



Concept Paper

Project Number: 42362-013
December 2011

Indonesia: Java-Bali 500 kV Power Transmission Crossing Project

Asian Development Bank

I. THE PROJECT

A. Rationale

1. The project will provide a \$185 million loan to the Government of Indonesia to support its efforts in improving the power supply in Bali Island by constructing a 227 kilometer (km) long extra high voltage (500 kilovolt [kV]) overhead transmission line from East Java to Bali and associated substations. The project preparatory technical assistance (PPTA) concept paper was approved by the Management in October 2009.¹ The PPTA has been underway since January 2010 and the final report will be submitted by end December 2011.

2. Infrastructure development is a key component of Indonesia's Medium Term Development Plan (RPJMN) 2010–2014. With the aim of transforming Indonesia into a developed country by 2025, the Government in May 2011 launched a 14-year master plan for accelerating economic development in Indonesia.² It integrates three main elements: (i) developing regional economic potential in six economic corridors;³ (ii) strengthening national connectivity locally and internationally; and (iii) strengthening human resource capacity, and national science and technology to support the development of key programs in every economic corridor. Infrastructure development, especially the electricity infrastructure is essential to support connectivity required in the development activities of each sector identified in this master plan.

3. Power shortage is a critical infrastructure constraint throughout the country. The current peak demand of the country averages 27,000 megawatt (MW) and is expected to grow at an average rate of 9.4% up to 2019.⁴ Current average electrification level is around 67% and the Government aims to increase the average electrification level to 90% by 2020. The Java-Bali region accounts for 60% of Indonesia's gross domestic product (GDP), but consumes about 80% of the total electricity consumption of the country.

4. Bali is a famous tourist and cultural destination and given that tourism accounts for 6% of the GDP of the country, the Government has given priority to its infrastructure development. The tourism industry generates 67% of Bali's gross regional domestic product and about 70% of the island's residents are directly or indirectly dependent on this activity. About 46% of the total energy consumption in Bali is in the commercial sector. Electricity demand in Bali averaged around 550 MW in 2010 and is expected to grow to about 2,300 MW by 2025 according to the load forecast of PT (Persero) Perusahaan Listrik Negara (PLN), State Electricity Corporation. The current aggregate supply capacity in Bali is only 632 MW and the reserve margin is very low (<15%). In addition, the capacity of the transmission network is limited due to lack of investments in the past. Low reserve margin coupled with transmission bottlenecks, the Bali power system has suffered from power outages and blackouts that take an average of 2-3 hours to restore. The projected demand growth in Bali is 10%, which is higher than the projected growth in Java which is 9.7%. The current and planned generation capacity in Bali Island is not sufficient to meet the future demand.

5. At present, construction of new thermal power stations in Bali is restricted as the provincial government has classified Bali as an environmentally protected area. Power consumption in Bali is approximately 2.5% of the total consumption of Java and Bali hence in the medium-term, new generation in Bali is also not the most techno-economically feasible option compared to transmission of power from Java to Bali. Hence, transmission of power from East Java to Bali at 500 kV level has been identified as the optimal option by PLN through power system

¹ ADB. 2009. *Java-Bali 500 kV Power Transmission Crossing Project Preparatory Technical Assistance Concept Paper*. Manila

² Coordinating Ministry for Economic Affairs. 2011. *Masterplan Percepatan dan Perluasan Pembangunan Ekonomi Indonesia (MP3EI)* (Acceleration and Expansion of Indonesia Economic Development) 2011-2025. Jakarta.

³ The six corridors includes Sumatra, Java, Kalimantan, Sulawesi, Bali-Nusa Tenggara and Papua-Kepulauan Maluku.

⁴ PLN. *Power Development Plan (RUPTL) 2010-2019*. Jakarta

studies and the Government has decided to construct a 500 kV, double circuit overhead power transmission line with a capacity to transmit 1,500 MW between Java and Bali. The Project is an outcome of the long-term transmission development plan and is included in the power development plan of PLN (footnote 4). The Project has been endorsed by the Government and is included in the Planning Ministry's (BAPPENAS)⁵ Bluebook for external funding.

6. The Project is in line with the Indonesia Country Partnership Strategy (CPS)⁶ and Assessment, Strategy and Roadmap (ASR) for Indonesia that supports infrastructure development to address bottlenecks in the energy sector. ADB's strategy in the energy sector emphasizes the assistance in power transmission projects that will link different islands to reduce the overall reserve requirements, improve system reliability, remove transmission bottlenecks and transmit comparatively cheaper power from one area to the other or cross-border interconnections where both countries will benefit from power trading. The Project is listed in the Country Operations Business Plan (COBP) 2011-2015 with loan approval targeted for 2012.⁷

7. ADB has a long relationship with the Government and PLN. ADB has financed over 30 power projects totaling about \$3.4 billion and 36 technical assistance (TA) projects totaling about \$14 million focusing on power generation and transmission sectors. In the transmission sector, ADB has provided strategic investments including a TA to study the West Kalimantan-Sarawak Interconnection.⁸ In addition to the proposed project, other transmission projects in the pipeline are the Grid Reinforcement in West Kalimantan project and the Melaka-Pekan Baru interconnections. There is an ongoing construction of high-voltage direct current (HVDC) 500 kV double-circuit undersea transmission line between Java and Sumatra financed by Japan International Corporation Agency (JICA) that will evacuate 3,000 MW by 2016. Hence the Project will strengthen the power transmission system by connecting Bali island at 500 kV to the transmission grid, thus facilitating efficient utilization of existing and planned power plants in Java. This would enable transmitting comparatively cheaper power to Bali from the large power plants in East Java with lower technical losses.⁹ It would contribute to the long-term energy security in Bali and ensures provision of adequate and reliable power supply which is vital for economic development activities identified in Bali under the recently developed "14-year master plan for accelerating economic development in Indonesia" (footnote 2). In addition, ADB's involvement in the Project will ensure strict compliance of design and implementation of safeguards requirements in accordance with ADB safeguards policy and it is envisaged to assist the Government institutions in strengthening the institutional capacity to ensure smooth implementation of its projects.

B. Impact, Outcome, and Outputs

8. The impact of the Project will be long-term energy supply security to support sustained socio-economic growth and the outcome will be expansion of Java-Bali power transmission system.

9. The overall project outputs will be; expansion of 500 kV and 150 kV transmission networks, expansion of 500/150/20 kV substations and project management covering six project components: (i) Extension of existing 500/150 kV substation in East Java; (ii) 114 km of 500 kV and 17 km of combined 500 kV and 150 kV overhead (OH) transmission lines in East Java; (iii) 4 km of 500 kV OH transmission line sea crossing at Bali Strait; (iv) 16 km of 500 kV OH transmission line in Bali; (v) 76 km of combined 500 kV and 150 kV OH transmission line in Bali and (vi) New 500/150/20 kV, 2x500 MVA substation in Bali.

⁵ BAPPENAS is the National Planning & Development Agency of Indonesia.

⁶ ADB. 2011. *Indonesia Country Partnership Strategy*. Manila.

⁷ ADB. 2011. *Indonesia Country Operations Business Plan (2011-2015)*. Manila.

⁸ ADB. 2004. TA 6174-REG: *Support to Strategize Regional Cooperation in Southeast Asia*. Manila.

⁹ Technical losses are less in 500 kV transmission compared to 150 kV and 275 kV which are the standard high voltage transmission voltages in Indonesia

C. Investment and Financing Plans

10. The total estimated cost of the project is \$458 million; of which ADB will provide \$185 million from the Ordinary Capital Resources, IsDB \$84 million and PLN \$190 million. ADB will finance components 1, 2 and 6; IsDB will finance component 5; and components 3 and 4 by the Government. The financing plan is provided in Table 1.

