May 6, 2015

APPROVAL BY MAIL: REVISED CTF INVESTMENT PLAN FOR INDONESIA

Proposed Decision

CTF Revised Investment Plan for Indonesia

Recalling its endorsement of the *CTF Investment Plan for Indonesia* in March 2010 and of the revisions to the plan in April 2013, the CTF Trust Fund Committee reviewed the *CTF Revised Investment Plan for Indonesia* (dated March 2015), submitted by the Government of Indonesia in collaboration with the World Bank Group and the Asian Development Bank. The Trust Fund Committee takes note of the updates on the implementation of the projects and programs financed by the CTF and the following revisions to the *CTF Investment Plan for Indonesia*:

a) Dropping the *Energy Efficiency and Renewable Energy Project* with ADB; and

b) Reallocating USD 50 million[1] in CTF funding to the *Geothermal Energy Upstream Development Projects* with the World Bank.

The Trust Fund Committee endorses the revisions as a basis for the further development of the proposed activities for CTF funding and notes that the total indicative allocation after the revisions remains at USD 400 million in CTF funding. The Trust Fund Committee recalls that the approval of CTF funding by the Committee is dependent upon the submission of high quality project or program proposals.

[1] In March 2012, the CTF Trust Fund Committee approved USD 472,500 under the *Global Climate Partnership Fund - Indonesia EE/RE Investment Program* (with ADB) as project preparation grant (USD 450,000) and MDB project implementation and supervision services (USD 22,500). The exact amount of funding available for commitment to the new project with the World Bank will be the balance after ADB has returned the unused funds to the Trustee.

CLEAN TECHNOLOGY FUND

INVESTMENT PLAN FOR

Indonesia/East Asia and Pacific

Revision Note

March, 2015

Indonesia/East Asia and Pacific

CLEAN TECHNOLOGY FUND INVESTMENT PLAN

Revision Note

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List of Abbreviations

ADB	Asian Development Bank
BAU	business as usual
CIP	Country Investment Plan
CTF	Clean Technology Fund
EE	energy efficiency
GHG	greenhouse gas
GoI	Government of Indonesia
IBRD	International Bank for Reconstruction and Development
IFC	International Finance Corporation
MDB	Multilateral Development Bank
MEMR	Ministry of Energy and Mineral Resources
MOF	Ministry of Finance
MtCO2e	million tons of carbon dioxide equivalent
MTOE	million tons oil equivalent
NAP	National Action Plan
PGE	Pertamina Geothermal Energy
PLN	Perusahaan Listrik Negara
RPJM	Rencana Pembangunan Jangka Menengah
RE	renewable energy
TFC	Trust Fund Committee
TNA	Technical Needs Assessment
WBG	World Bank Group

EXECUTIVE SUMMARY

1. The original Country Investment Plan (CIP) submitted by the Government of Indonesia (GoI) was endorsed by the CTF Trust Fund Committee (TFC) in March 2010 and included a CTF allocation of US$400 million to support two priority activities/areas, namely: (i) significant and rapid scale-up of large-scale geothermal power development, through the Asian Development Bank (ADB), the International Bank for Reconstruction and Development (IBRD) and the International Finance Corporation (IFC); and (ii) acceleration of investments in energy efficiency (EE) and renewable energy (RE) through ADB private sector operations and IFC.

2. In 2013, a joint mission of the Multilateral Development Banks (MDBs) laid the foundation for a revision of the original CIP on the basis of an unchanged overall rationale for CTF intervention and the need to reallocate some CTF funds. Taking into consideration the evolving Indonesian energy and environmental policy framework, such a reallocation entailed shifting CTF funds (i) from public to non-sovereign and private sector investments in geothermal energy development; and (ii) from the private sector EE/RE program to the private sector geothermal program. The revision of the CIP was endorsed by the CTF TFC in April 2013.

3. The 2015 revision builds on the original CIP, 2013 revisions, and November 2014 consultations between GoI, the WB and ADB, and stakeholder outreach. The recent soundings underscored that GoI continues assigning high priority to harnessing the country's geothermal potential – particularly at a time when the use of CTF funds started generating some early progress. To help gaining momentum, GoI proposes to strategically reallocate additional CTF resources to the geothermal component of the CTF CIP.

4. The overall rationale for CTF intervention remains unchanged from the 2013 revision. The proposed 2015 revision of the 2013 CIP reflects the evolution of relevant national policies and priorities. In order to make a decisive contribution to low-carbon economic and social development through furthering the country's geothermal sector, the GoI is looking to: (i) remove barriers for increased private sector participation; (ii) mobilize the resources committed to the country's Geothermal Fund; and (iii) implement the provisions mandated by the Geothermal Law.

5. The proposed revisions to the CIP will reallocate US$50 million from the ADB Energy Efficiency and Renewable Energy Private Sector Program to the proposed WB Geothermal Energy Upstream Development Project.

6. The proposed WB project's objective is to increase the utilization of geothermal-based electricity to strengthen diversification and resilience of Indonesia's generation portfolio and accelerate the shift to a low carbon growth path. This will be achieved by de-risking resource estimation of prospective geothermal fields and subsequent development of the steam resources in the most promising fields.

7. The remaining amounts under the EE/RE private sector programs implemented by IFC will continue targeting market barriers across the spectrum of RE and EE technologies, by utilizing various financing modalities, including direct investments and investments through financial intermediaries.

CTF Proposed Allocation and Update of Project Financing Plan

8. The 2013-revised CTF financing plan is presented in Table ES-1 below.

Table ES-1: Revised CTF Financing Plan (2013) - (US$ Million)

Program/Project Title	Total	CTF	MDB	Other Cofinancing
WB Geothermal Clean Energy Project	575	125	175	275
ADB Private Sector Geothermal Program	2,625	150	375	2,100
IFC Geothermal Program (Investment & Advisory)	1,760	40-50	120	1,600
IFC Energy Efficiency and Renewable Energy	260	25-35	125	100
ADB Energy Efficiency and Renewable Energy	250	50	50	150
Total	**5,470**	**400**	**845**	**4,225**

Source: Indonesia CTF Investment Plan, revision 2013

9. Table ES-2 and Table ES-3 present the proposed re-allocation of CTF resources and the 2015-revised CTF financing plan.

