1. Project Data:

**OEDID:** L3349  
**Project ID:** P003975  
**Project Name:** Power Transmission  
**Country:** Indonesia  
**Sector:** Electric Power & Other Energy Adjustment  
**L/C Number:** Loan 3349-IND  
**Partners Involved:** 0  
**Prepared by:** Melody K. Mason, OEDST  
**Reviewed by:** Hernan Levy  
**Group Manager:** Roger H. Slade  
**Date Posted:** 06/16/1998

2. Project Objectives, Financing, Costs and Components:

The Power Transmission Project, supported by a loan for US$ 275 million equivalent, was approved in FY1991 and closed 9 months behind schedule in FY1998. A total of US$112.3 million was cancelled. The appraisal estimate of costs was US$415.7 million compared with actual costs of US$282.3 million. Most of the cost savings resulted from lower contract prices after ICB. The objectives of the project were (i) to meet electricity demand in Java by strengthening the Java-Bali transmission system, (ii) to prepare power generation projects and long-term development of the transmission network in Java-Bali, (iii) to improve PLN's transmission planning capacity; and (iv) to promote measures for strengthening PLN's financial position. Apart from financing the expansion, strengthening and upgrading of transmission facilities for the Java-Bali system, the loan financed technical assistance for design and supervision, and a transmission system feasibility study.

3. Achievement of Relevant Objectives:

Project implementation was delayed by about one and a half years mainly due to procurement delays and difficulties in acquisition of land for transmission substations and rights of way for transmission lines. The inadequate number and quality of commissioning personnel on project sites also delayed the project. While the physical facilities were completed as planned, it is not possible to say if the broader objective of strengthening the transmission system was achieved because of the lack of monitoring indicators. While the transmission system was substantially improved in the 1990s, system overloading is still common, in part because growth in demand has been high at 15% p.a. The project's focus on the transmission planning study did not really achieve the objective to improve PLN's transmission planning capacity since broader organisational and other issues were not addressed. The project failed to achieve its financial objective.

4. Significant Achievements:

The most significant achievement of the project was the construction of new and extension of existing substations and construction of 182 km of transmission lines.

5. Significant Shortcomings:

The most serious shortcoming of the project was the inability to strengthen the financial position of PLN to the extent projected. The rate of return on net fixed assets covenant (replaced by a single rate of return covenant in a subsequent project) of 8% for all PLN's operations was never achieved. After increasing from 3.6% to 6.5% in FY1992, the rate of return declined to 4.4% in 1994 (calendar year), increased again in 1995 to 6.2% but declined again to 3.4% in 1997. PLN is expected to make a loss in 1998. The debt service covenant of 1.5 has been met in all years except the last year of the project when it fell to 1.4. PLN is unlikely to be able to meet its debt service requirements in 1998 following the sharp devaluation of the rupiah in November 1997. The situation facing PLN is particularly serious because of the large number of take or pay contracts entered into with IPPs and considerable excess generation capacity. Another shortcoming of the project was serious overestimation of project costs at appraisal.
### 6. Ratings:

<table>
<thead>
<tr>
<th>Outcome</th>
<th>ICR</th>
<th>OED Review</th>
<th>Reason for Disagreement / Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfactory</td>
<td>Marginally Satisfactory</td>
<td>The project successfully completed the physical components of the project but a rating of marginally satisfactory has been given because of not fully meeting the financial objective of the project. The devaluation of the rupiah by 70% after closure of the project has severely affected the finances of PLN, but this was outside of the scope of the project and therefore was not taken into account in the rating of project outcome.</td>
<td></td>
</tr>
<tr>
<td>Institutional Dev</td>
<td>Substantial</td>
<td>Modest</td>
<td>The institutional objectives of the project were very limited, therefore the overall institutional development impact of the project was modest.</td>
</tr>
<tr>
<td>Sustainability</td>
<td>Likely</td>
<td>Uncertain</td>
<td>The deteriorating financial situation of PLN could have severe repercussions on future operations. Although Government has agreed to reduce subsidies for the power subsector as part of the IMF restructuring package, implementation will prove very difficult in the present political situation.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bank Performance</th>
<th>Satisfactory</th>
<th>Satisfactory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Borrower Perf.</td>
<td>Satisfactory</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>Quality of ICR</td>
<td>Satisfactory</td>
<td>Satisfactory</td>
</tr>
</tbody>
</table>

### 7. Lessons of Broad Applicability:

A major lesson learned is that where there has been a long history of failure to comply with financial covenants of power projects, Bank lending should be conditional on adoption of long-term sustainable measures to improve financial performance, involving the establishment of an autonomous regulatory authority to determine tariff structure and levels. Another lesson is that issues such as co-ordination of planning, construction and operation cannot be addressed by carrying out a study but must be dealt with through a well-defined institutional strategy involving stakeholders.

### 8. Audit Recommended?

- Yes
- No

### 9. Comments on Quality of ICR:

The ICR focused on the successful implementation of the physical objectives of the project and tended to downplay the seriousness of PLN's financial situation. The economic revaluation of the project failed to take account of excess capacity in generation and especially the effect of take or pay contracts with IPPs on the economics of PLN's investment program. It appears that no account has been taken of the lower than projected utilisation of generation plant constructed under the investment program. Nevertheless, the transmission line financed by the project could well be justified (no separate analysis has been carried out for individual project components in line with the appraisal methodology).