Cover Page for CTF Project/Program Approval Request			
1. **Country/Region**	Indonesia	2. **CIF Project ID#**	(Trustee will assign ID)
3. **Project/Program Title**	ADB Private Sector Geothermal Energy Program		
4. **Terms and Amount Requested in million USD equivalent**	**Private sector** Loan/guarantee: $149.25 million Grant: N/A Fees: $0.75 million **Total: $150.00 million**		
5. **Implementing MDB(s)**	Asian Development Bank (ADB)		
6. **National Implementing Agency**	n/a		
7. **Contact Information of MDB Focal Point and Program Task Team Leader**	HQ Contacts: Mr. Don Purka, Principal Investment Specialist and CIF Private Sector Focal (dpurka@adb.org) Mr. Jiwan Acharya, Senior Climate Change Specialist and CTF Focal (jacharya@adb.org)	Task Team Leader: Mr. Jackie Surtani, Senior Investment Specialist, Private Sector Operations (jsurtani@adb.org)	

8. Brief Description of Project/Program (including objectives and expected outcomes)

ADB's Private Sector Operations Department ("ADB-PSOD") proposes a $150 million CTF program to facilitate commercial lending and the financial close of geothermal power projects undertaken by the private sector and state owned enterprises borrowing without a government guarantee. Most of these projects have been awarded rights and permits for exploration and project development, and have signed a power purchase agreement (PPA) or are well advanced in such negotiations. ADB-PSOD is currently evaluating multiple prospective projects ranging from 30 MW to more than 300 MW per project. The Program will include multiple private sector geothermal projects over the next 3 years totaling 750 MW (approximately $2.6 billion in project costs) and 4.4 million tons of CO2 equivalent.

Although the policy and regulatory environment has improved considerably in the last few years, commercial financing has not appeared in requisite quantities to accelerate development. The billions of investment and financing needed for market transformation will not materialize until some of the actual and perceived risks are reduced through financial closure of new private sector projects. These projects face common development and financing barriers. A suite of products will deployed depending on the specific circumstances as discussed with the project sponsors/investors and commercial lenders. The proposed financial products will be aligned to specific project risks, and are consistent with the general findings and recommendations of prior review and analysis of Indonesia's geothermal market risks. This Program was re-endorsed by the Government of Indonesia and the TFC in the IP Update in April 2013.

9. Consistency with CTF Investment Criteria[1]

(1) **Potential GHG Emissions Savings**

4.4 million tons CO_2e per year (88 million tons CO_2e over 20 years) for the projects co-financed by the Program. *See Program proposal, paragraph 17, page 9.*

(2) Cost-effectiveness

CTF$ 1.70 per ton CO_2e, decreasing to CTF$ 0.40 per ton CO_2e with replication and scale up. *See Program proposal, paragraph 17, page 9.*

(3) Demonstration Potential at Scale

The program will have a strong demonstration effect to initiate market transformation. Replication and scale up potential is more than 10:1. *See Program proposal, paragraphs 18-19, page 10.*

(4) Development Impact

The program will support 750 MW of new capacity which is sufficient for electricity to supply more than 1 million households. It will also include other co-benefits such as improvement in ambient air quality from the reduction of fossil fuel combustion (coal and diesel) and create approximately 4,275 skilled and unskilled jobs during construction and operations. *See Program proposal, paragraph 20, page 11.*

(5) Implementation Potential

The Program will support 750 MW of projects over the next 3 years with credible sponsors that are at a reasonably advanced stage of development, i.e., all with relevant permits and development rights and in some cases with signed PPAs. All licensing and permitting (including environmental and forest licenses) is largely completed and does not pose a critical-path risk to financial closure and implementation. *See Program proposal, paragraphs 21-22, page 12.*

(6) Additional Costs and Risk Premium

Capital costs are more than 4x higher for geothermal power than for conventional fossil fuel plants. Exploration, resource and other development risks are highly prevalent upfront in the project, and 30% of the total project costs are related to resource and reservoir development (the equivalent of prepaying for the entire "fuel" supply for the project). *See Program proposal, paragraphs 23-24, page 12.*

(7) Financial Sustainability

Projects financed under the program will be subject to ADB's normal due diligence and feasibility assessments, including financial, economic, environmental, social, and risk analyses. CTF funds will be utilized with minimum concessionality to ensure that individual projects meet ADB criteria for financial viability. *See Program proposal, paragraphs 25-26, page 12.*

(8) Effective Utilization of Concessional Finance

CTF funds will support financial closing on several landmark projects which will demonstrate that geothermal energy is a viable destination for commercial investment. The landmark projects will serve as a "bridge" to the next generation of geothermal development. *See Program proposal, paragraphs 27-29, page 13.*

(9) Mitigation of Market Distortions

At present, there is little or no "third party" commercial financing of geothermal projects and the

[1] Same as footnote 2.

possibility of distorting this non-existent market is vanishingly small. *See Program proposal, paragraphs 30, page 14.*

(10) Risks

Geothermal resources are the most complex and challenging of any form of renewable energy, and development in Indonesia pose a variety of regulatory, exploration, offtake, environmental and other risks. Risk mitigation measures and instruments will be formulated and applied as necessary for the specific risks of individual projects. *See Program proposal, paragraphs 31-35, page 14-16.*

10. Stakeholder Engagement[2]

The Program has been formulated under the aegis of the Government's policy and programs for energy development including specific policies for geothermal development. Civil society and non-government organizations were consulted during preparation of the original CTF Investment Plan in 2009 and during the Joint Mission which updated and revised the IP in 2013. Project-specific consultations are being and will be carried out in accordance with relevant ADB policies on public communications and safeguards.

11. Gender Considerations[3]

Gender action plans will be developed for individual projects depending on the circumstances and opportunities for effective gender mainstreaming.

Indicators and Targets (consistent with results framework)

See draft Program proposal, paragraph 17, page 36.

Core Indicators	Targets
(a) tCO_2e reduced annually	4.4 million
(b) Leverage factor	1:17
(c) Installed capacity (MW)	750
(d) Design Output (GWh/y)	5,913
Development Indicator(s):	Performance targets and indicators quantifying developmental impacts will be included in the formulation of a Project Design and Monitoring Framework for each individual project to be supported under this program. Indicators which are expected to be included are summarized here.
Improved enabling policy and regulatory environment for low carbon technologies and practices	The program will facilitate financial closing on several landmark geothermal projects which will demonstrate the attractiveness of geothermal development as a commercial investment destination. This will serve to clarify the intent of GoI policy, which is viewed with substantial uncertainty by commercial investors. In effect, the program will drive policy rather than *vice versa*.
Access to energy co-benefits	The program will support 750 MW of new capacity will be sufficient for electricity supply to more than 1 million households.

[2] Same as footnote 2.
[3] Same as footnote 2.

Health co-benefits	Health benefits will accrue mainly at the local and national level from avoided power plant emissions of conventional pollutants including particulate matter (PM), nitrogen oxides (NOX), sulphur oxides (SOX), mercury and other toxic compounds present in petroleum fuels, coal, and coal ash.

12. **Co-financing**

See Program proposal, page	Amount (in USD)
• Government / public sector	$ 400 million
• MDB	$ 350 million
• Private Sector (please specify)	$1100 million (international commercial banks and equity from project sponsors)
• Bilateral (please specify)	$600 million (Japan Bank for International Cooperation)
• Others (please specify)	$150 million (Clean Technology Fund)
Total	$ 2.6 billion

13. **Expected Date of MDB Approval**

Q4 2013 through Q4 2016