Table 1: Tentative Financing Plan

Source	Amount (\$ million)	Share of Total (%)
Asian Development Bank (ordinary capital resources)	185	40.4
Islamic Development Bank	84	18.1
Indonesian Government	190	41.5
Total	458	100.0

D. Indicative Implementation Arrangements

11. PLN will be the Executing Agency (EA). A senior staff member of PLN has been appointed to assume overall responsibility of the Project. A project management unit (PMU) headed by a full-time project director and supported by administrative staff has been established for assisting the overall supervision.

12. A tentative procurement plan has been prepared in accordance with the financing plan. The procurement method will be turn-key international competitive bidding except one project component which is turn-key national competitive bidding funded by the Government. Bidding documents will be carefully reviewed by ADB and overall performance will be monitored through engagement of qualified implementation consultants. Advance action for recruitment of implementation consultants and procurement will be used. Implementation consultants will be selected and engaged in accordance with ADB's *Guidelines on the Use of Consultants* (2010, as amended from time to time) and disbursements will be done according to ADB's *Loan Disbursement Handbook* (2007, as amended from time to time).

II. DUE DILIGENCE REQUIRED

13. Under the PPTA a consulting firm has been engaged to conduct the due diligence covering technical, economic and financial, poverty and social, and safeguards aspects. PLN has sound technical capacity in implementing electricity sector projects. PLN awarded the contract for the construction of 4 km overhead transmission crossing across the Bali Strait in October 2011. Proper design of this power crossing that involves two high towers of about 376m height is critical which will be the world's tallest power pylons when completed. There are other similar power crossings with high towers in the world with proven technology¹⁰ but technical due diligence under the PPTA will be undertaken to identify risks, if any, associated with this project component.

14. Thorough due diligence is being conducted in safeguards, since the line traverses across densely populated areas, buffer zones of natural parks and forest areas. Under the PPTA, an Environmental Impact Assessment (EIA) is being prepared. PLN also has made arrangements to prepare separately an Environmental Impact Assessment (AMDAL) and is coordinating with the respective government authorities in obtaining the necessary approvals before commencing construction works. Land acquisition and resettlement impacts have been identified and a land acquisition and resettlement plan (LARP) is being prepared. As per LARP, approximately 1,210

¹⁰ Jiangyin Crossing - 346 meters (m), PRC; Nanjing Crossing - 257m, PRC; Orinoco Crossing - 240m, Venezuela; Zhujiang Crossing - 235m, PRC; Wuhu Crossing - 229m, PRC; Elbe Crossing - 227m, Germany; Chusi Crossing - 226m, Japan; Osaki Channel Crossing-223m, Japan; Suez Canal Crossing-221m, Egypt; and Lingbei Crossing - 214m, Japan.

households will be affected out of which around 380 households will be severely affected by the Project. Impacts on ethnic minorities or indigenous people is not expected as per the ongoing due diligence.

15. The project's financial and economic internal rates are estimated at 17.2% (post-tax) and 21.2% respectively. Risks are associated with obtaining timely approvals from the Ministry of Forestry, Ministry of Environment and the Provincial Authorities for the construction of the transmission line, and implementation of LARP. Any disparity of investments in power generation, transmission, and distribution may result in some of the transmission interconnection capacity not operating at full capacity.

III. PROCESSING PLAN

A. Risk Categorization

16. The project is classified as a complex project since it is involuntary resettlement category "A" project.

B. Resource Requirements

17. The Project will be overseen by a team from the ADB comprising the following specialists: Mission Leader (4 person-months); Financial Specialist (1 person-month); Transmission Specialist (2 person-months); Environmental Specialist (2 person-months); Social and Resettlement Specialist (4 person-months); Economist (1 person-month); Procurement Specialist (1 person-month); and Legal Counsel (1 person-month).

C. Processing Schedule

18. The following processing schedule is proposed for processing the project.

Table 4: Proposed Processing Schedule

Milestones	Expected Completion Date	
Approval of Project Concept	December	2011
PPTA Final Report	December	2011
Reconnaissance Mission	January	2012
Draft RRP	February	2012
Loan Fact- Finding Mission	March	2012
Management Review Meeting	April	2012
Loan Negotiations	May	2012
Board Circulation	July	2012
Board Approval	August	2012
Loan Effectiveness	December	2012

IV. KEY ISSUES

19. The main issues with the proposed transmission line and substations are mainly related to compliance with safeguard requirements including obtaining the right of way, land acquisition, resettlement and environmental impact mitigation. On the environmental front, there is a section of the transmission line that traverses across the utilization zone of the Bali national park, where there is already an existing 150 kV transmission line. Although PLN has received support from the Governor of Bali for the Project, the Ministry of Forestry and the Ministry of Environment approvals are pending. On the social issues, the Project is involuntary resettlement category "A" project and ADB involvement is envisaged in the implementation of the LARP and environmental impact mitigation plan. Detailed LARP and EIA report are being prepared as part of the PPTA. A capacity building program, which will supplement this project on Safeguards aspects, will be implemented under the regional technical assistance on Strengthening and Use of Safeguards Systems, in parallel to the project.¹¹

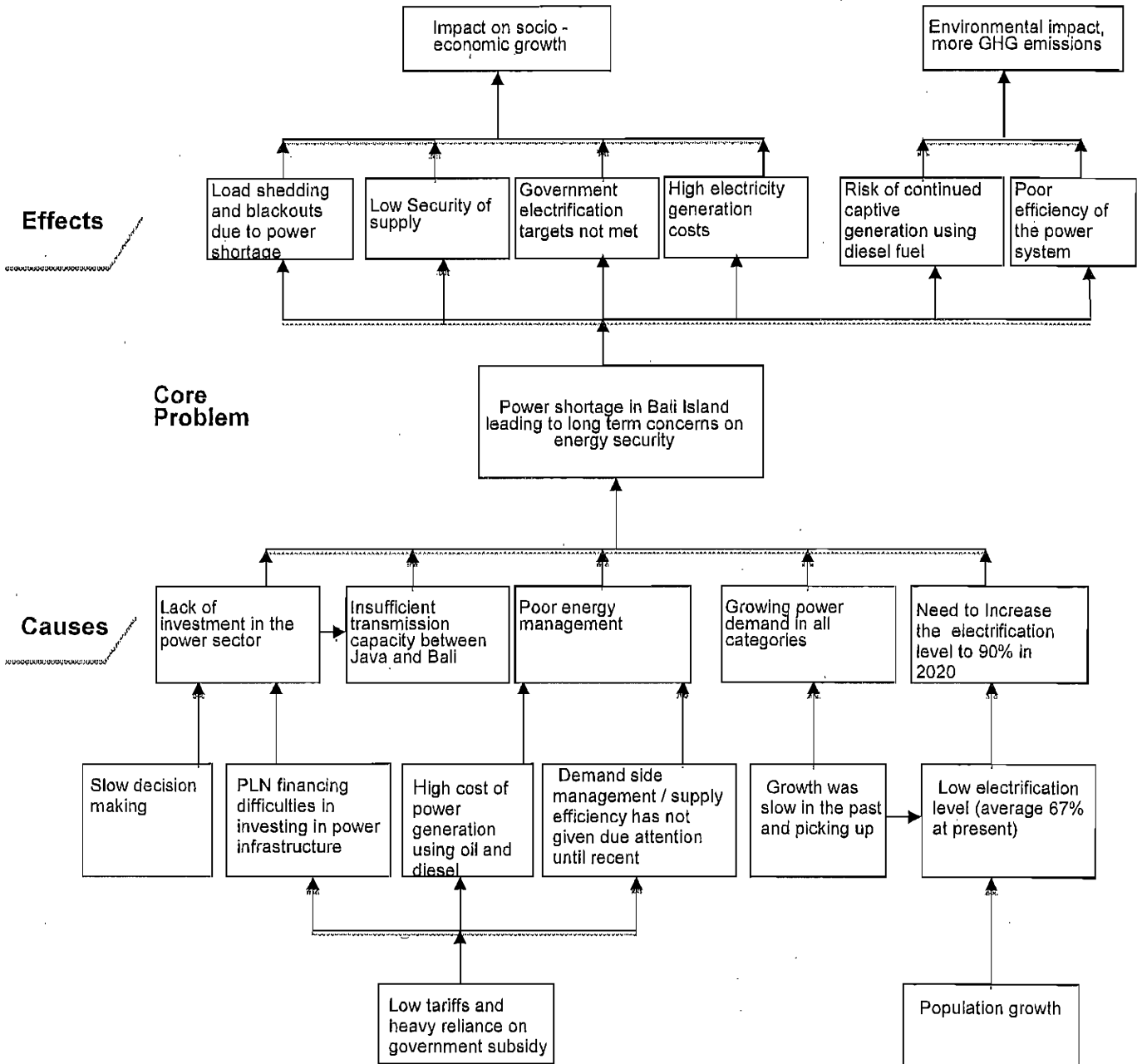
¹¹ ADB. 2010. *Technical Assistance for Strengthening and Use of Country Safeguard Systems (TA7566-REG)*. Manila

