOEP; (ii) the Department of Electric Power and the Department of Hydropower Planning, both of the MOEP; (iii) the Ministry of National Planning and Economic Development; and (iv) the Office of the Attorney General. The MOEP will assign its director general as head of the steering committee, reporting directly to the Minister of the MOEP. Monitoring will be through regular reporting by the consultants, and comments and suggestions from key stakeholders. A series of workshops may be held to discuss progress with institutions, including the MOEP, and to disseminate the TA findings.

17. The TA will be implemented from October 2013 to December 2014. About 40 person-months of consulting services (13 person-months of international consulting services and 27 person-months of national consulting services) will be engaged through a firm using quality- and cost-based selection (quality–cost ratio of 80:20). Consultant engagement will be done in accordance with ADB’s Guidelines on the Use of Consultants (2013, as amended from time to time). The international regulatory expert will act as team leader. The international consultants will be responsible to ADB for the total scope of work. In carrying out their work, the consultants will coordinate with the Japan International Cooperation Agency Resident Office in Yangon from time to time to ensure that the agency’s work on the power development master plan
complements the proposed electricity law, and with the World Bank on the development of a Myanmar national electrification program. The outline terms of reference for consultants are in Appendix 3.

18. Equipment will be procured in accordance with ADB’s Procurement Guidelines (2013, as amended from time to time). On completion of the TA, all equipment will be turned over to the executing agency. Disbursements under the TA will be done in accordance with ADB’s Technical Assistance Disbursement Handbook (2010, as amended from time to time).

19. Several civil society consultations will be held during the revision of the electricity law, the drafting of the new rural electrification law and its implementing regulations. The consultations will be followed by discussions and workshops. The draft laws will be disclosed to the public through electronic media in both the English and Burmese language, as well as through other means appropriate to reaching other interested stakeholders.

IV. THE PRESIDENT’S DECISION

20. The President, acting under the authority delegated by the Board, has approved ADB administering technical assistance not exceeding the equivalent of $850,000 to the Government of Myanmar to be financed on a grant basis by the Government of Norway for Enhancing the Power Sector’s Legal and Regulatory Framework, and hereby reports this action to the Board.
## DESIGN AND MONITORING FRAMEWORK

<table>
<thead>
<tr>
<th>Design Summary</th>
<th>Performance Targets and Indicators with Baselines</th>
<th>Data Sources and Reporting Mechanisms</th>
<th>Assumptions and Risks</th>
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<tbody>
<tr>
<td>Impact</td>
<td>By 2018: Revised electricity law enacted  &lt;br&gt; Regulator (ERA) established</td>
<td>Government publications  &lt;br&gt; ADB country dialogue and consultations</td>
<td>Assumption  &lt;br&gt; Government reform agenda is maintained and sustained. &lt;br&gt; Risk  &lt;br&gt; Policy adoption is weak.</td>
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<tr>
<td>Outcome</td>
<td>By end 2016: Revised electricity law and implementing regulations accepted by Parliament  &lt;br&gt; Draft rural electrification law and implementing regulations acceptable to the government and ADB  &lt;br&gt; Institutional requirements for establishing the ERA accepted by the government</td>
<td>Government and steering committee reports  &lt;br&gt; TA completion report  &lt;br&gt; Feedback from donors and stakeholders</td>
<td>Assumption  &lt;br&gt; Recommended actions are accepted and endorsed by the government and other stakeholders. &lt;br&gt; Risk  &lt;br&gt; There is insufficient support for the TA recommendations by members of Parliament.</td>
</tr>
<tr>
<td>Outputs</td>
<td>By end 2014 Draft implementing regulations for the revised electricity law prepared within 90 days of Parliamentary approval  &lt;br&gt; Draft rural electrification law and its implementing regulations prepared  &lt;br&gt; Organizational structure finalized  &lt;br&gt; Corresponding rules and regulations for establishing the ERA prepared in consultation with the government</td>
<td>Consultant reports  &lt;br&gt; TA progress reports  &lt;br&gt; Stakeholders’ workshop  &lt;br&gt; Mission back-to-office reports and aide-mémoire</td>
<td>Assumptions  &lt;br&gt; Different levels of government are able to agree on proposed legal and regulatory arrangements.  &lt;br&gt; Stakeholders’ interest and engagement are sustained. &lt;br&gt; Risk  &lt;br&gt; Interministerial coordination is weak.</td>
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<td></td>
<td>1. The draft legal and regulatory framework and institutional arrangements developed</td>
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<td>2. Institutional arrangements for the establishment of ERA finalized</td>
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Activities with Milestones

