

CONCEPT PAPER

Title: Philippines – The Electricity Market and Transmission Development Project

Date: 18 June 2002

<p>1. Type/modality of assistance</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Lending <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Project loan <input type="checkbox"/> Program loan <input type="checkbox"/> Sector loan <input type="checkbox"/> Sector development program loan <input type="checkbox"/> Other <input checked="" type="checkbox"/> Nonlending <ul style="list-style-type: none"> <input type="checkbox"/> Project preparatory <input type="checkbox"/> Other than project preparatory <ul style="list-style-type: none"> <input type="checkbox"/> Economic, thematic, and sector work <input checked="" type="checkbox"/> Institutional development <input type="checkbox"/> Other: <input type="checkbox"/> Activities financed by JFICT or JFPR 		
<p>2. Assistance Focus</p> <p>a. If assistance focuses on a particular sector or subsector, specify the Sector: Energy Subsector: Power</p> <p>b. For project preparatory and lending, classification</p> <ul style="list-style-type: none"> <input type="checkbox"/> Core poverty intervention <input type="checkbox"/> Poverty intervention <p>c. Key thematic area</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Economic growth <input type="checkbox"/> Gender and development <input type="checkbox"/> Environmental protection <input type="checkbox"/> Regional cooperation <input type="checkbox"/> Other: </td> <td style="width: 50%; vertical-align: top;"> <ul style="list-style-type: none"> <input type="checkbox"/> Human development <input type="checkbox"/> Good governance <input checked="" type="checkbox"/> Private sector development <input type="checkbox"/> Social protection </td> </tr> </table>	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Economic growth <input type="checkbox"/> Gender and development <input type="checkbox"/> Environmental protection <input type="checkbox"/> Regional cooperation <input type="checkbox"/> Other: 	<ul style="list-style-type: none"> <input type="checkbox"/> Human development <input type="checkbox"/> Good governance <input checked="" type="checkbox"/> Private sector development <input type="checkbox"/> Social protection
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<p>3. Coverage</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Country <input type="checkbox"/> Subregional <input type="checkbox"/> Interregional <input type="checkbox"/> Internal policy development 		
<p>4. Responsible division/department: SEID/SERD</p>		
<p>5. Responsible ADB officer: Yongping Zhai</p>		
<p>6. Description of assistance</p> <p>a. Background/linkage to country/regional strategy:</p> <p>The Government's policy in the sector is to ensure and accelerate the total electrification of the country with transparent and reasonable prices of electricity to enhance the competitiveness of Philippine products in the global market. The enactment of the Electric Power Industry Reform Act paves way for the power sector's major restructuring towards a market with retail competition and open access in 2004. Such a market requires, as a prerequisite, a power trading and pooling system and adequate transmission networks.</p>		

b. Goal and purpose:

The objective of the Project is to develop the necessary system and infrastructure to support the power sector restructuring, i.e. (i) to establish the Wholesale Electricity Spot Market (WESM), which will allow electricity generation to be dispatched on a competitive basis to meet the power demand at a lower cost; and (ii) to reinforce and upgrade the critical transmission lines and substations in Luzon and Mindanao, which will improve the reliability of the power supply, and help expand rural electrification.

c. Components, outputs, specific deliverables:

The Project consists of Part A - the Wholesale Electricity Spot Market (WESM) and Part B-Transmission Reinforcement. Part A includes procurement and installation the WESM hardware, software and system integration. Part B includes (i) Luzon transmission line upgrading; and (ii) Mindanao substation expansion.

Part A. WESM

This subproject will develop the power trading and pooling system software and provide the required computer hardware to control and process transactions and functions associated with the competitive electricity market. TRANSCO envisions a turnkey contract, which will cover system development; hardware and software specification, acquisition and installation; system installation, implementation and testing; and the training of operators in the use of the new system. Consulting services are required to (i) supervise the performance of the turnkey contractor with regard to software design and hardware acquisition, and subproject implementation; (ii) perform quality control functions; and (iii) supervise and assist in the installation and commissioning phases of the subproject. The implementation of such an operational system is on the critical path for release of the third tranche of the PSRP loan.

Part B – Transmission Reinforcement**(i) Luzon Transmission Upgrading**

This component consists of procurement and erection of lines and substation equipment to reinforce and upgrade the existing 230 kilovolt (kV) overhead transmission network in Luzon to increase the transfer capacities to accommodate planned generation additions and the load growth in the concerned provinces. The San Miguel-Conception (80 km) and Conception-Mexico (37 km) lines will be upgraded from single circuit-single conductor to double circuit-bundle of two conductors. The associated substations will also be upgraded as necessary.

(ii) Mindanao Substation Expansion

This component consists of procurement and installation of 6 nos of 138/69 kV power transformers with total capacity of 475 megavolt-ampere (MVA), 9 nos of 138 kV and 18 nos of 69 kV power circuit breakers (PCB) in Davao, Bislig, Butuan, Kibawe, Sta. Clara and Tindalo.

d. Expected results and deliverables:

Part A: The Wholesale Electricity Spot Market will be established and become operational by June 2004.