BASIC PROJECT INFORMATION

Aspects	Arrangements		
Modality	Sector Loan		
Financing	Source	Funding \$ million	%
	ADB (OCR)	185	40.4
	IsDB	84	18.1
	PLN	190	41.5
	Total	458	100.0
COBP/RCOBP	ADB. 2010. Indonesia Country Operations Business Plan, 2011–2013. Manila.		
Classification	Sector (subsectors): Energy		
	Themes (subthemes): Sustainable Economic growth		
	Targeting classification: General Intervention		
	Gender mainstreaming category: No gender elements		
	Location impact: Urban (high), National (medium), Rural (low)		
	Safeguards: Indicative classifications for Environment (B), Involuntary resettlement (A), Indigenous peoples (C).		
Risk categorization	Complex		
Partnership(s)	IsDB as co-financier		
Use of a PBA	NA		
Parallel PIU	NA		
Department and division	SERD/SEEN		
Mission leader and members	<p>Aruna Wanniachchi, Senior Energy Specialist, SEEN Ross Butler, Safeguards (Resettlement) Specialist, SEEN Genandrialine Peralta, Environmental Specialist, SEEN Ma. Elisa B. Paterno, Financial Specialist, SEEN Daniela Schmidt, Young Professional (Economic Analysis), SEEN Pradeep Tharakan, Climate Change Specialist (Mitigation), SEEN Bagus Mudiantoro, Project Officer (Infrastructure), IRM</p>		

ADB = Asian Development Bank; IRM = Indonesia Resident Mission; IsDB = Islamic Development Bank; PLN = Perusahaan Listrik Negara, COBP = country operations business plan, unit; RCOBP = regional cooperation operations business plan; OCR = ordinary capital resources; PBA = programmatic based approach; PIU = project implementation; SERD = Southeast Asia Regional Department; SEEN = Southeast Asia Energy Division

PROBLEM TREE



PRELIMINARY DESIGN AND MONITORING FRAMEWORK

Design Summary	Performance Targets and Indicators with Baselines	Data Sources and Reporting Mechanisms	Assumptions and Risks
<p>Impact Long-term energy supply security to support sustained socio-economic growth</p>	<ul style="list-style-type: none"> - Projected power demand in Bali Island; 850 MW in 2015 and 2300 MW in 2025 met Baseline: 550 MW in 2010 - Bringing down Loss of Load Probability to 0.274%, which is equivalent to 1 day/year of power interruption Baseline: Loss of load probability is around 9% in 2010 	<p>Power development plan (RUPTL) of PLN</p> <p>Statistics produced by PLN</p>	<p>Assumptions</p> <ul style="list-style-type: none"> - The planned distribution network rehabilitation, development and expansion projects in Bali implemented in parallel
<p>Outcome Expansion of Java-Bali power transmission system</p>	<ul style="list-style-type: none"> - Power transmission capacity between Java and Bali islands increased by 1500 MW by 2015 Baseline: 200 MW in 2010 	<p>Operation records and annual reports of PLN</p> <p>Project reports from implementation consultants</p>	<p>Assumptions</p> <ul style="list-style-type: none"> - Planned additional power plants are built as scheduled in East Java
<p>Outputs</p> <ol style="list-style-type: none"> 1. 500 kV and 150 kV transmission networks expanded 2. Capacity of 500/150/20 kV substations expanded 3. Project Management 	<ul style="list-style-type: none"> - 227 km of 500 kV and 93 km of 150 kV new double circuit transmission lines connected to the transmission grid by 2015 - 2x500 MVA capacity, 500/150/20 kV new substation added to the grid by 2011 - Successful implementation of the land acquisition and resettlement plan by December 2012 - Successful completion of the construction, testing and commissioning 	<p>Annual reports of PLN, Project monitoring and progress reports by ADB</p> <p>Annual reports of PLN, Project monitoring and progress reports by ADB</p> <p>Project monitoring and progress reports by Implementation Consultants</p>	<p>Assumptions</p> <ul style="list-style-type: none"> - Approvals for construction granted by the Ministries of Forestry and Environment and provincial authorities by April 2012 - Major environmental impacts mitigated <p>Risks</p> <ul style="list-style-type: none"> - Executing Agency delay in meeting Government readiness criteria - Delays due to the issues with right of way, land acquisition and resettlement - Protests by local population against the construction of transmission line

Design Summary	Performance Targets and Indicators with Baselines	Data Sources and Reporting Mechanisms	Assumptions and Risks																														
Activities with Milestones 1. 500 kV and 150 kV transmission networks expanded 1.1 Preliminary design, specifications and bidding documents completed by January 2012 1.2 Bidding documents reviewed by February 2012 1.3 Contracts awarded by October 2012 1.4 LARP implemented by December 2012 1.5 Implementation of EMP from January 2012 1.6 Construction, testing and commissioning completed by December 2015 2. Capacity of 500/150/20 kV substations expanded 2.1 Preliminary design, specifications and bidding documents completed by January 2012 2.2 Bidding documents reviewed by February 2012 2.3 Contracts awarded by October 2012 2.4 LARP completed by December 2012 2.5 Construction, testing and commissioning completed by December 2015 3. Project Management 3.1 Implementation consultants recruited by August 2012 3.2 Contracts reviewed by September 2012 3.3 First review mission by September 2012 and follow-up missions every 4 months 3.4 Monitoring of Implementation of LARP and EMP until the completion of the plan 3.5 Project progress reports completed every 3 months until the project completion			Inputs Total Inputs: \$458 million ADB: \$185 million <table border="1" data-bbox="1029 457 1471 646"> <thead> <tr> <th data-bbox="1029 457 1328 527">Item</th> <th data-bbox="1328 457 1471 527">Amount (\$ million)</th> </tr> </thead> <tbody> <tr> <td data-bbox="1029 527 1328 562">Turn-key contracts</td> <td data-bbox="1328 527 1471 562">154.50</td> </tr> <tr> <td data-bbox="1029 562 1328 598">Consulting services</td> <td data-bbox="1328 562 1471 598">7.50</td> </tr> <tr> <td data-bbox="1029 598 1328 646">Contingencies</td> <td data-bbox="1328 598 1471 646">23.00</td> </tr> </tbody> </table> Government: \$190 million <table border="1" data-bbox="1029 730 1471 1100"> <thead> <tr> <th data-bbox="1029 730 1328 800">Item</th> <th data-bbox="1328 730 1471 800">Amount (\$ million)</th> </tr> </thead> <tbody> <tr> <td data-bbox="1029 800 1328 835">Turn-key contracts</td> <td data-bbox="1328 800 1471 835">65.00</td> </tr> <tr> <td data-bbox="1029 835 1328 871">Land acquisition</td> <td data-bbox="1328 835 1471 871">22.00</td> </tr> <tr> <td data-bbox="1029 871 1328 907">Resettlement</td> <td data-bbox="1328 871 1471 907">20.00</td> </tr> <tr> <td data-bbox="1029 907 1328 942">Environment</td> <td data-bbox="1328 907 1471 942">3.00</td> </tr> <tr> <td data-bbox="1029 942 1328 978">Taxes and Duties</td> <td data-bbox="1328 942 1471 978">34.00</td> </tr> <tr> <td data-bbox="1029 978 1328 1014">Contingencies</td> <td data-bbox="1328 978 1471 1014">35.00</td> </tr> <tr> <td data-bbox="1029 1014 1328 1100">Financial charges during implementation</td> <td data-bbox="1328 1014 1471 1100">11.00</td> </tr> </tbody> </table> Co-financing by IsDB: \$83 million <table border="1" data-bbox="1029 1220 1471 1367"> <thead> <tr> <th data-bbox="1029 1220 1328 1289">Item</th> <th data-bbox="1328 1220 1471 1289">Amount (\$ million)</th> </tr> </thead> <tbody> <tr> <td data-bbox="1029 1289 1328 1325">Turn-key contracts</td> <td data-bbox="1328 1289 1471 1325">73.00</td> </tr> <tr> <td data-bbox="1029 1325 1328 1367">Contingences</td> <td data-bbox="1328 1325 1471 1367">10.00</td> </tr> </tbody> </table>	Item	Amount (\$ million)	Turn-key contracts	154.50	Consulting services	7.50	Contingencies	23.00	Item	Amount (\$ million)	Turn-key contracts	65.00	Land acquisition	22.00	Resettlement	20.00	Environment	3.00	Taxes and Duties	34.00	Contingencies	35.00	Financial charges during implementation	11.00	Item	Amount (\$ million)	Turn-key contracts	73.00	Contingences	10.00
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ADB = Asian Development Bank; EMP = Environment Mitigation Plan; IsDB = Islamic Development Bank; kV=kilovolt; LARP = Land Acquisition and Resettlement Plan; MW = megawatt; MVA=megavolt- ampere; PLN = PT (Persoro) Perusahaan Listrik Negara; RUPTL= Power Development Plan