Table ES-2: Proposed Re-allocation of CTF Resources (US$ million)

CTF Program	MDB	CTF Funding (CTF IP Endorsed April 2013)	CTF Funding Reallocation		CTF Funding (CTF IP Revision February 2015)
			WB	ADB	
Geothermal Energy Upstream Development Project	WB	N/A	(+) 50		50
Energy Efficiency and Renewable Energy	ADB	50		(-) 50	0
Total		**50**	**(+) 50**	**(-) 50**	**50**

Source: Consultations between GoI, WB and ADB

Table ES-3: Revised CTF Financing Plan (2015) - (US$ Million)

MDB & Program/Project Title	Total	CTF	MDB	Other Cofinancing
WB Geothermal Energy Upstream Development Project	2,860.5	50	0	2,810.5
WB Geothermal Clean Energy Project	575	125	175	275
ADB Private Sector Geothermal Program	2,625	150	375	2,100
IFC Geothermal Electricity Finance Program	1,770	50	120	1,600
IFC Energy Efficiency and Renewable Energy	225	25	75	125
Total	**8,055.5**	**400**	**745**	**6,910.5**

INTRODUCTION

10. Following the Indonesian elections of July 2014, a new Government was formed. Recent consultations between the newly-formed GoI, WB, and ADB have confirmed that geothermal development remains a pillar of the country's Low Carbon Growth Strategy (LCGS), a key priority for economic development, and an area, which requires additional support by development aid.

11. In order to make a decisive contribution to low-carbon economic and social development through furthering the country's geothermal sector, the GoI is looking to: (i) remove barriers for increased private sector participation; (ii) mobilize the resources committed to the country's Geothermal Fund; and (iii) implement the provisions mandated by the Geothermal Law.

12. To move its geothermal development program forward, the GoI has evaluated a number of options, ultimately requesting support to the WB through the Minister of Finance (MoF).

13. WB support will be enabled by strategically reallocating US$50 million from ADB Energy Efficiency and Renewable Energy private sector program to the proposed WB Geothermal Energy Upstream Development Project. The proposed project's objective is to increase the utilization of geothermal-based electricity to strengthen diversification and resilience of Indonesia's generation portfolio and accelerate the shift to a low carbon growth path. This will be achieved by de-risking resource estimation of prospective geothermal fields and subsequent development of the steam resources in the most promising fields.

14. The overall rationale for CTF intervention remains unchanged. The proposed revisions to the CIP reflect the evolution of relevant national policies and priorities. The overall context and long-term objectives of the revised 2015 CIP remain consistent with the 2013 CIP. The 2015 CIP is a business plan owned by the Government of Indonesia (GoI) and remains a dynamic document with the flexibility to consider changing circumstances and new opportunities.

STATUS OF REVISED INVESTMENT PLAN IMPLEMENTATION

15. Below is a summary table and descriptive updates on the implementation status for each project.

Table 1: 2013 CIP - Status of Project Approvals

Project Title	TFC Approval Date	Actual / Projected MDB Board Approval Date	CTF Funding ($ million)	Leveraged Funding ($ million)
WB Geothermal Clean Energy Investment Project	December 2010	July 2011	125	450
ADB Private Sector Geothermal Program	October 2013	December 2013 & June 2014	150	2475
IFC Geothermal Electricity Finance Program	December 2013	December 2015	50	1720
IFC Energy Efficiency and Renewable Energy	December 2015	June 2016	25	200
ADB Energy Efficiency and Renewable Energy	To be dropped	To be dropped	50	200

WB Geothermal Clean Energy Investment Project

1. **Description:** The project objective is to increase power generation from renewable geothermal resources, and reduce local and global environmental impacts. This will be achieved by supporting development of two geothermal fields (namely, Ulubelu and Lahendong) with respective capacities of 110 MW and 40 MW. The geothermal resources have been confirmed at both fields and project implementation is underway.
2. **Rationale:** The rationale and expected impacts are the same as envisioned in the 2010 and 2013 CIPs; concessional funds are needed to further develop the backlog of geothermal projects under state-owned enterprise (SOE) lead.
3. **Progress:** The Geothermal Clean Power Project was approved by the TFC in December 2010, approved by the WB Board in July 2011, and became effective in June 2012. The total project costs were estimated to be $574.7 million, consisting of $125 million from CTF, $175 million from WB, and $274.7 million from the project sponsor Pertamina. Despite a relatively slow start, the drilling program for reinjection and production wells for the Ulubelu and Lahendong fields is giving good results. To date, a total disbursement of $17 million – largely CTF – has been made. MoF has requested the World Bank an extension of the closing date to allow the project to achieve its stated objectives.

ADB Private Sector Geothermal Program

1. **Description**: The program comprises a pipeline of geothermal power generation projects currently being developed by the private sector in Indonesia. The program is catalyzing the demonstration, replication, and scale-up of the geothermal sector in Indonesia.

2. **Rationale:** The Program will help demonstrate a viable business model for geothermal power by the private sector, and build the next generation of experience and precedents for the private sector in Indonesia to leverage commercial debt and investment into the sector. As more projects commence exploratory programs and commercial operations, it will build the experience database in terms of success rates, and comparisons of actual results (e.g., heat resources, well capacities, other gases) as against estimates made using probabilistic models. This will reduce the uncertainties of future drilling programs (of success rates as well as costs), benefitting the geothermal sector.
3. **Progress:** The proposed program with CTF$150 million was approved by the TFC in October 2013. Subsequently, ADB's Board approved a financing package for the 330 MW Sarulla project in December 2013, and a separate transaction for the 240 MW Rantau Dedap project in June 2014. Due diligence is being conducted on additional projects which will utilize remaining CTF funds.

IFC Geothermal Electricity Finance (IGEF) Program

1. **Description:** The IGEF program comprises a series of sub-projects, which will catalyze financing from IFC and other commercial investors and lenders in the geothermal sector with the aim to unlock the pipeline of potential private sector geothermal projects.
2. **Rationale:** The rationale and expected impacts are the same as envisioned in the original CIP and 2013 CIP revision: concessional funds are needed to further support private sector geothermal projects.
3. **Progress:** The IGEF Program proposal was approved by the CTF TFC in December 2013. Currently IFC is in discussions with several project sponsors on the preparation of a series of sub-projects, some of which are expected to reach board approval during the calendar year of 2015. The CTF funds are intended to be used to allow these sub-projects to complete the exploration phase and reach financial closure.