1. **Draft legal and regulatory framework and institutional arrangements developed**
   1.1 Review of existing structure (Nov 2013)
   1.2 Discussion of main findings (Dec 2013)
   1.3 Undertake civil society consultations and organize workshops (Dec 2013–Jan 2014)
   1.4 Drafting of the revised implementing regulations for the revised electricity law (Feb–May 2014)
   1.5 Drafting of the of the proposed rural electrification law and its implementing regulations (April–Sep 2014)
   1.6 Dissemination of the proposed rural electrification law and its implementing regulations (Oct–Nov 2014)

2. **Institutional arrangements for the establishment of ERA finalized**
   2.1 Consultations with stakeholders (Jan 2014)
   2.2 Review of existing arrangements (Feb 2014)
   2.3 Location, staffing, and budgetary requirements defined (April 2014)
   2.4 Defining of institutional arrangements (Mar–Jun 2014)
   2.5 Drafting of regulations for establishing ERA (Jul–Oct 2014)

**Inputs**

**Government of Norway: $850,000**

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<th>Item</th>
<th>Amount ($'000)</th>
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<td>Consultants</td>
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<tr>
<td>Workshops</td>
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<tr>
<td>Equipment</td>
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<tr>
<td>Administrative support</td>
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<tr>
<td>Representative for contract</td>
<td>5.0</td>
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<tr>
<td>negotiations</td>
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<tr>
<td>Contingencies</td>
<td>100.0</td>
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Note: The government will provide counterpart support in the form of counterpart staff, office space, reports and documents, secretarial assistance, local communication facilities, and other in-kind contributions.

ADB = Asian Development Bank, ERA = Electricity Regulatory Authority, TA = technical assistance.
## COST ESTIMATES AND FINANCING PLAN
($'000)

<table>
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<th>Item</th>
<th>Amount</th>
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<tr>
<td><strong>Government of Norway</strong>&lt;sup&gt;a&lt;/sup&gt;</td>
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<tr>
<td>1. Consultants</td>
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<tr>
<td>a. Remuneration and per diem</td>
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<tr>
<td>i. International consultants</td>
<td>420.0</td>
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<td>ii. National consultants</td>
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<td>b. International and local travel</td>
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<td>2. Workshops</td>
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<td>3. Equipment</td>
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<tr>
<td>a. Office equipment, computers and software&lt;sup&gt;b&lt;/sup&gt;</td>
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<td>b. Vehicle hire</td>
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<td>4. Administrative support costs&lt;sup&gt;c&lt;/sup&gt;</td>
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<td>5. Representative for contract negotiations</td>
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<td>6. Contingencies</td>
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<tr>
<td><strong>Total</strong></td>
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Note: The technical assistance (TA) is estimated to cost $900,000 of which contributions from the Government of Norway are presented in the table above. The Government of Myanmar will provide counterpart support in the form of counterpart staff, office space, reports and documents, secretarial assistance, local communication facilities, domestic transport, and other in-kind contributions. The value of the government contribution is estimated to account for 5.55% of the total TA cost.

<sup>a</sup> Administered by the Asian Development Bank (ADB). This amount also includes ADB’s administration fee, audit costs, bank charges, and a provision for foreign exchange fluctuations (if any), to the extent that these items are not covered by the interest and investment income earned on this grant, or any additional grant from the Government of Myanmar.

<sup>b</sup> Five desktop computers, two printers, and three faxes. On the completion date, all equipment will be turned over to the Ministry of Electric Power.

<sup>c</sup> The miscellaneous administration and support costs also include costs associated with any translation of the draft law into the Burmese language.

Source: Asian Development Bank estimates.
OUTLINE TERMS OF REFERENCE FOR CONSULTANTS

A. Scope of Work

1. The scope of work is divided into three phases.

2. Phase 1 will cover the review of the Electricity Law (1984), the draft electricity law 2013, the Electricity Rules (1985), the Asian Development Bank (ADB) energy sector initial assessment, and related regulatory structures within the region and elsewhere to propose regulatory reform models for government consideration. Task will include the following:

   (i) Review existing ADB material, including work under the regional TA for Enhancing Effective Regulation of Water and Energy Utilities,\(^1\) and conduct workshops to present and assess relevant regulatory reform models potentially applicable in Myanmar. The work to be performed shall include the following:

   (a) Review ADB’s Myanmar Energy Sector Initial Assessment, the Electricity Act 1948 (as amended in 1967), the Myanmar Electricity Law (1984), Electricity Rules (1985), the draft electricity law 2013, and other government plans; and undertake research on existing electricity law and regulatory structures.