INITIAL POVERTY AND SOCIAL ANALYSIS

Country:	Indonesia	Project Title:	Java-Bali 500 kV Power Transmission Crossing Project
Lending/Financing Modality:	Project/Energy sector	Department/ Division:	Southeast Asia Department/ Energy Division

I. POVERTY ISSUES

A. Links to the National Poverty Reduction Strategy and Country Partnership Strategy

The Government of Indonesia has incorporated the national poverty reduction strategy paper in its medium-term national development plan (RPJMN) 2010-2014, as poverty reduction is a major concern for the Government. The 2005 country poverty assessment for Indonesia found that improved quality social services and infrastructure access are central to poverty reduction and achievement of the Millennium Development Goals. Better access to basic services is key for the economic development and poverty reduction. Hence the Government seeks to develop the power sector to support the country's economic development and reducing poverty. CPS supports the Government efforts to achieve higher levels of pro-poor sustainable growth and to enhance social development. The project directly supports two of the five identified areas of engagement in the CPS, namely: improved infrastructure and infrastructure services. The proposed loan project is listed in the COBP 2011-2015.

B. Targeting Classification

Select the targeting classification of the project:

General Intervention Individual or Household (TI-H) Geographic (TI-G) Non-Income MDGs (TI-M1, M2, etc.)

Explain the basis for the targeting classification:

The project is classified as general intervention since it has a national focus. The project is an outcome of national power development plan. The interconnection transmission line will remove the power transmission bottleneck between Java and Bali and meet the electricity demand in Bali and improve the reliability and quality of supply while ensuring long term energy security in Bali. The increased capacity and reliable source of electricity will have long term impacts on economic and social development. It is expected that economic growth will lead to increased employment opportunity and would have an impact on poverty reduction.

C. Poverty Analysis

1. If the project is classified as TI-H, or if it is policy-based, what type of poverty impact analysis is needed? N/A
2. What resources are allocated in the PPTA/due diligence? \$1 million for the ongoing PPTA and due diligence
4. If GI, is there any opportunity for pro-poor design (e.g., social inclusion subcomponents, cross subsidy, pro-poor governance, and pro-poor growth)? Please explain

The focus of the Project does not have opportunity for pro-poor design except the recruitment of labor during civil work which is estimated to absorb around 1,350 local workers. Bali is one of the world's attractive tourist destinations, hence contributes significantly to supply foreign exchange. It is estimated that 70% of Bali residents are directly or indirectly employed in tourism industry. Improved electricity supply will positively impact the development of tourism and thereby increase employment opportunities for low income groups. The increase capacity in supply of electricity will increase household access to electricity and ensure improved reliability of supply for business, industries, real estate development etc. The industrial sector will require energy to grow further but will also require labor force thus providing employment opportunities for low income groups. Home industries and small businesses in Bali can increase production through improved electricity supply. The electricity is also needed for fundamental public services such as education, health care, water supply and sanitation etc., and contributes to minimize public service cost. During the PPTA study, poverty and social analysis will assess the extent to which reduction of public service cost will have an impact on poor people's access to social service.

II. SOCIAL DEVELOPMENT ISSUES

A. Initial Social Analysis (Based on existing information)

1. Who are the potential primary beneficiaries of the project? How do the poor and the socially excluded benefit from the project?

As a result of the project, the population in Bali is benefitted by having sufficient supply to meet their electricity needs. The average electrification level in Bali is 67% and electrification level in rural areas where majority of the poor people live is considerably lower. The project will increase power supply in Bali by 1500 MW and directly contributes to the Government's rural electrification program which aims to increase the electrification level to 90% by 2020. As a result of the project, a significant number of households living in rural areas will be benefitted by having improved access to reliable electricity. Improved rural access to power supply, directly contributes to access to technology, employment opportunities, better living standards and higher income.

2. What are the potential needs of beneficiaries in relation to the proposed project?

Access to adequate, reliable, safe and quality electricity supply

3. What are the potential constraints in accessing the proposed benefits and services, and how will the project address them?

Insufficient and deteriorated electricity distribution system will hinder the project benefits. Distribution network development plan prepared by PLN is available but timely investment cannot be guaranteed. In the ADB ongoing project, "Distribution Performance Phase I", distribution networks in the Java-Bali system are being rehabilitated / augmented. PLN is now planning scaling-up on going activities with appropriate investment in distribution sector. In 2011, Government has provided \$1 million for distribution system improvements

B. Consultation and Participation

1. Indicate the potential initial stakeholders.

PLN, provincial authorities, district and sub district authorities, village heads in the project area, affected households from land acquisition and resettlement activities and Ministries of forestry and environment.

2. What type of consultation and participation (C&P) is required during the PPTA or project processing (e.g., workshops, community mobilization, involvement of nongovernment organizations and community-based organizations, etc.)?

Various participatory methods and approaches were used including a rapid social assessment in consultation and participation with stakeholders under the PPTA. Interactive meetings with members of the communities, local authorities of two National Parks and Coastal area and concerned Ministry of Forestry and Ministry of Environment have been conducted as part of the consultation process. During the preparation of resettlement plan, participation of affected people in the survey was ensured so that affected people could express their opinion on the project and its impact on them. They expressed their opinion and suggestions on compensation, relocation, entitlement provisions, income restoration option, mechanisms for grievance and compliant redress etc.

3. What level of participation is envisaged for project design?

Information sharing Consultation Collaborative decision making Empowerment

4. Will a C&P plan be prepared during the project design for project implementation? Yes No Please explain.

C. Gender and Development

Proposed Gender Mainstreaming Category: No gender elements

1. What are the key gender issues in the sector/subsector that are likely to be relevant to this project/ program?

In Indonesia, generally women are responsible for housing activities such as agriculture, cooking, arrangement of wood or other alternative fuel for cooking and lightening. Time and effort spent on these activities would be significantly reduced for women with improved electricity supply, so that they can engage in income generating activities, family or leisure time. It is expected that a reliable source of electricity will have a positive impact on use of household equipment, especially kitchen equipment. This could lessen the workload of women in upper and middle-income households. Women running home industries, businesses, and other enterprises might experience lower production costs and increased revenue. The negative impact of the Project is related to land acquisition and loss of income for poor women. Specific actions to address gender issues have been included in the draft resettlement plan.