IFC Energy Efficiency and Renewable Energy Program

1. **Description:** The IFC EE/RE program is designed to support the government's initiatives as well as complement bilateral/multilateral institutions' efforts to promote EE and RE projects by encouraging private sector investment through the use of appropriate concessional financing instruments. IFC's program may include both investment and advisory services targeting the scale-up of various EE and RE technologies in Indonesia. At this time the program seeks greater flexibility in deploying the funds as direct investments or investments through financial intermediaries. The program will continue looking for ways to identify and address market barriers preventing the investments from flowing into EE and RE technologies and applications, structuring intervention in the way that is most efficient and practical.
2. **Rationale:** The rationale for the program remains the same as envisioned in the 2010 and 2013 CIPs. The program is being designed to mobilize financing to variety of financing products and alternatives tailored to the different needs of EE, RE, and cleaner production (CP) projects.
3. **Progress:** IFC is currently in dialogue with a few potential clients over possibilities of investments in various RE/EE technologies. Recent reforms in the financial sector have improved the investment attractiveness of RE/EE projects and IFC expects to be able to generate a pipeline of the sub-projects shortly. The range of potential investments includes wind, waste-to-energy, mini-hydro, green buildings, geothermal, and others that can be done directly or through financial intermediary. Final selection of the project partners will be based on readiness and potential of creating the desired impact. IFC expects to submit a proposal for CTF Trust Fund Committee approval by the end of calendar year 2015.

ADB Energy Efficiency and Renewable Energy

1. **Description:** the potential market for EE and RE is estimated at more than $4 billion, comprising a broad spectrum of demand side management, green buildings, industrial energy efficiency and cogeneration, biomass/biogas, small hydropower, supply side efficiency, and electricity grid improvements, but only a fraction of the potential has been developed. Investment and advisory services would be provided to scale-up private sector investment with an initial focus on EE upgrades for commercial and residential buildings, industrial EE and cleaner production (CP), and RE-based distributed generation.
2. **Rationale:** The rationale for CTF support remains the same as envisioned in the 2010 and 2013 CIPs. The Program was being designed to deliver a variety of financing products and alternatives tailored to the different needs of EE, RE, and CP projects.
3. **Progress:** ADB requested and received TFC approval for $0.45 million project preparation funding from CTF for the preparatory and due diligence tasks of structuring the investment vehicle inclusive of $50 million of CTF financing. The preparation targeted a cofinancing program with the Global Climate Partnership Fund (GCPF); feasibility assessments confirmed the potential market for EE/RE/CP investments, but a viable operating structure has not been identified to manage the candidate investment pipeline. ADB has determined that the program as envisioned will not be mobilized in a timely manner, and proposes to relinquish the CTF allocation.

RATIONALE AND CIRCUMSTANCES FOR INVESTMENT PLAN REVISION

16. The overall rationale for CTF intervention remains unchanged from the 2013 CIP. The proposed revisions to the CIP are aligned with the relevant national policies and priorities, including:
    - Indonesia's Second National Climate Change Communication (2009);
    - the Indonesia Green Paper (2009);
    - the GOI National Energy Policy (2005);
    - the Energy Blueprint 2005 – 2025;
    - Indonesia's National Long-Term Development Plan 2005-2025, and National Medium-Term Development Program for 2010 – 2014 (Rencana Pembangunan Jangka Menengah, or RPJM);
    - the National Action Plan for Climate Change (NAP 2007), the Development Planning Response to Climate Change (2008);
    - the Climate Change Roadmap for the National Medium-Term Development Program for 2010 – 2014 (2009);
    - Indonesia's Technology Needs Assessment on Climate Change Mitigation (TNA 2009); and
    - other relevant sector development policies and programs.

17. The circumstances underpinning the proposed CIP revision include the following:

    - New initiatives are required to accelerate geothermal development, particularly in the upstream exploration and development phases. Recent GoI policy interventions, advisory services from ADB and the World Bank Group, and CTF co-financing have resulted in encouraging progress. The WB project approved in 2010-11 is under implementation, and ADB's private sector geothermal program has provided financing for two new projects (with additional projects in the pipeline). Assuming that all of these projects are successfully commissioned, CTF will have facilitated a 60% increase in installed capacity over the 2010 baseline. When these new projects are complete, total installed capacity will be still be less than 20% of economic potential and less than 10% of technical potential. The overall rate of new capacity additions is less than desired, and there is significant demand and need for concessional funds to accelerate development.

    - The ADB proposed private sector EE/RE investment program will require restructuring and additional feasibility assessment and due diligence in order to deliver a viable investment pipeline. ADB has determined that the program as envisioned will not be mobilized in a timely manner, and proposes to relinquish the CTF allocation in favor of supporting the aforementioned geothermal development.

18. **GoI has strengthened the policy framework for private sector participation, but geothermal development has been slower than desired**: Indonesia's power sector has struggled to keep up with the high electricity demand that has accompanied economic growth. Electricity consumption increased by more than 6% over the first nine months of 2014 and is expected to double in 10 years, from 189 TWh in 2013 to 386 TWh by 2022 – equivalent to +8% per year). The Government of Indonesia (GoI) has launched two 10 GW Fast-Track Programs to increase the country's electricity generation capacity to meet demand. While the first Fast-Track

Program was directed to conventional power-generation, the 2008-established second Fast-Track Program is predominantly made up of renewable energy, with geothermal making up forty percent of the target.

19. Geothermal power is one of the best options to diversify Indonesia's energy mix. It is a base load generation technology not subject to the intermittency and variability associated with most renewable electricity sources. Geothermal resources in Indonesia are also ideally located on islands with major population centers where electricity demand is high and continues to grow. Furthermore, as an indigenous and non-tradable energy source, it will also enhance the country's energy security and serve as a natural hedge against the volatility of fossil-fuel prices.

20. As noted above, only a small fraction of the total geothermal resources in Indonesia is operational and producing power. The progress made by the second *Fast-Track Program* has been slower than desired. Against the *Program*'s 76 planned power plants[1] only a few have progressed – causing the Government to delay the installation deadline from 2015 to 2020. Estimates suggest that only about a third of this total is likely to be developed under a business-as-usual scenario despite the fact that a large number of projects are economically justified when local and global environmental externalities are considered[2].

21. In an effort to revive and bring back on track geothermal development generally and the second *Fast-Track Program* specifically through increased private sector participation, GoI has pursued a number of initiatives, including:
    - the Indonesia Investment Agency (PIP) under the Ministry of Finance (MoF) established a $300 million revolving fund for geothermal development, as known as Geothermal Fund, in 2011 – the Fund is currently reviewing its rules of engagement to make it more effective;
    - in June 2014, geothermal tariffs have been revised a fourth time, providing some relief to developers willing to take on exploration and development risks; and
    - in August 2014, the Indonesian Parliament approved a new Geothermal Law aimed at facilitating geothermal development, particularly in conservation areas.