   (b) Based on item (a), prepare presentation materials for consultations, subsequent discussions, and workshops involving civil society stakeholders, government officials, and development partners to highlight 3–4 possible regulatory reform models from the region, e.g., from the Lao People’s Democratic Republic, Malaysia, Thailand, and Viet Nam, and present an appropriate model for Myanmar government officials to consider, if needed.

   (c) Incorporate provisions for the draft electricity law, such as (i) overall control and operation of electricity in the country; (ii) establishment of an electricity regulator; (iii) private sector participation in both large-scale generation and small-scale off-grid projects for rural electrification; (iv) cross-border power trading, (v) third-party access to the grid; (vi) licenses for private sector participation and contractual arrangements between the government, operators, and service providers; and (vii) review of themes such as public–private partnerships, community participation in electricity supply as part of renewable energy, feed-in tariffs, demand-based management, and energy efficiency.

   (d) Hold consultations and subsequent discussions and workshops with civil society stakeholders, government officials, and development partners regarding electricity sector issues to ensure that their views are taken into account when considering appropriate policy measures.

   (ii) Review existing materials on Myanmar’s energy sector, research other relevant materials, and conduct workshops to assess possible models of rural

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electrification for Myanmar to propose a new rural electrification law and corresponding implementing regulations. The work to be performed shall include the following:

(a) Review ADB reports and energy sector assessments and undertake background research on rural electrification models in Brazil, the People’s Republic of China, the Lao People’s Democratic Republic, the Philippines, and Viet Nam. Based on this review and research work, conduct a workshop to highlight two or three possible models of rural electrification that may be appropriate in the Myanmar context.

(b) Once the government has selected a rural electrification model, draft the regulations and implementing guidelines for rural electrification.

(c) Enable local authorities to invest in small grids and enable rural electrification within their franchise areas, or allow private companies to invest in localized generation and distribution.

(d) Propose a new rural electrification law and corresponding implementing regulations suitable to Myanmar.

3. Phase 2 will cover the preparation of implementing regulations for a revised electricity law and draft rural electrification law; development of a competitive power market as a long-range goal; and identification of institutional arrangements and roles for the location, structure, and staffing of the Electricity Regulatory Authority (ERA). Tasks will include the following:

(i) Assist the Ministry of Electric Power (MOEP) in preparing the implementing regulations to facilitate implementation of the revised electricity law; including translation into the local language; various civil society consultations; and subsequent discussions and workshops involving civil society stakeholders, government officials, and development partners to meet the requirements of the government and Parliament.

(ii) Assist the MOEP in preparing the implementing regulations for the proposed rural electrification law, including translation into the local language; and hold civil society consultations and subsequent discussions and workshops involving civil society stakeholders, government officials, and development partners to meet the requirements of the government and Parliament.2

(iii) Discuss the appropriate transparent regulatory reform model in long-range terms, including the following issues:

(a) The purpose of the law, i.e., to govern and establish a framework for the supply of electric power; and the principles of the law, including operations in the electricity industry and activities of licensees in the provision of electricity services; establishment of favorable conditions for investments in, and commercial operation of, the electric power industry; regulation of the supply of electric power; promotion of the rights of consumers to receive reliable and adequate power services at reasonable

2 In particular, women’s organizations and other civil society organizations will be consulted.
cost; establishment of competition; granting of rights and obligations; penalizing of suppliers and consumers of electricity, the public, and land owners in relation to electricity and supply facilities; establishment of the ERA; establishment of a rural electrification agency of Myanmar, if needed, or suggest other appropriate structures to promote rural electrification and regulate third party access to the transmission network; contractual arrangements between the government and state-owned enterprises or provincial bodies; environmental and social considerations; and the use of land.

(b) The framework for electric power supply and services, including the designation of an authority for policy making; the use of primary energy sources; the regulatory responsibilities of the ERA; the operational responsibilities of the MOEP (generation), the Yangon Electricity Supply Board, the Electricity Supply Enterprise, and the Myanmar Electricity Transmission Enterprise, and any licensed independent power producer; the overall basis for power conservation; and policy and regulation of the supply of electric power services throughout Myanmar.

(c) Institutional arrangements necessary for undertaking electricity operations and the roles and responsibilities between the central government and provincial and local authorities as applicable.

(d) Institutional arrangements for the establishment of the ERA. The ERA shall be an independent regulatory agency, with transparency (public disclosure requirements); public participation (in regulatory decision making); accountability (to Parliament and through reports); and credibility, legitimacy, and integrity. The ERA shall have rights and obligations to regulate access to electricity the service quality of electricity providers; transmission tariffs; mechanisms for electricity pricing decisions; licensing, including the issue, revision, revocation, or denial of licenses; accounting and reporting; efficiency; financial performance; investment and maintenance; equity (affordability, access, and quality); environmental sustainability, including as required any renewable energy issues; and market composition and competition.