2. Does the proposed project/program have the potential to promote gender equality and/or women's empowerment by improving women's access to and use of opportunities, services, resources, assets, and participation in decision making? Yes No.

Since the transmission line is to increase the availability of supply in Bali and strengthen the regional electricity grid, the overall positive impacts are diffused, it is difficult to design gender equality and/or women's empowerment actions within the project design.

3. Could the proposed project have an adverse impact on women and/or girls or widen gender inequality?

Yes No Please explain

III. SOCIAL SAFEGUARD ISSUES AND OTHER SOCIAL RISKS			
Issue	Nature of Social Issue	Significant/Limited/ No Impact/Not Known	Plan or Other Action Required
Involuntary Resettlement	IR is envisaged. The total land area where permanent impact is expected is around 450,000 m ² belong to 500 households. Lands to be acquired are a combination of private owned and lands belong to PLN and government (Ministry of Forestry). Based on its function, the lands comprise of forests, paddy fields, and dry fields used for vegetables and other secondary crops. It is envisaged about 380 houses will be severely affected.	Significant	<input checked="" type="checkbox"/> Resettlement Plan <input type="checkbox"/> Resettlement Framework <input type="checkbox"/> Environmental and Social Management System Arrangement <input type="checkbox"/> None <input type="checkbox"/> Uncertain
Indigenous Peoples	No indigenous people expected to be affected by the Project.	No Impact	<input type="checkbox"/> Indigenous Peoples Plan <input type="checkbox"/> Indigenous Peoples Planning Framework <input type="checkbox"/> Environmental and Social Management System Arrangement <input checked="" type="checkbox"/> None <input type="checkbox"/> Uncertain
Labor <input checked="" type="checkbox"/> Employment Opportunities <input type="checkbox"/> Labor Retrenchment <input checked="" type="checkbox"/> Core Labor Standards	The Project will create wage employment opportunities during construction. It will be ensured that the construction contracts will include provision of fair wages, equal wages for men and women for equal work, and basic facilities in the construction camps.		<input type="checkbox"/> Plan <input checked="" type="checkbox"/> Other Action <input type="checkbox"/> No Action <input type="checkbox"/> Uncertain
Affordability	Not Applicable		<input type="checkbox"/> Action <input checked="" type="checkbox"/> No Action <input type="checkbox"/> Uncertain
Other Risks and/or Vulnerabilities <input checked="" type="checkbox"/> HIV/AIDS <input checked="" type="checkbox"/> Human Trafficking <input type="checkbox"/> Others (conflict, political instability, etc.), please specify	The project will minimize the risk of HIV/AIDS through information dissemination campaigns at project areas as per the provisions in the project administration manual.		<input type="checkbox"/> Plan <input checked="" type="checkbox"/> Other Action <input type="checkbox"/> No Action <input type="checkbox"/> Uncertain
IV. PPTA/DUE DILIGENCE RESOURCE REQUIREMENT			
<p>1. Do the TOR for the PPTA (or other due diligence) include poverty, social and gender analysis and the relevant specialist/s? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If no, please explain why.</p> <p>2. Are resources (consultants, survey budget, and workshop) allocated for conducting poverty, social, and/or gender analysis, and C&P during the PPTA/ due diligence? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Under the PPTA following resources allocated; social specialists 3 person-months international and 4 person-months national, survey budget of \$70,000 and total travel budget of \$90,000</p>			

COMMENT MATRIX – Interdepartmental Review Meeting
Java-Bali 500 kV Power Transmission Crossing Project

Department	Comments	Actions by Project Team
<p>Nam Kee-Yung, ERD</p>	<p>1. Para 5: Without including the results of the economic project analysis in the document, it is difficult to justify that this project was identified to be the optimal option. It would be interesting to know how the alternative/least cost analysis has been considered, and whether the least cost analysis has considered aspects of environmental impacts and resettlement impacts.</p> <p>2. Para 5: If thermal power plant construction is being restricted in Bali, and Bali would only continue to depend on the power transmission from Java or other places, how can power supply be secured and sustained in Bali in the long run? What may be the other local alternatives that would ensure sustainable power generation in the area without dependency from other province supplier?</p> <p>Please clarify why thermal power construction would not be the least-option for Bali? Is it due to this earlier government policy restricting thermal construction?</p>	<p>Feasibility of 5 options including generation in Bali and transmission at 500 kV level were examined under the PPTA including the environmental and resettlement impacts of each option. Costs of resettlement and environmental impact mitigation identified and included in the economic analysis of the Project.</p> <p>Bali is the largest tourist destination in Indonesia and local government restricts any construction of thermal power plants that will impact upon the environment. The proposed project is one of the developments identified in the power development plan 2009-2019 for meeting the demand in Bali together with generation of power from existing gas power plants, and small coal power plants that are being constructed to provide the supply security in Bali. Beyond 2019, large scale generation in Java and Sumatra will augment power supplies to Bali.</p> <p>Java-Bali is one power system and Bali power consumption is only around 2.5% of the total consumption of Java. Forecasted power demand in Bali in 2015 is 850 MW and will gradually increase to 2,300 MW by 2025. Government policy is to reduce the oil fired power generation (which is expensive) and increase coal based generation and renewable energy (hydro and geothermal) generation. In fast track generation programs, large coal power plants and geothermal and hydro power plants are being built in Java and Sumatra. Power generation from small coal power plants in Bali is not economical as large size coal power plants are more efficient due to better heat rates and less capital costs. Hence the least-cost option to supply the above demand within the current planning horizon is the transmission of power from Java at 500 kV level.</p>

	<p>3. para 6: We recommend the Mission to omit the word of 'cleaner' in the phrase "transmit cheaper and" since the electricity is coming from coal power generation in Java.</p> <p>4. para 4: Change "about 70% of the island resident dependant" --pls. change it to dependent</p> <p>5. Footnote 5 needs to be attached to BAPPENAS</p>	<p>Incorporated in para 6</p> <p>Incorporated in para 4</p> <p>Incorporated in para 5</p>
Oliver Domagas, CTLA, LGFC	(para 10) – Please indicate the specific ADB funding source (OCR) and loan terms, if known.	Incorporated in para 10. Loan terms and conditions will be finalized during loan fact finding mission.
Paritha Tritasavit, OCO	<p>1. We note that the project is expected to be financed by ADB and cofinanced by IsDB. The project will be discussed and included under the new Framework Cofinancing Agreement to be signed on 25 Nov 2011 during this forthcoming ADB-IsDB retreat. Please continue to liaise with OCO's focal point for IsDB, (Megumi Araki) to firm up IsDB financing including the amount.</p> <p>2. You may wish to specify the modality of IsDB financing in the paper, i.e., in a form of a loan to be provided on a parallel basis, not administered by ADB. Please also indicate whether it will follow ADB's guidelines, e.g, on procurement.</p> <p>3. Please ensure that economic and financial analysis will take into account IsDB financing and that IsDB agrees to follow ADB's safeguard policy.</p> <p>4. Para.13 indicates that capacity building on Safeguards aspects is being considered under a RETA (Strengthening and Use of Country Safeguards Systems) approved in 2010, and not as a CDTA piggy-backed to this project. As such, please only refer to the RETA in a paragraph or a footnote outside the Technical Assistance section along the lines that the supplementary activities will be implemented under the RETA. (in parallel with the project?).</p>	<p>Noted and will coordinate with OCO focal point.</p> <p>Will incorporate in RRP once this has been firmed up with IsDB and PLN.</p> <p>Discussions with IsDB indicate that IsDB has no objection to the use of ADB's safeguards policy and procurement guidelines.</p> <p>Noted section has been removed and the capacity building under RETA is incorporated in para 19.</p>
Indira Simbolon RSES	1. We reviewed the paper in terms of social safeguards, and note that essentially at this stage social safeguards issues have yet to be confirmed. We would appreciate if the Due Diligence Required section elaborate a bit more on the key findings on initial due diligence relevant to involuntary resettlement and Indigenous Peoples safeguards. The section currently indicate that safeguard documentation	Under the ongoing PPTA, detailed social impact assessment has been carried out and LARP has been prepared which is not finalized yet. Further studies on safeguards issues are being conducted to ensure compliance to ADB social safeguards policies. Available data is incorporated in Due Diligence section of the revised