22. GoI's ambitious geothermal prospects remain attractive and recent reform initiatives are encouraging, but the pace of geothermal development has not increased as envisioned: the second *Fast-Track Program* has not progressed as fast as planned, the Geothermal Fund has not disbursed any funds, and the new Geothermal Law has not been fully implemented. Regulation of the geothermal sub-sector has been separated from mining laws and higher off-take tariffs have been established. However, the risk associated with the early resource exploration phase – the riskiest and most expensive stage of the geothermal development process - still outweighs the benefits linked with the new tariff structure.

23. Only a handful of existing geothermal operations (brownfields) in Indonesia have expanded production over the past decade and a smaller number of new greenfield projects that carry

[1] According to the second *Fast-Track Program*, the bulk of investments would be prerogative of the private sector, which is to build 59 plants. On the state-side, PLN is expected to develop 17 power plants.

[2] It is important to distinguish that although avoidance of local pollution directly benefits Indonesians, the benefits of avoided GHG emissions extend beyond a single country and positively impact the entire world.

greater risks have been developed. Moreover, carious factors have resulted in lower-than-expected participation from private investors, including:

- limited institutional capability to properly plan geothermal development and sufficiently engage suitable developers;
- insufficient policy and regulatory support for implementation of the Geothermal Law – this has been addressed through the new Geothermal Law;
- inadequate incentives and pricing mechanisms that fail to reflect the environmental benefits of the technology and enable investors to secure a return commensurate with the higher risks they face especially when developing unexplored (green) geothermal fields;
- the current structure of the Geothermal Fund, for which a satisfactory operating model has yet to be developed, particularly for de-risking projects at the exploration stage; and
- limited domestic capacity in the areas of resource assessment.

PROPOSED CHANGES TO THE INVESTMENT PLAN

24. The 2013 revised CIP included (i) shifting of CTF funds from public to non-sovereign and private sector investments in geothermal energy development; and (ii) shifting some resources from the private sector EE/RE programs to the private sector geothermal program, taking into consideration the evolving Indonesian energy and environmental policy framework. The revised financing plan is summarized in Table 2.

Table 2: Revised CTF Financing Plan (2013) - (US$ Million)

Program/Project Title	Total	CTF	MDB	Other Cofinancing
WB Geothermal Clean Energy Project	575	125	175	275
ADB Private Sector Geothermal Program	2,625	150	375	2,100
IFC Geothermal Program (Investment & Advisory)	1,760	40-50	120	1,600
IFC Energy Efficiency and Renewable Energy	260	25-35	125	100
ADB Private Sector Energy Efficiency and Renewable Energy	250	50	50	150
Total	**5,470**	**400**	**845**	**4,225**

Source: Indonesia CTF Investment Plan, revision 2013

25. The 2014-formed GoI proposes to adjust priorities for CTF based on the circumstances outlined above and candidate project readiness. In line with the IP revision in 2013, geothermal development continues to be a high priority, with the need for interventions that will allow better understanding and management of upfront development risks and facilitate greater private sector investments on an accelerated basis. The major change proposed is to shift CTF resources from the ADB to the World Bank. After evaluating options, it was proposed to shift US$50 million from the ADB private sector Energy Efficiency and Renewable Energy program to the proposed WB Geothermal Energy Upstream Development Project.

26. The proposed changes in CTF allocations are highlighted in Table 3, and Table 4 presents the indicative financing plan after the proposed CTF reallocations.

Table 3: Proposed Re-allocation of CTF Resources (US$ million)

CTF Program	MDB	CTF Funding (CTF IP Endorsed April 2013)	CTF Funding Reallocation		CTF Funding (CTF IP Revision February 2015)
			WB	ADB	
Geothermal Energy Upstream Development Project	WB	N/A	(+) 50		50
Energy Efficiency and Renewable Energy	ADB	50		(-) 50	0
Total		**50**	**(+) 50**	**(-) 50**	**50**

Source: Consultations between GoI, WB and ADB

Table 4: Revised CTF Financing Plan (2015) - (US$ Million)

MDB & Program/Project Title	Total	CTF	MDB	Other Cofinancing
WB Geothermal Energy Upstream Development Project	2,860.5	50	0	2,810.5
WB Geothermal Clean Energy Project	575	125	175	275
ADB Private Sector Geothermal Program	2,625	150	375	2,100
IFC Geothermal Electricity Finance Program	1,770	50	120	1,600
IFC Energy Efficiency and Renewable Energy	225	25	75	125
Total	**8,055.5**	**400**	**745**	**6,910.5**

Source: MDB staff estimates

27. As the resource estimation risk remain the key barrier for proving the entire megawatt capacity of a project and also for catalyzing the full amount of commercial debt and equity required within the timeframe allocated by the license, CTF will be deployed to specifically mitigate these risks with lenders and investors via the WB Geothermal Energy Upstream Development Project.

28. The GoI intends to seek TFC endorsement in Q1 of calendar year 2015. The project concept note for the WB Geothermal Energy Upstream Development Project is presented in Annex 1.

POTENTIAL IMPACTS OF PROPOSED CHANGES ON INVESTMENT PLAN OUTPUTS

29. The proposed changes are expected to have a positive impact on the investment plan outputs. Table 5 summarizes the potential impacts of the proposed changes with respect to the main CTF investment criteria.

Table 5: Assessment of Proposed Changes

CTF Investment Criteria	2013 Revised Investment Plan	2015 Revised Investment Plan
Transformational Impact	Increased support for non-sovereign and private sector geothermal with improved financial leverage is expected to accelerate investment resulting in faster capacity additions.	Harnessing Indonesia's geothermal endowment – particularly removing exploration drilling barriers for private sector investment – can have a significant transformational potential since it can serve the burgeoning energy needs of the country and help achieve GoI's ambitious goal of reducing GHG emissions by 26 percent by 2020, significantly bending the GHG emissions curve.
Potential for GHG Emissions Savings	Total reductions are estimated at 13.96 $MtCO_2e/y$.	With the new project, life-cycle GHG reductions will further increase for geothermal and decrease for EE/RE in comparison to the 2013 revision. Overall, total reductions are estimated to change slightly from 13.96 $MtCO_2e/y$ to 13.22 $MtCO_2eq/y$.
Cost-effectiveness	CTF cost effectiveness: (CTF $400 M) / (13.96 $MtCO_2e/y$) / 20 y project lifetime = CTF$1.43 / tCO_2e CTF + Leveraged Financing cost effectiveness: (Total $5,470 M) / (14.56 $MtCO_2e/y$) / 20 y project lifetime = CTF$19.6 / tCO_2e	CTF cost effectiveness: (CTF $400 M) / (13.22 $MtCO_2eq/y$) / 20 y project lifetime = CTF$1.51 / tCO_2e CTF + Leveraged Financing cost effectiveness: (Total $8,055.5 M) / (13.22 $MtCO_2eq/y$) / 20 y project lifetime = CTF$30.5 / tCO_2e
Demonstration Potential at Scale	Significant demonstrational impact potential with increased emphasis on non-sovereign and private sector financing expected to accelerate market penetration of geothermal, EE, and smaller-scale RE.	Demonstrational potential similar as envisioned in the 2013 CIP. The technical potential remains the same, but the economic potential is expected to increase with selective application of concessional funds to improve project viability.
Development Impact	Co-benefits from improved energy security, access to energy, and environmental	With shifting resources to geothermal development, a greater impact in terms of