(e) Third-party access to the electricity transmission network and principles for permitting private sector participation in electricity generation.

4. Phases 1 and 2 will be completed within 12 calendar months of the commencement of the TA.

5. Phase 3 will cover the drafting of implementing guidelines including the proposed location, staffing, and budget, as well as regulations for the institutional arrangements necessary for the establishment of the ERA. Phase 3 will commence after the draft rural electrification law has been completed and preliminary requirements for establishing the ERA have been identified.

6. The implementing guidelines and regulations may include a tariff-setting formula and tariff structure for different categories of consumers; procedures for granting and issuance of licenses, conditions for the granting and removal of licenses; the management of grid codes; the
Appendix 3

rights and obligations of electricity providers and users; consumer complaints; theft and illegal connections; connections and disconnections; safety and technical standards; competition in generation; renewable energy and demand- and supply-side management for utility operators; requirements for major electrical work, including maintenance; licensing of electricians, including the establishment of offenses and penalties; rights to access generators and end-users' property; transparency and disclosure standards; and other matters relevant to the Electricity Act 1948.

B. Consulting Services

1. **International regulatory expert cum team leader** (10 person-months)

7. The international regulatory expert will take primary responsibility for delivering the scope of work, reviewing the revised electricity law, and making suggestions for the next revision; as well as drafting the proposed rural electrification law, and organizing and administering consultations with civil society stakeholders, including subsequent discussions and workshops. The expert should have a sound legal background and understanding of the power sector, and solid experience in the drafting of power legislation. The expert should have at least 15 years of experience in legal, regulatory, and institutional aspects of the power sector. Experience in drafting electricity law and regulation would be advantageous. In addition, the expert should have experience in the design and implementation of consultation methodologies in the energy sector, preferably in Myanmar.

2. **National regulatory expert** (12 person-months)

8. The national regulatory expert will support the team leader and other team members by providing information on local laws, translating local material, and convening the multi-stakeholder workshops. The expert should have a sound legal background and understanding of the power sector; and at least 10 years of experience in the legal, regulatory, and institutional aspects of the power sector in Myanmar.

3. **International power engineer** (3 person-months)

9. The international power engineer will review existing technical standards and their enforcement, and will determine what new technical specifications need to be included in the new electricity law. The engineer will provide technical inputs to the legal team to ensure that (i) there is interface between generation plants and interconnection, (ii) regulations are covered within the electricity law, and (iii) there is provision to allow for future renewable energy interface with the grid. The engineer should have a strong background in power generation, transmission, and distribution, and must have at least 15 years of relevant experience.

4. **National power engineer** (3 person-months)

10. The national power engineer will provide an update on existing technical standards and how these standards are currently applied. He or she will assist the international power engineer in developing appropriate new technical standards and procedures that will be considered in the revised electricity law and in future amendments and revisions. The engineer should have a strong background in power generation, transmission, and distribution, and must have at least 15 years of relevant experience.
5. National administrative assistant (12 person-months)

11. The national administrative assistant will be based in Nay Pyi Taw and will help coordinate meetings with government, development partners, and civil society. The administrative assistant will facilitate logistics for field visits, organize stakeholder meetings, and others. The administrative assistant should have a bachelor's degree and must have at least 5 years of administrative coordination experience.

C. Reporting Requirements

12. A total of 40 person-months of consultancy inputs is envisaged, comprising of 13 person-months of international consultant inputs and 27 person-months of national consultant inputs. The consultants will submit the following reports:

(i) An inception report, within 1.5 months of commencing the study, indicating the scope and coverage of the TA. The inception report shall be provided to ADB and the MOEP in English 4 weeks after commencement of the work. It should contain the revised project plan and any observations concerning matters that may affect successful completion of the project, or additional work required to satisfy the objectives. The consultants should also consider the feasibility of preparing the draft law in the Burmese language if required for parliamentary discussions and approval.

(ii) An interim report, within 6 months of commencing the study, containing an assessment of the existing legal and regulatory environment; the detailed content of the revised electricity law, implementing regulations, and possible future revisions and amendments; and a draft of the proposed rural electrification law.

(iii) A draft final report, within 12 months of commencing the study, containing implementing regulations of the proposed rural electrification law and detailed institutional arrangements for the establishment of the ERA. The draft final report should include a chapter with well-documented minutes of the consultation workshops. The final report is to be submitted 1 month after comments on the draft final report have been received. The draft of the rural electrification law should be in a format for translation and submission to the cabinet. The reports shall be produced over a maximum period of 12 months inclusive of the ministerial approval process, but excluding any required parliamentary approval required.