	<p>are prepared under the PPTA without any discussion on whether some initial assessments were undertaken or will still be undertaken to determine the project's social safeguards issues. If information is available (as may be found in the IPSA and Key Issues paragraph, please thus discuss whether the project will still need to check on social safeguards issues or whether these have already been checked which led to the decision to prepare a resettlement plan and in not triggering Indigenous Peoples safeguards. The IPSA (Appendix 4) and the Key Issues (Para 19) section provides some information that explain the availability of some information relevant to involuntary resettlement and Indigenous Peoples issues.</p> <p>2. Please use the IPSA template as may be found in the Concept Paper (Streamlined Business Process) template as the one currently attached in the concept paper is a pre-SPS version or please generate the IPSA from eOperations to ensure that information are well reflected in the system as well.</p> <p>3. Section 11 of the PPTA Appendix 2 Outline Terms of Reference of Consultants indicate the tasks of consultants with reference to the old safeguards policies (1995 Involuntary Resettlement Policy and 1998 Indigenous Peoples Policy) given the approval of the PPTA before SPS effectivity. Please make sure that safeguard documents are retrofitted to comply with the safeguard requirements of the 2009 Safeguard Policy Statement instead.</p> <p>4. It is noted that approved categories for the project were prepared prior to the effectivity of the Safeguard Policy Statement. Given some new information available, please update the screening and categorization forms using the SPS Involuntary Resettlement Checklist and Categorization Form and Indigenous Peoples Screening and Categorization Form and submit these for RSES' review and subsequent endorsement to the Chief Compliance Officer.</p>	<p>concept paper. In the RRP full details on social safeguards analysis will be discussed.</p> <p>Incorporated</p> <p>Noted</p> <p>Noted, will follow the procedure</p>
<p>Nirmala Saraswat, RSDD</p>	<p>1. At the PPTA concept stage, the project was endorsed by us as category A. In the Basic Project Information section of the above Concept Paper, the indicative classification for environment is shown as category B.</p>	<p>At the PPTA concept stage the Project was classified as environmental category "A" and an EIA was prepared. However, the final alignment of the transmission line, avoids protected areas and there is no adverse environmental impact that cannot be mitigated.</p>

	<p>2. From the Concept Paper it is difficult to ascertain to what extent it has been possible to avoid the alignment through the protected areas, and whether the environmental impacts are likely to be significant. Therefore, if there is information available from the ongoing PPTA work to justify a reclassification, then we request you to seek an endorsement of the environment category by submitting for CCO approval the REA checklist and categorization form along with any supporting information.</p> <p>3. As some sections of the transmission line are to be co-financed by the IsDB and the government, we suggest to adopt a unified safeguards planning process and reach an agreement with the co-financiers on the allocation of responsibilities for monitoring and supervising safeguards implementation, in accordance with OM Section F1 para 63.</p> <p>4. It is mentioned in the Preliminary DMF under activities and milestones that the bidding documents will be completed by January 2012. The ADB review and approval of the EIA should be completed prior to this, so that the EMP can be incorporated into the bidding documents.</p>	<p>In case of two national parks in Java and Bali the line traverses across the utilization zone. Hence project can be classified as environmental category B and already coordinating with RSES. A recategorization will be submitted.</p> <p>IsDB indicated they will use ADB safeguards policy.</p> <p>Noted</p>
<p>Samantha Hung, RSGS</p>	<p>Gender and Development We note from the Basic Project Information page and IPSA that there is no gender mainstreaming category stated - please insert the proposed gender category in both places, as per template. Based on the information provided, it appears that a No Gender Elements (NGE) categorization is appropriate.</p>	<p>Noted, gender mainstreaming category Incorporated in the Basic Project Information in appendix 1 and section C of the IPSA.</p>
<p>Comments by CoP PEER REVIEW</p>		
<p>Peer Reviewer, Tianhua Luo, CWRD/CWEN</p>	<p>1. The problem tree shows that the core sector problem is that the sector is not financially sustainable without large subsidies. It is unclear what efforts and reform are ongoing and how the proposed project will contribute to improve the sector performance. Suggestion: The paper needs to highlight the power sector's overall performance and key sector issues in INO power sector in the Rationale.</p>	<p>PLN recovers less than 50% of its cost of power production and supply from the tariffs and the Government subsidizes PLN through Public Service Obligations (PSO) mechanism to meet the financing gap. This is a national policy and the subsidy to PLN is approved by the Parliament. Energy pricing reforms to reduce the levels of government subsidy for energy production have been underway in recent years. A fast track coal based power generation program was launched in 2006 to reduce the dependency on expensive oil based generation. A second fast-track program was launched that includes</p>