	benefits should be higher than the original CIP; impacts on employment may be lower than the original CIP.	enhanced energy security, access to energy, and environmental benefits is to be expected.
Implementation Potential	WB, ADB-PSOD and IFC are developing a pipeline of geothermal projects with aggregate capacity of about 1560 MW (150 MW for WB, 660 MW for IFC and 750 MW for ADB).	The revision to Indonesia's IP would allow installing an additional 640MW of geothermal power capacity, which together with WB, ADB-PSOD and IFC, would bring the aggregate capacity enabled through the IP to 2,200MW. GoI's long-standing commitment to furthering the sector will be complemented by the mobilization of international development aid in order to ensure an appropriate level of implementation support. See "Implementation Capacity" in Table 6.
CTF Additionality	New feed-in-tariffs introduced for geothermal and other RE (including biomass/waste to energy, small hydro, wind) are helpful but commercial bank financing remains largely absent from the market. The new tariffs cannot be readily monetized to cover the higher upfront costs of RE and potential savings from EE investments.	CTF additionality is embedded in the package of interventions approved with the 2010 and 2013 CIPs. CTF additionality is also strengthened through the revisions of this CIP. The Geothermal Energy Upstream Development Project would be the first CTF-backed operation to de-risk geothermal resource estimation in Indonesia, which GoI finds key to unlocking the private investment needed to sustainably meet the country's energy needs.

30. The 2015 CIP risks and mitigation measures remain largely unchanged from the 2013 CIP. A few nuances have however been captured in light of this CIP revision. The implementation potential and risk summary are presented in Table 6.

Table 6: Risks and Mitigation Measures

Risk	Mitigation Measure	**Residual Risk** (low/moderate/high)
Project Readiness	The Project proposes a new way of providing risk mitigation for geothermal exploration drilling based on successful elements from international models and best practices. Salient features include: (i) a risk sharing arrangement; (ii) improved licensing rules; and (iii) moving away from local governments to the central government for improved efficiency with geothermal development.	**Moderate**
Policy and	There is a need to operationalize Indonesia's Geothermal Fund and take	**Moderate**

Regulatory Framework Clarity of policy and regulatory framework related to Geothermal	full advantage of the provisions of the new Geothermal Law. The Geothermal Energy Upstream Development Project will be supported by a $10 million Global Environmental Facility (GEF) Technical Assistance (TA) program which will inter-alia include assistance with the policy and regulatory framework.	
Implementation Capacity	Private sector geothermal projects will be selected partly based on capacity of the project companies, which is considerable given that most companies have long experience in the sector. This will include, not only in depth knowledge and sector-specific experience (taking into account the specifics of geothermal as compared to oil & gas, for instance), but also understanding of the local regulations and approval requirements. TA will be provided as necessary to accelerate project development and implementation.	**Moderate**
Finance Operational inertia of Indonesia's Geothermal Fund Facility	In an effort to support geothermal development, GoI has been pursuing an ambitious geothermal development program, including the establishment of the US$300 million Geothermal Fund in 2011. The proposed Project is designed to operationalize the Fund through a risk-sharing arrangement. Please see Annex I for details.	**Moderate**
Private Participation Private sector is sensitive to upfront exploration and other transaction costs	According to "RUPTL, 2015-2024", over 90% of the newly-planned geothermal capacity is to be developed by Independent Power Producers (IPPs). Yet, risks associated with the early-stage development of geothermal power have historically held back private participation and may play an antagonistic role in the broader sector development context. The proposed Project would introduce an insurance scheme for project developers in order to mitigate early-stage geothermal development risks. Please see Annex I for details.	**Moderate**
Scale-up and Replication	By focusing on a small, but significant part of the geothermal capacity that has yet to be developed (e.g. utilization of medium-enthalpy resources to displace high-cost fossil alternatives outside the main load centers in Eastern Indonesia), the proposed Project will be able to achieve substantial results on a relatively limited scale while showcasing a new intervention strategy that can then be mainstreamed into the main geothermal	**Moderate**

	market of Java and Sumatra.	
Safeguards Some geothermal prospects are located in environmentally sensitive areas	Project design will follow GOI and multilateral development bank safeguard policies. Appropriate environmental management and social development measures will be incorporated into project design. Advisory services will be provided to upgrade and enhance domestic capacity to implement good practice safeguard measures in geothermal development (as well as commercial lender capacity to assess risks).	**Low**
Overall risk after mitigation	Moderate	

MONITORING AND EVALUATION

31. The proposed results and performance indicators for the revised 2015 CIP in accordance with the CTF results framework approved in 2013 are summarized in Table 7.

Table 7: Investment Plan Results Framework

Results Indicator	Baseline	Expected Results in 2013 CIP	Expected Results in 2015 CIP
Tons of GHG emissions reduced or avoided - Annual (tCO2/yr) - Lifetime (tCO2/lifetime)	0	Total: 13.96 MtCO2eq/y and 271.34 MtCO2eq over lifetime *Breakdown:* WB - Geothermal: 0.89 MtCO2eq/y and 17.90 MtCO2eq over lifetime IFC - Geothermal: 6.4 MtCO2eq/y and 120 MtCO2eq over lifetime - EE/RE: 0.8 MtCO2eq/y and 16 MtCO2eq over lifetime ADB - Geothermal: 4.47 MtCO2eq/y and 89.48 MtCO2eq over lifetime - EE/RE: 1.4 MtCO2eq/y and 27.96 MtCO2eq over lifetime	Total: 13.22 MtCO2eq/y and 301.78 MtCO2eq over lifetime *Breakdown:* WB - Geothermal: 4.7 MtCO2eq/y and 94.3 MtCO2eq over lifetime IFC - Geothermal: 3.7 MtCO2eq/y and 111 MtCO2eq over lifetime - EE/RE: 0.35 MtCO2eq/y and 7.0 MtCO2eq over lifetime ADB - Geothermal: 4.47 MtCO2eq/y and 89.48 MtCO2eq over lifetime - EE/RE: Dropped
Financing leveraged through CTF funding – disaggregated by public and private finance (US million)	N/A	Total - Public: $450 million - Private: $4,620 million *Breakdown:* WB - Public: $450 million - Private: $0 million IFC - Private: $1,945 million ADB - Private: $2,675 million	Total - Public: $1,060.5 million - Private: $6,595 million *Breakdown:* WB - Public: $1,060.5 million - Private: $2,200 million IFC - Private: $1,920 million ADB - Private: $2,475 million
Installed capacity as a result of CTF interventions (MW)	1,226 MW	1,560 MW	2,200 MW
Number of additional passengers (disaggregated by men and women if	N/A	N/A	N/A