Part B: The transmission networks in Luzon and Mindanao will be reinforced to improve the reliability of the power supply.

e. Social or environmental issues or concerns:

The equipment procured under Part A of the Project will be installed inside the TRANSCO's existing compound in Diliman, Quezon City. Therefore, Part A will not have adverse environmental impacts. Transmission components under Part B are classified as Environment Category B.

Although the Luzon transmission line-upgrading subproject will utilize an existing right-of-way, it also involves land acquisition for transmission tower foundation sites. On the basis of the feedback received from the affected communities and the results of the socio-economic surveys, TRANSCO has prepared a Resettlement Plan for Luzon Transmission Upgrading in order to facilitate the payment of relocation and compensation. ADB conducted field inspections, and made appropriate recommendations to TRANSCO concerning implementation of the plan. The Resettlement Plan and the process used to formulate it have

<p>been reviewed and are in compliance with <i>ADB's Policy on Involuntary Resettlement</i>.</p> <p>f. Plans for disseminating results/deliverables:</p> <p>A web site for the WESM will be made available for the general public.</p>																															
<p>7. Proposed executing/implementing agencies:</p> <p>National Transmission Corporation (TRANSCO)</p>																															
<p>8. Nature/extent of government/beneficiary involvement in identifying or conceptualizing the assistance:</p> <p>For Part A, The Electric Power Industry Reform Act (EPIRA), which became effective in June 2001, requires that establishment of a WESM composed of the wholesale electricity spot market participants. This is also a condition for the third tranche release of the ADB Power Sector Restructuring Program. The World Bank is financing an interim market system for WESM to cope with the initial need of a competitive power market. The proposed ADB Project will finance the final market system of WESM.</p> <p>For Part B, all components are included in the Government approved Transmission Development Plan. Project presentations have been made to affected people and communities in the project areas.</p>																															
<p>9. Timetable for assistance design, processing, and implementation</p> <p>a. Year included in CSP, CSP update, SCSP, SCSP update, or interregional work plan:</p> <p>2002</p> <p>b. Expected date of submission for approval</p> <p>Lending: November 2002</p> <p>Nonlending (project preparatory): none</p> <p>Nonlending (other than project preparatory): Piggy-backed TA, November 2002</p> <p>Activities financed by JFICT or JFPR: none</p> <p>c. Period and duration of assistance</p> <p>Lending:</p> <p style="padding-left: 40px;">The Project will start in January 2003 with June 2004 as the target completion date for Part A (WESM) and 30 June 2006 for Part B (transmission components).</p> <p>Nonlending:</p> <p style="padding-left: 40px;">The piggy-backed TA will start in January 2003 and be implemented over a period of 12 months.</p>																															
<p>10. Financing Plan</p> <p>a. For lending</p> <p><input checked="" type="checkbox"/> Ordinary capital resources: \$ 40 million</p> <p><input type="checkbox"/> Asian Development Fund:</p> <p><input checked="" type="checkbox"/> Other- JBIC \$40 million</p>																															
<p>Cost Estimates</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align: center;">Foreign Cost</th> <th style="text-align: center;">Local Cost</th> <th style="text-align: center;">Total</th> </tr> </thead> <tbody> <tr> <td>Part A</td> <td style="text-align: center;">23.0</td> <td style="text-align: center;">2.0</td> <td style="text-align: center;">25.0</td> </tr> <tr> <td>Part B</td> <td></td> <td></td> <td></td> </tr> <tr> <td style="padding-left: 20px;">Luzon T/L Upgrading</td> <td style="text-align: center;">26.0</td> <td style="text-align: center;">12.0</td> <td style="text-align: center;">38.0</td> </tr> <tr> <td style="padding-left: 20px;">Mindanao S/S Expansion</td> <td style="text-align: center;">12.0</td> <td style="text-align: center;">2.0</td> <td style="text-align: center;">14.0</td> </tr> <tr> <td style="padding-left: 20px;">Contingencies & IDC</td> <td style="text-align: center;">19.0</td> <td style="text-align: center;">4.0</td> <td style="text-align: center;">23.0</td> </tr> <tr> <td style="padding-left: 20px;">Total</td> <td style="text-align: center;">80.0</td> <td style="text-align: center;">20.0</td> <td style="text-align: center;">100.0</td> </tr> </tbody> </table>					Foreign Cost	Local Cost	Total	Part A	23.0	2.0	25.0	Part B				Luzon T/L Upgrading	26.0	12.0	38.0	Mindanao S/S Expansion	12.0	2.0	14.0	Contingencies & IDC	19.0	4.0	23.0	Total	80.0	20.0	100.0
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- b. For nonlending
- No resources required, other than ADB staff
 - ADB's administrative budget:
 - Grant TA funds
 - TA Special Fund: \$ 800,000
 - Japan Special Fund:
 - Other

Technical assistance (TA) will be provided by ADB as a grant to assist Government in ensuring the transition from the current regulated market to a competitive electricity market. Specifically, the TA will (i) develop an implementation plan for the selection of an independent market operator (IMO) for WESM; (ii) conduct industry consultation process; (iii) prepare tender documents for the selection of IMO and (iv) conduct public education campaign and setting up a WESM web site for the general public.

CSP = country strategy and program, JFICT = Japan Fund for Information and Communication Technology, JFPR = Japan Fund for Poverty Reduction, SCSP = subregional cooperation strategy and program