	<p>2. Paras. 3 and 4: These paragraphs indicate that power shortage is a critical infrastructure constraint throughout the country and Bali power system has suffered from power outages.</p> <p>Suggestions: It will be helpful to provide concrete data; briefly describing the current situation and the gap against with the required capacity.</p> <p>3. Para.5 says that transmission of power from East Java to Bali at 500 kV level has been identified as the optimal option.</p> <p>Suggestion: Please provide reference on any studies conducted and how to reach this conclusion. Whether the option of submarine cables has been studied and what are the findings. Consider elaborating for example, on what is the targeted power source in East Java?; if they are not renewable energy based, what are they?; are they better than all the other possible options? Consider using another term rather than 'optimal' if the intervention is seen to be the only solution. Suggest further, mentioning the constraints that prevents or makes the alternative approaches (including expanding generation capacity in Bali) not feasible.</p> <p>4. Para. 14 indicates that the technical risks are associated with the construction of 4 km overhead crossing across Bali Strait with two high towers of about 376 m which will be the world's tallest power pylons.</p> <p>Suggestion: The paper needs to explain that</p>	<p>about 60% renewable energy (geothermal and hydro) generation to be implemented between 2009 and 2014. These initiatives will address the immediate problems of power shortage, the high cost of power generation and dependency on oil, use of renewable energy. The Government's aim is to gradually reduce the PSO to PLN from 2012 onwards when the new power plants come into operation and thereby enabling PLN shut down the diesel/fuel oil power plants gradually. The project contributes by transmitting power from the power Grid at cheaper price compared to generating power in Bali. A summary of power sector analysis is included in the ASR as a link document.</p> <p>The Java-Bali power system, which accounts for about 80% of Indonesia's total power consumption, registered an increase in demand of about 50% in the last decade but generation capacity only increased by 15%. The reserve margin is thus getting smaller, now placed at 15%. Lower reserve margin causes frequent power outages. Detailed situation analysis and supply demand gap is incorporated in the ASR.</p> <p>The transmission line is a result of system studies conducted by PLN. PPTA consultant reviewed the studies and analyzed 5 options including generation in Bali and transmission from Java at 500 kV level and determined that transmission from Java is the least cost option for the proposed planning horizon 2009-2019. Submarine cable option has been studied under the PPTA and the least cost option is the overhead crossing. Suggested information will be discussed in the RRP</p> <p>Noted and incorporated in para 13 of the revised concept paper. Based on the ongoing studies, suggested details will be incorporated in the RRP.</p>
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	<p>such technology is mature and technically and financially viable. Any past experience of success or failure of such a technology in INO could also be mentioned. Suggest also, getting all possible structural and technical specifications, feasibility studies and other information from PLN, raise the safety and technical risks to Government and mention these efforts in the RRP. There are safety and technical risks associated with the construction of the tower. It may be useful to hire a structural engineering expert panel to assess the safety and structural integrity of these towers</p> <p>5. The project will transmit 1,500 MW power between Java and Bali island by 2015. It is unclear whether adequate generation capacity in Java will be available by 2015?</p> <p>Suggestion: The paper needs to briefly discuss the status on other associated facilities including generation and distribution network, and provide justifications in case the transmission line is underutilized.</p> <p>6. Para. 12 indicates that one subproject will be financed by PLN and separated from the main contract package. What's the reason for such arrangement? If the contracts are awarded separately, what will be risks in contractors coordination and qualify and compatible with the rest of the project.</p> <p>Suggestions: If the contracts are awarded separately, there will be implementation and coordination issues. This arrangement also may not ensure who will guarantee overall performance. It is also noted that due to the co-financing aspect with IsDB, procurement rules and guidelines may differ from ADB's. Suggest addressing these concerns in the Procurement Plan.</p>	<p>The transmission line has the capacity to transmit 1,500 MW. The forecasted power demand in Bali in 2015 is 850 MW out of which 400 MW will be supplied through the proposed transmission line in 2015 which will gradually increase up to 1,500 MW in 2025. Two Fast track programs are in progress for addition of around 21,000 MW by 2015 of which 15,000 MW of generation is planned to connect to Java-Bali power system. Hence, adequate power supply capacity will be available. Distribution network development projects are also implemented according to the distribution network development plan. Progress of these projects will be discussed in a link document.</p> <p>PLN has decided to construct 16 km line section which traverses across the utilization zone of the Bali National Park through NCB, where there is an existing power line corridor and contract has already awarded. Risks associated with awarding separate contracts (six) are minor. Scope of work of each contract will be clearly defined in the bidding documents to avoid any work left out inadvertently at the terminating towers of each contract. PLN prepares the preliminary design and specifications ensuring the compatibility. Bidding documents will be carefully reviewed by ADB and overall performance will be monitored through engagement of qualified implementation consultants. Further studies will be conducted during fact finding mission. Discussions with IsDB indicate that IsDB has no objection to the use of ADB's procurement guidelines.</p>
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	<p>7. The 500 kV transmission line envisaged by the project could bring system efficiencies and/or system loss reductions that could be converted to GHG emission reduction. ADB is monitoring these indicators as part of its results framework. Suggest putting the estimated energy savings and the corresponding emission reduction figures in the DMF. Further, the reduction in GHG emission could not be associated with oil-based generating plants being replaced by coal-fired plants. The GHG emission reduction will be associated with the system loss reduction as a result to a more efficient transmission line.</p> <p>8. The 1000 MVA substation capacity mentioned in the Output column in the DMF is not clear whether it is a single unit of a set of units. Please clarify in the DMF.</p> <p>9. "Associated facilities" mentioned in para. 9 may be used incorrectly. Associated facilities pertain to aspects related to the project but are not being financed by ADB. Please change the language as using 'associated facilities' has implications in the Safeguards assessment.</p> <p>10. Consider including in the main causes in the Problem Tree: the insufficient transmission capacity connection between Java and Bali.</p> <p>11. Baseline information may not be required in the Performance Targets for Output in the DMF. And since these are applicable to the national context, suggest dropping.</p> <p>12. The team may also want to consider mentioning the energy mix of power generating that this transmission line will be evacuating from Java to Bali and clarify that it only involves supercritical coal-fired plants</p> <p>13. Suggest using components instead of subprojects in Impact, Outcome and Output. Please revisit the names in footnote 9, where some companies indicated to be Japanese firms have names that are not Japanese.</p>	<p>Indicated in para 7 and loss reduction as a result of the 500 kV transmission compared to 150 kV transmission will be evaluated and incorporated in DMF after obtaining required data from PLN.</p> <p>Incorporated in DMF</p> <p>Incorporated in para 9</p> <p>Incorporated in problem tree</p> <p>Noted and targets of outputs removed.</p> <p>Will address in the RRP after obtaining sufficient information from PLN.</p> <p>Subprojects changed to components. Out o of the 2 references of tall power pylons in Japan; Chusi and Daqi, the name Chusi is correct however name Daqi which is in some of the references was changed in the foot note to "Osaki Channel Crossing".</p>
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ADB

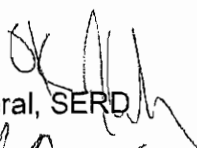
Asian Development Bank

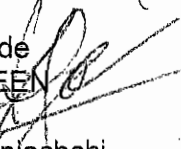
Memorandum


Southeast Asia Department
Energy Division

17 November 2011

21 Nov 11

To: Kunio Senga 
Director General, SERD

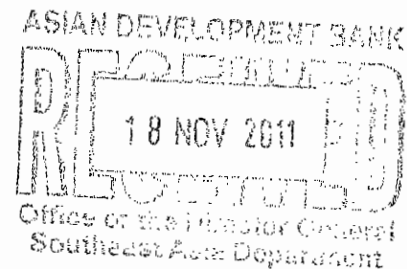
Through: Anthony Jude 
Director, SEEN

From: Aruna Wannachchi 
Senior Energy Specialist, SEEN

Subject: **INO: Java-Bali 500 kV Power Transmission Crossing Project
— Minutes of the Department Review Meeting**

Attached for your approval is the minutes of the Concept Paper Review Meeting held on 9 November 2011 for the proposed project. Comments received from the participants on the draft Minutes have been incorporated.

cc: Director General, SERD
Deputy Director General, SERD
J. Balbosa, R. Bolt, H. Nacario, N. Sinsiri, SEOD
PAU Head, SEEN
R. Butler, G. Peralta, M. Paterno, SEEN;
PAU File (C. Ricerra,)/Chrono (AK)





Asian Development Bank

Southeast Asia Department
Energy Division

INO: Java-Bali 500 kV Power Transmission Crossing Project

CONCEPT PAPER
REVIEW MEETING
(Departmental review)

Date:
Department:
Project Team Leader:

09 November 2011
Southeast Asia Department
Energy Division
Aruna Wanniachchi
Senior Energy Specialist

A. SUMMARY OF CONCLUSIONS

1. The Chair concluded further processing of the project and observed the following points: (i) contribution of the Project in the context of the Government economic development master plan,¹ and (ii) institutional strengthening and capacity building requirements of the counterpart agencies in environment and social safeguards through a technical assistance. He also advised the team to ensure full compliance of ADB Safeguard Policy, stressing the lessons learnt through this project can be shared in other ADB projects in Indonesia.

2. The Chair also asked the team to ascertain Government commitment for ADB assistance in the proposed project before fielding the fact finding mission. IRM indicated that they will approach National Planning and Development Agency (BAPPENAS) to obtain confirmation for government borrowing from ADB for this project.

B. SUMMARY OF DISCUSSION

3. The Chair opened the session indicating that the concept paper has been clearly articulated and he invited the project team leader (PTL) to discuss the key features of the Project highlighting issues and any guidance that may be required.

4. PTL provided a brief outline of the Project highlighting the project sites geographically. She described: composition of project components; capacity of the executing agency (EA), (Perusahaan Listrik Negara [PLN]); cost estimates and financing plan; safeguard categorization and project classification; and key issues. The Project is an outcome of long-term transmission master plan prepared through detailed system studies and from the technical point of view the Project is very straightforward. It is listed in the Government Bluebook for external funding, and is identified as a pipeline project in Country Operations Business Plan (COBP). The recent sector assessment made by ADB, supports the assistance in transmission line expansions to remove the power supply bottlenecks. Three of the subprojects will be funded by ADB/PLN, one subproject will be funded by the Islamic Development Bank/PLN and two subprojects will be funded by the Government for the construction of; (i) overhead crossing at the Java Bali Strait and (ii) transmission line along the Bali National park. The contracts for the above two subprojects have been already awarded.