feasible) using low carbon public transport as a result of CIF intervention			
Energy savings as a result of CTF interventions - Annual (GWh/yr) - Lifetime (GWh/lifetime)	0	Total - Annual: 1 GWh/y - Lifetime: 20 GWh *Breakdown* IFC - Annual:0.375 GWh/y - Lifetime: 7.5 GWh ADB - Annual: 0.625 GWh/y - Lifetime: 12.5 GWh	Total - Annual: 0.25 GWh/y - Lifetime: 5.0 GWh *Breakdown* IFC - Annual: 0.25 GWh/y - Lifetime: 5.0 GWh ADB: (Dropped)

Source: MDB staff estimates

Notes: N/A means Not Available

The expected results in the revised investment plans endorsed in 2013 and 2015 reflect: (i) MDB-specific GHG reduction, leveraged financing and energy savings calculations; (ii) a new methodology to assess GHG reductions; and (iii) update key figures according to the approved programs/projects.

ANNEX I: Geothermal Energy Upstream Development Project (WB)

Problem Statement:

1. With the *Electricity Supply Business Plan 2015-2024*, or *Rencana Usaha Penyediaan Tenaga Listrik (RUPTL)*, GoI has set a target of installing 4,800MW of geothermal capacity. Roughly one-fourth of the targeted megawatts is scheduled to come on-line as part of the 2015-2019 35GW[3] plan to address the country's most immediate energy needs, leaving the bulk of geothermal investments for the period 2020-2024. According to RUPTL, over 90% of the newly-planned geothermal capacity is to be developed by Independent Power Producers (IPPs). Yet, risks associated with the early-stage development of geothermal power have historically held back private participation and may play an antagonistic role in the broader sector development context.

2. Geothermal development is a pillar of the country's *Low Carbon Growth Strategy* and a key development priority for GoI. In an effort to support geothermal development, GoI has been pursuing an ambitious geothermal development program, including a specific target for the *second Fast-Track Program* and the establishment of the US$300 million Geothermal Fund. Despite these efforts, geothermal development has stalled with the *second Fast-Track Program* struggling to make progress as planned and a zero disbursement rate for the Geothermal Fund – which has not yielded a satisfactory operating model to de-risk projects at the exploration stage. There is a need for additional financing instruments to reduce upstream development risk. Absent a near-term breakthrough in drilling technology, new risk mitigation approaches are needed to accelerate exploration and early stage development and crowd-in private investment.

Proposed Transformation:

3. The project objective is to increase the utilization of geothermal-based electricity in order to strengthen diversification and resilience of Indonesia's generation portfolio and support the shift to a low carbon growth path. This will be achieved by de-risking resource estimation of prospective geothermal fields and subsequent development of the steam resources in the most promising fields. The proposed Project consists of three components. Component 1 would target the operationalization of the Geothermal Fund Facility (GFF) through a risk-sharing arrangement with a CTF US$50 million convertible loan. Component 2 would comprise of a coordinated technical assistance package with funding from GEF and AFD. Component 3 would entail a WB loan (IBRD) in the amount of US$300 million[4] to support midstream investment such as, production drilling of steam fields.

Component 1

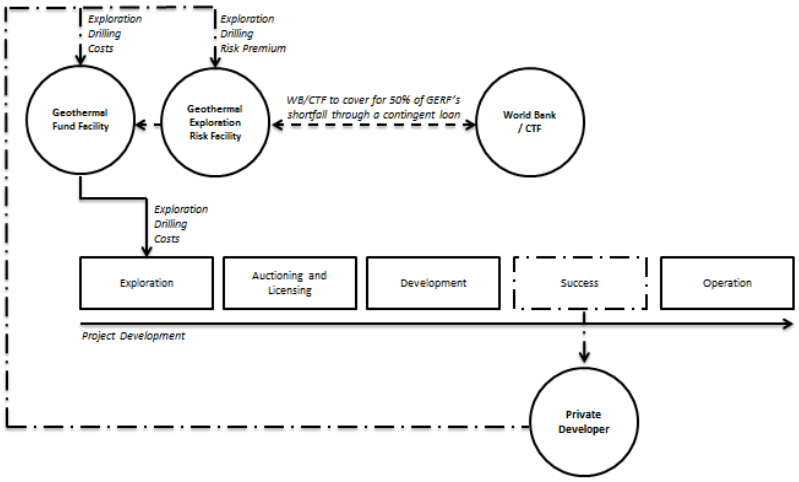
4. Component 1 is designed to restructure Indonesia's GFF in order to support exploratory drilling, which is the riskiest part of the geothermal development process. Support eligibility would apply to both prospective and existing license holders.

Prospective Licensees:

5. If the exploration is successful a development and operation license will be issued to a developer through a competitive auction process. The license will be awarded to the bidder which offers to develop the project based on the lowest power price ($/kWh) as long as this price is not higher than the ceiling price offered by PLN as per Government regulation. If the auction is successful, the chosen licensee will start to develop the steam field whilst seeking financial closure on his project finance. At the time of financial closure he will be required to refund the total costs of the exploration to GFF plus a risk premium to be paid to a dedicated facility. If the project does not come to financial closure before a certain date determined in the license agreement, the license is revoked and in this case the licensee will not pay the full cost of the exploration back to the GFF. At this point the GFF will be refunded from the funds accumulated in a dedicated facility. If the funds are insufficient, 50% of the shortfall will be covered with a pay-out from the WB/CTF contingent grant. This pay-out will be partially or fully refunded if at a later stage the dedicated facility receives more funds from risk premiums paid up by successful project developers. If, at the closing of the dedicated facility (after 15 years of operation) there is an unpaid balance in favor of the WB/CTF this loan balance will be forgiven, i.e. converted into a grant. A schematic of the proposed Facility's modus operandi is presented below.

