Implementation Status & Results
Indonesia
Geothermal Clean Energy Investment Project (P113078)

Operation Name: Geothermal Clean Energy Investment Project (P113078)
Project Stage: Implementation
Seq.No: 2
Status: ARCHIVED
Archive Date: 09-Apr-2013

Country: Indonesia
Approval FY: 2012
Region: EAST ASIA AND PACIFIC
Lending Instrument: Specific Investment Loan

Key Dates
Board Approval Date: 26-Jul-2011
Original Closing Date: 31-Mar-2015
Planned Mid Term Review Date: 
Last Archived ISR Date: 31-Mar-2012
Effectiveness Date: 29-Jun-2012
Revised Closing Date: 31-Mar-2015
Actual Mid Term Review Date: 

Project Development Objectives
The development objective of the proposed project is to increase power generation from renewable geothermal resources, and reduce local and global environmental impacts.

Has the Project Development Objective been changed since Board Approval of the Project?
☐ Yes  ☐ No

Component(s)

<table>
<thead>
<tr>
<th>Component Name</th>
<th>Component Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - Investment in Geothermal Power Generation Capacity (US$574.7 million)</td>
<td>574.70</td>
</tr>
<tr>
<td>2 - Technical Assistance for Capacity Building (US$6.95 million)</td>
<td>6.95</td>
</tr>
</tbody>
</table>

Overall Ratings

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Previous Rating</th>
<th>Current Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Progress towards achievement of PDO</td>
<td>Satisfactory</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>Overall Implementation Progress (IP)</td>
<td>Satisfactory</td>
<td>Moderately Satisfactory</td>
</tr>
<tr>
<td>Overall Risk Rating</td>
<td>Moderate</td>
<td>Moderate</td>
</tr>
</tbody>
</table>

Implementation Status Overview
The Geothermal Clean Energy Investment Project became effective on June 29, 2012. The Grant for capacity building of Pertamina Geothermal Energy (PGE) by the New Zealand Government was signed and effective on May 24, 2012. The project is progressing on the way to meet its development objectives. The activities launched under the investment and technical assistance components shows reasonable progress.

Locations
No Location data has been entered
### Results

#### Project Development Objective Indicators

<table>
<thead>
<tr>
<th>Indicator Name</th>
<th>Core</th>
<th>Unit of Measure</th>
<th>Baseline</th>
<th>Current</th>
<th>End Target</th>
<th>Date</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>New geothermal power generation capacity installed directly financed by the World Bank loan</td>
<td>Megawatt</td>
<td>Value 0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>150.00</td>
<td>26-Jul-2011</td>
<td>Steamfield development underway The installed capacity of the Ulubelu Units 3&amp;4 and Lahendong Units 5&amp;6 power plants.</td>
</tr>
<tr>
<td>Avoided local air pollution (NOX, SO2, TSP)</td>
<td>Text</td>
<td>Value 0 tonnes of NOX 0 tonnes of SO2 0 tonnes of TSP</td>
<td>0 tonnes of NOX 0 tonnes of SO2 0 tonnes of TSP</td>
<td>0 tonnes of NOX 0 tonnes of SO2 0 tonnes of TSP</td>
<td>3,000 tonnes of NOX 5,400 tonnes of SO2 2,500 tonnes of TSP</td>
<td>26-Jul-2011</td>
<td>28-Feb-2013</td>
</tr>
<tr>
<td>Avoided global GHG pollution (CO2)</td>
<td>Metric ton</td>
<td>Value 0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>1100000.00</td>
<td>26-Jul-2011</td>
<td>07-Mar-2012</td>
</tr>
<tr>
<td>Contribute towards PGE becoming a leading geothermal developer</td>
<td>Megawatt</td>
<td>Value 232.00</td>
<td>232.00</td>
<td>232.00</td>
<td>700.00</td>
<td>26-Jul-2011</td>
<td>28-Feb-2013</td>
</tr>
<tr>
<td>Ensure technical, environmental and social practices in line with industry standards during project preparation</td>
<td>Text</td>
<td>Value Feasibility studies are under par of industry standards. Bank funded FSs in-line with industry and international</td>
<td>Feasibility studies are under par of industry standards. Bank funded FSs in-line with industry and international</td>
<td>Feasibility studies are under par of industry standards. Bank funded FSs in-line with industry and international</td>
<td>It is aimed that by 2015 feasibility studies should meet good industry practice.</td>
<td>26-Jul-2011</td>
<td>28-Feb-2013</td>
</tr>
</tbody>
</table>
### Maintain operation availability of geothermal power plants

<table>
<thead>
<tr>
<th>Indicator Name</th>
<th>Core</th>
<th>Unit of Measure</th>
<th>Baseline</th>
<th>Current</th>
<th>End Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum of 2 EPC contracts signed</td>
<td>Text</td>
<td>Value</td>
<td>0.85</td>
<td>0.85</td>
<td>0.85</td>
</tr>
<tr>
<td>Date</td>
<td>28-Feb-2013</td>
<td>31-Mar-2015</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comments</td>
<td>Baseline plant availability factor is at 85-90%</td>
<td>Current average plant availability factor is at 85-90%</td>
<td>Plant availability factor in 2015 is at 85-90%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Intermediate Results Indicators