5. Key issues of the project relate to the implementation of; (i) the overhead crossing at the Bali Strait which is going to require two of the world's tallest power pylons, (ii) land acquisition and resettlement plan and (iii) environmental impact mitigation plan. The Project is involuntary

¹ Coordinating Ministry for Economic Affairs. 2011. Acceleration and Expansion of Indonesia Economic Development 2011-2025. Jakarta

resettlement category "A", hence the project is classified as a "Complex" project. The PTL added that project processing may get delayed due to the delays in completing the environmental impact assessment (AMDAL) and obtaining the environmental clearance from the Ministry of Environment by the EA. One of the BAPPENAS readiness criteria is that the AMDAL be approved prior to loan negotiations. The PTL stated that ADB will continue to closely follow-up and assist PLN in this matter.

6. The Chair mentioned the importance of this project and the relevance to ADB country partnership strategy. This is a simple transmission line project between interesting locations however the rationale needs to be strengthened reflecting the relevance to Government program to address energy bottlenecks. He further added that it is not sufficient this project is included in the Bluebook in view of the new borrowing strategy. Currently the Government is scrutinizing every proposal including the projects already listed in the bluebook. He asked what is the rationale for the Government to borrow from ADB. With respect to the overhead crossing at the Bali Strait, the Chair mentioned that if this is the difficult part of the project and if it is financed and implemented by the Government, what will be the assistance Government need from ADB to implement the rest of the project components that are relatively simple. He indicated that he needs assurance that project is considered as a priority project by the Government for borrowing from ADB.

7. DDG, SERD pointed out that the Government plan is to transmit power to Bali from East Java power generating plants and due to previous bad experience coupled with design flaws with the submarine cables, PLN opted to go with the challenging two towers on either side of the Bali Straits. The Government is financing the crossing at the Bali Strait and expecting external assistance in constructing of the rest of the transmission line.

8. Project officer (Infrastructure), IRM mentioned that the Government and PLN have been expecting ADB financing since 2009, as the project had been listed in the Bluebook for last two years expecting funding in 2012. He indicated that as per recent communications with the Government this is a priority project for which the Government would borrow from ADB. The Government needs to borrow because of the limitations of the Government funding and they opt to borrow from ADB because of the transparent competitive bidding process and long payback period of ADB loans. DDG, SERD explained the government borrowing strategy, mentioning the project has been included in the bluebook for two years. PLN is confident that the government will proceed in the loan on a sovereign basis through the Ministry of Finance with a supplementary loan agreement with PLN. Principal Infrastructure Specialist, IRM also mentioned that as per the recent communications with the Government it has been clear that one of the Government's first choice for borrowing for their Infrastructure projects is ADB. He indicated that the government needs external funding for the infrastructure developments; this is a clear cut project that the Government can request external funding; it has been in the Blue Book for a while so there is no reason for the Government to withdraw what has been discussed and agreed in the past.

9. The Chair asked the safeguard specialists, to explain on the safeguard aspects. Safeguards Specialist (Resettlement), mentioned that ADB has worked with PLN to prepare an appropriate resettlement plan. He indicated that the land acquisition and resettlement plan is quite substantive in this project and added value of the project by ADB can be the support in the preparation and implementation of the resettlement plan that would otherwise have serious issues. It was noted that the safeguard documentation will also address the issues associated with the towers on each side of the Bali Strait since these towers will be associated facilities for the purposes of ADB safeguards requirements. Given the importance of the physical and social environment of Bali, it was agreed that part of value addition by ADB would be ensuring

application of international standards of social safeguards for a project which is likely to receive international attention.

10. Senior Safeguards Specialist (Environment) mentioned that the project involves two national parks and this is a good opportunity for ADB to demonstrate how ADB safeguard procedures can help PLN in improving their environmental safeguards systems. She indicated, Government needs assistance in the safeguard policies and implementation. During EIA of the ADB financed project components and due diligence of the Government financed project components there will be interactions with PLN and the Ministry of Environment, hence ADB intervention could improve the current capacity on country safeguards.

11. The Chair asked the environment specialist on the current capacity and experience of PLN in ensuring safeguards aspects. Senior Safeguards Specialist (Environment), responded that PLN needs assistance in enhancing the skills and mentioned that PLN safeguards staff are keen in enhancing the capacity. She indicated that she has noted the lengthy process of attending to safeguard requirements in the implementation of the projects by both PLN and the relevant governmental authorities. She mentioned that ADB has a good interaction with the staff of the PLN environment unit and the Ministry of Environment through the assistance in implementation of other ADB projects. She added that streamlining the process in safeguards aspects would benefit in the implementation of other ADB supported ongoing and future infrastructure projects.

12. DDG, SERD mentioned one of the challenges to this project can be the political dimension. Java had vast deficit in Energy and the Paiton power station was built for the specific purpose to elevate the Energy shortage in Java. Sometimes back there was a tremendous opposition within Java to export power to Bali. He indicated that other option to increase power supply in Bali is local generation using thermal power which is not the least cost option and environmental friendly. He stated that transmission of power from Java to Bali is cleaner and sustainable.

13. Project officer (Infrastructure), IRM pointed out that this project will strengthen the Java-Bali transmission system highlighting the ongoing construction of 500 kV transmission line between Java and Sumatra funded by JICA. He mentioned that the transmission system will be expanded by connecting Sumatra, Java and Bali at 500 kV voltage level. Mentioning the potential of geothermal energy generation in Sumatra, he indicated the importance of the expansion that enables cheaper and cleaner power transmitted across different islands/regions. He added that Bali will be the most advantaged by being able to import cheaper power compared to local generation in Bali. He indicated that strength in this project from ADB side is that strengthening the transmission system connecting Sumatra, Java and Bali. ADB was originally interested in financing the Sumatra-Java transmission line project but JICA eventually financed the project.

14. The Chair asked what has been done so far to address safeguards aspects of the project. PTL responded that under the PPTA, detailed land acquisition & resettlement plan and EIA (considering the project is environment category "A") are been prepared. Safeguards Specialist (Resettlement), indicated that the project is involuntary resettlement category "A", therefore ADB involvement is required in the implementation of LARP. Senior Safeguards Specialist (Environment), pointed out the difference between the Java-Bali transmission project and the Kalimantan-Sarawak project which has some cross border issues that need to be resolved on a wider scale among all the other line agencies. She mentioned that Java-Bali transmission project is only a national project dealing with the provincial environmental agencies. Therefore the preparation and evaluation of AMDAL is easier. She indicated with the

ADB assistance and shepherding on the process not just PLN but including environmental agencies, will be able to resolve the issues faster than cross border international projects.

15. The Chair concluded that he wants to see a better justification of the project relating it to clean energy aspects, institutional strengthening in safeguards aspects assisting the Government institutions in stream lining the processes to ensure smooth implementation of its projects and the connectivity of the project to the recently developed government economic master plan. He requested the safeguards specialists to ensure full compliance of the project design and implementation arrangements since approval from the Ministry of Forestry, Ministry of Environment and the implementation of land acquisition and resettlement plan always take time for resolution of the issues. He requested full support from IRM in processing the project loan and to obtain assurance from the Government regarding the borrowing for implementation of the Project before fact finding mission.

**INO: Java-Bali 500 kV Power Transmission Crossing Project
DEPARTMENTAL REVIEW MEETING
9 November 2011, 9.30 am at Conference Room 6256W**

LIST OF PARTICIPANTS

REVIEW PANNEL

Kunio Senga, Director General, SERD (Chair)
James Nugent, Deputy Director General, SERD
Joven Balbosa, Senior Economist, SEOD

PROJECT TEAM

Aruna Wanniachchi, Senior Energy Specialist (Project Team Leader), SEEN
Genandrialine Peralta, Senior Safeguards Specialist (Environment), SEEN
Ross Butler, Safeguards Specialist (Resettlement), SEEN
Ma. Elisa Paterno, Finance Specialist, SEEN
Carmie Ricerra, Associate Project Officer, SEEN
Minnie Ramas, Project Analyst, SEEN

IRM (through videoconference)

Bagus Mudiantoro, Project Officer (Infrastructure), IRM
Bob Finlayson, Principal Infrastructure Specialist, IRM