[3] The 35GW plan envisioned through RUPTL can be appreciated by subtracting the capacity currently under construction from the overall megawatts planned over the period 2015-2019. In other words, approximately 43,000MW minus 8,000MW (under construction) equals 35,000MW or 35GW.

[4] The actual amount is yet to be agreed upon.



Existing Licensees:

6. Existing license holders would be entitled to sell their geotechnical data related to a given field to the Geological Agency (Badan Geologi) at a discounted price. The returned license could then be re-auctioned and, upon new licensing, the GFF and dedicated facility procedures and conditions for prospective license holders would apply.

Component 2

7. The Project will be supported by a coordinated multi-donor Technical Assistance (TA) package (Component 2), for which the key partners and areas of support have been identified as follows:

- *GEF – Geothermal Up-Stream Development (US$10 million)*: GEF support will focus on four areas, namely: (i) Policy Assistance; (ii) Site Screening; (iii) Tendering Assistance; and (iv) Project Management.
- *AFD – Geothermal Development Field Studies (US$500 thousand)*: The Agence Française de Développement (AFD) will support the preparation of field studies as well as the operation as a whole.

Component 3

8. In addition to removing upstream barriers linked with geothermal exploration drilling, the Project is planned to be complemented with support through a US$300 million[5] IBRD loan for production drilling (i.e. steam field development). Component 3 would complement private sector participation to bring on-line 640MW of new geothermal-based generation capacity. The sequencing of investments in the geothermal development process implies that Component 3 will be triggered upon successful completion of standard exploratory and production drillings – hence the need to commit IBRD resources in due course only.

Implementation Readiness:

9. WB has been engaged by GoI to develop the proposed project, drawing on: (i) the complementarity of services offered by the entities affiliated with the World Bank Group apparatus; and (ii) the global presence and knowledge of the WBG which is applicable to the Indonesian context.

10. Complementarity of Services Offered: It is envisaged that the Project will bring together: (i) grant-funded technical assistance from GEF; (ii) funding for risk mitigation models from CTF; and (iii) mid- and down-stream investments in the form of WB and/or IFC commitments. Given the structure of the power market in Indonesia, there is also an opportunity to include MIGA through its Non-Honoring of Sovereign Financial Obligations product.

11. Global Presence and Knowledge: The Bank's support would build on the existing body of work and previous engagements in the global and Indonesia geothermal space. Globally, experiences such as, the Turkey's Geothermal Development Project and Armenia's Geothermal Exploratory Drilling Project provide relevant input to the project design.

12. In the Indonesian context, past World Bank activities which inform this operation are: (i) the PPIAF-funded Assessment of Geothermal Resource Risks, which took stock of the international experience with geothermal development and distilled mitigations options applicable to Indonesia; and (ii) the GEF-funded Geothermal Power Generation Development

[5] The actual amount is yet to be agreed upon

Project, which inter-alia supported the development of a pricing and compensation policy for geothermal power.

13. In addition to the Bank's past experience, ongoing activities which inform this operation are: (i) the CTF-backed IBRD, ADB-PSOD and IFC downstream investment projects and related technical assistance programs, which target to bring on-line 1560MW of new geothermal installed capacity; and (ii) the Climate Change Development Policy Loans, which, provided collectively by the World Bank, JICA and AFD, further support the development of a pricing and compensation policy that is necessary to address the higher financial cost of geothermal electricity compared with coal-based power.

Rationale for CTF Financing:

14. GoI expects 90% of new geothermal capacity to be developed by IPPs. To incentivize private sector participation, public interventions would need to be targeted at removing – or at least reducing – key geothermal development barriers, first and foremost: exploration drilling risks. Exploration drilling comes with a hefty price tag of up to US$8 million per well, which can be prohibitive for equity-constrained project developers who are not guaranteed downstream returns on their pre-production investments. Exploratory drilling also constitutes the biggest barrier to obtaining financing as it increases investors' equity returns requirements. Moreover, there is little appetite from the private sector to fund projects where the nature and extent of the resource are unknown.

15. These considerations were at the heart of the original rationale for GFF's design. Unfortunately, the original GFF design based on collateral-backed loans failed to adequately address the high exploration risk issues, in part due to concerns relating to moral hazard and misuse of the facility. Despite GFF's operational inertia, the rationale for exploration drilling risk-targeted interventions still holds true today. Building on the knowledge distilled from engagements such as, the Turkey's Geothermal Development Project and Armenia's Geothermal Exploratory Drilling Project, the proposed Project will utilize CTF resources to develop a risk-sharing arrangement with GFF in order to deal with exploratory risks and unlock GoI's commitments and private sector investment. Sustaining the achievements of previous and existing engagements[6], GEF and AFD resources will be mobilized to provide technical assistance (TA) aimed at complementing the proposed Project through policy and pipeline development support.

16. CTF co-financing is expected to unlock downstream investments of over US$2.8 billion, assuming that about 20% would be implemented by the public sector (possibly supported by a US$300 million WB loan), with another 80% provided by the private sector – please see Financing Plan below for further details.

Results Framework:

17. The indicative results framework comparing project baseline and expected results against the CTF indicators is provided in Table AI-1.

Table AI-1: Project Results Framework

Results Indicator	Baseline	Expected Results
Tons of GHG emissions reduced or avoided - Annual (tCO2/yr) - Lifetime (tCO2/lifetime)	- Annual (0 tCO2/yr) - Lifetime (0 tCO2/lifetime)	- Annual: 3.82 MtCO2e/y - Lifetime: 76.4 MtCO2e
Financing leveraged through CTF funding – disaggregated by public and private finance (US$)	- Public: $0 million - Private: $0 million	- Public: US$610.5 million - Private: US$2,200 million
Installed capacity as a result of CTF interventions (MW)	0MW	640MW

Source: MDB staff estimates

Notes:

- Lifetime Assumption: 20 years
- GHG reductions are estimated as follows: New geothermal capacity assumes 640 MW, running at 8000 hours / year = 5,120 GWh/y output. GHG reductions are estimated as follows: (5,120 GWh/y) x (745.7 tCO_2e/GWh) = 3.82 MtCO2e/y. Lifetime emission reductions are equal to 76.4 MtCO2e. Calculations are in line with the World Bank GHG accounting guidelines.

Financing Plan:

[6] For further information on geothermal-targeted technical assistance engagements, please refer to the "Implementation Readiness" section of this annex.