<table>
<thead>
<tr>
<th>Indicator Name</th>
<th>Core</th>
<th>Unit of Measure</th>
<th>Baseline</th>
<th>Current</th>
<th>End Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum of 2 EPC contracts signed</td>
<td>Text</td>
<td>Value</td>
<td>EPC Contractors not procured</td>
<td>Contracts under procurement at PQ stage</td>
<td></td>
</tr>
<tr>
<td>Date</td>
<td>26-Dec-2011</td>
<td>07-Mar-2012</td>
<td>31-Dec-2012</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comments</td>
<td>EPC Contractors not procured</td>
<td>Contracts under procurement at PQ stage</td>
<td></td>
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</tbody>
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<tr>
<th>Indicator Name</th>
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<th>Baseline</th>
<th>Current</th>
<th>End Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yearly agreement reached between PGE and Partner on support program</td>
<td>Text</td>
<td>Value</td>
<td>Partner not procured</td>
<td>Agreement reached</td>
<td></td>
</tr>
<tr>
<td>Date</td>
<td>01-Jan-2012</td>
<td>07-Mar-2012</td>
<td>31-Mar-2015</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comments</td>
<td>Partner under procurement; Expression of Interest evaluation underway</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Indicator Name</th>
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<th>Unit of Measure</th>
<th>Baseline</th>
<th>Current</th>
<th>End Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>World Bank approval of yearly training program</td>
<td>Text</td>
<td>Value</td>
<td>Training Program yet to be approved</td>
<td>Training Program approved</td>
<td></td>
</tr>
<tr>
<td>Date</td>
<td>01-Jan-2012</td>
<td>07-Mar-2012</td>
<td>31-Dec-2015</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comments</td>
<td>Partner under procurement; Expression of Interest evaluation underway</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<th>Baseline</th>
<th>Current</th>
<th>End Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum of 40 staff trained in key workshops each year</td>
<td>Number</td>
<td>Value</td>
<td>0.00</td>
<td>30.00</td>
<td>120.00</td>
</tr>
<tr>
<td>Date</td>
<td>01-Apr-2012</td>
<td>28-Feb-2013</td>
<td>31-Mar-2015</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comments</td>
<td>Training on procurement provided</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th>Indicator Name</th>
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<th>Unit of Measure</th>
<th>Baseline</th>
<th>Current</th>
<th>End Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT software purchased, installed, and being utilized by PGE staff</td>
<td>Text</td>
<td>Value</td>
<td>Software not installed</td>
<td>Software purchased by PGE</td>
<td></td>
</tr>
<tr>
<td>Date</td>
<td>01-Jan-2012</td>
<td>28-Feb-2013</td>
<td>31-Mar-2013</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comments</td>
<td>Software installed, utilized by PGE staff</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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<th>Unit of Measure</th>
<th>Baseline</th>
<th>Current</th>
<th>End Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bid documents including FEED issued for one geothermal plant; Studies issued for new developments/investments</td>
<td>Text</td>
<td>Value</td>
<td>Bid documents/studies not issued</td>
<td>Bid documents/studies issued</td>
<td></td>
</tr>
<tr>
<td>Date</td>
<td>01-Jan-2012</td>
<td>28-Feb-2013</td>
<td>31-Dec-2015</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comments</td>
<td>Bid documents under preparation; contract under negotiation for FEED</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Data on Financial Performance (as of 19-Dec-2012)
### Financial Agreement(s) Key Dates

<table>
<thead>
<tr>
<th>Project</th>
<th>Ln/Cr/Tf</th>
<th>Status</th>
<th>Approval Date</th>
<th>Signing Date</th>
<th>Effectiveness Date</th>
<th>Original Closing Date</th>
<th>Revised Closing Date</th>
</tr>
</thead>
</table>

### Disbursements (in Millions)

<table>
<thead>
<tr>
<th>Project</th>
<th>Ln/Cr/Tf</th>
<th>Status</th>
<th>Currency</th>
<th>Original</th>
<th>Revised</th>
<th>Cancelled</th>
<th>Disbursed</th>
<th>Undisbursed</th>
<th>% Disbursed</th>
</tr>
</thead>
<tbody>
<tr>
<td>P113078</td>
<td>IBRD-80820</td>
<td>Effective</td>
<td>USD</td>
<td>175.00</td>
<td>175.00</td>
<td>0.00</td>
<td>175.00</td>
<td>0.00</td>
<td>100.00</td>
</tr>
<tr>
<td>P113078</td>
<td>TF-10407</td>
<td>Effective</td>
<td>USD</td>
<td>125.00</td>
<td>125.00</td>
<td>0.00</td>
<td>125.00</td>
<td>0.00</td>
<td>100.00</td>
</tr>
<tr>
<td>P113078</td>
<td>TF-11854</td>
<td>Effective</td>
<td>USD</td>
<td>6.95</td>
<td>6.95</td>
<td>0.46</td>
<td>6.49</td>
<td>7.00</td>
<td></td>
</tr>
</tbody>
</table>

### Disbursement Graph

![Disbursement Graph](image)

### Key Decisions Regarding Implementation

Next implementation support mission is planned in June 2013.

### Restructuring History

There has been no restructuring to date.

### Related Projects
There are no related projects.