18. A summary of the project financing commitments is shown in Table AI-2.

Table AI-2: Project Indicative Financing ($ million)

Financing Source	Amount
Upstream Investments	
CTF	US$ 50.00
Geothermal Fund Facility	US$ 300.00
Global Environmental Facility (GEF)	US$ 10.00
Agence Française de Développement (AFD)	US$ 0.50
Downstream Investments	
Private Sector Investment	US$ 2,200.00
World Bank - IBRD	US$ 300.00
Total	**US$ 2,860.50**

Source: MDB staff estimates

Notes:

- Based on the assumption of $3.9 million per MW installed. Source: 2012, ESMAP – Geothermal Handbook: Planning and Financing Power Generation
- The actual amount is yet to be agreed upon

Project Preparation Timetable

19. The timeframe for the Geothermal Energy Upstream Development Project and CTF-related approval sequencing is shown in Table AI-3.

Table AI-3: Project Preparation Timetable

Milestone	Date
CTF Trust Fund Committee Approval	April 2015
WB Decision Review	May 2015
WB Board Approval	August 2015

Source: MDB staff estimates

ANNEX II: Private Sector EE and RE Investment Program (IFC)

Problem Statement

1. Significant share of the Indonesia's GHG emissions (over 21%) is generated by the country's energy sector. Furthermore, energy related emissions are projected to increase with one of the highest growth rate in the region. Recognizing that, the GOI has indicated its full commitment to promote a broad array of RE technologies (including but not limited to geothermal) and EE measures (including but not limited to green buildings) that could help 'clean' the energy generation mix and reduce energy consumption, therefore decreasing GHG emissions. The progress, however, has been slow, with multiple factors preventing active private sector participation.

2. Among those factors, one of the most significant has been a narrow selection of financing schemes available for structuring private sector funds. Despite the large potential for EE improvements in industries and buildings as well as growth of the installed capacity of various RE resources, the Indonesian banking sector has so far not undertaken a systematic effort in developing products and solutions for facilitating investment at scale. Banks in Indonesia follow opportunities identified by their corporate clients rather than leading the way in "green lending". This approach has resulted in a very limited role the banks are playing in targeted project financing (non-recourse financing) in the RE/EE space.

3. Project finance approach has been used for several years in many transactions, including power plant projects and infrastructure development, but not for RE/EE projects. For example, in 2013 a project financing scheme was used to finance 660 MW, US$730 million coal-fired Independent Power Plant (IPP) in Banten, West Java, marking the first major IPP financing that did not have a guarantee from the GOI.

4. Even the traditional power deals have so far attracted very little interest from domestic financial institutions (FIs), being mostly driven by foreign lenders. Most of the deals involved export credit agencies (ECA) support for foreign equipment, as there were no Indonesian suppliers for the larger equipment. In rare cases where project finance deals were entertained by the domestic banks, a lack of domestic expertise in power deals did not allow the banks to reach a necessary level of comfort. As a result, availability of long term domestic capital is limited and foreign currency capital is associated with substantial foreign exchange rate volatility risks. While some efforts are ongoing to build capacity of local banks and other FIs, the Indonesian financial sector as a whole has yet to recognize the potential of EE and RE investments as a viable business line.

Proposed Transformations

5. Recent structural reforms in the financial sector undertaken by the GOI have raised expectations of greater involvement by local banks in non-recourse financing and an opening up of Indonesia's RE/EE market to more commercial bank led-deals that do not rely so heavily on ECAs. These long-awaited enhancements are seen as having a potential to unlock stagnant pipeline of RE/EE investments. In recognition of these improvements, on September 3rd, 2014 L'Agence Française de Développement (AFD) and the UK Department for International Development (DFID) have launched a call for projects for the "Promotion of investments in the sectors of renewable energies and energy efficiency in Indonesia." The objective of this call is to identify RE and/or EE projects stalled before Power Purchase Agreements (PPAs) (or "energy performance contract") signed, for which project sponsors need to have access to venture capital to carry on the developments. The projects selected will be granted with seed capital through a partnership agreement.

6. To further support the momentum developed by the Indonesian RE/EE market and assist several pilot projects in reaching financial closure, it is important to also provide support to FIs participating in first transactions. Domestic banks continue to shy away from targeted climate smart investments, even though there appears to be significant demand for non-recourse instruments. Despite low electricity tariffs and inefficiencies of power utilities, many firms have emphasized strong demand for EE investments facilitating substantial energy cost savings and RE investments leading to additional installed capacity for off-grid as well on grid projects. Piloting several transactions that would involve domestic FIs will help build knowledge and institutional capacity to accelerate and increase financing of the RE/EE project pipeline. IFC will seek opportunities to support engagement of domestic FIs in these transactions by either directly providing needed support to projects on a stand-alone, non-recourse basis, or channeling the funds through FIs towards the projects that meet desired eligibility criteria.

Rationale for CTF Financing

7. IFC's CTF Private Sector EE and RE Investment Program (RE/EE Program) will support the scale-up of RE/EE projects in Indonesia. It will aim to engage the financial sector as a key change agent in promoting climate smart investments. The Program will take a technology-agnostic position, identifying the areas where interventions can be conducted in the most efficient and expedited manner. It will cover hydropower, solar photovoltaic (PV), wind, and biomass/biogas technologies as well as demand side management, green buildings, industrial energy efficiency and cogeneration, among others. Given that commercial banks have so far demonstrated limited appetite for scaling up EE and RE funding, a learning-by-doing approach will be employed to implement prototype investments; this early experience can then be transferred to FIs with an expedited learning curve.

8. As part of the program, CTF will provide critical financing to create and implement non-recourse/limited recourse financial structures that will allow mobilizing commercial financing for a series of RE/EE sub-projects. As these types of financial structures have not yet been extensively tried in Indonesia context, CTF resources will target covering additional transaction costs and perceived risks, such as but not limited to: (i) financing gaps associated with atypically high requirements for debt service coverage ratios; (ii) additional cost for deployment of RE systems, EE measures, co-generation, and other climate smart investments; and (iii) credit enhancements to improve financial rates of return.

Implementation Readiness

9. IFC is currently in dialogue with a few potential clients over possibilities of investments in various technologies. The range of potential investments includes wind, waste-to-energy, mini-hydro, green buildings, geothermal, and others that can be done directly or through financial intermediary. Final selection of the project partners will be based on readiness and potential of creating the desired impact. IFC expects to submit a proposal for CTF Trust Fund Committee approval by the end of calendar year 2015.

Table AII-1: Implementation timeline

Milestone	Date
CTF Trust Fund Committee approval	December 2015
IFC Board Approval for the first sub-project	June 2016

Table AII-2: Results Indicators

Core Indicator	Unit	Baseline	Target
Avoided annual GHG emission	$MtCO_2e$/year	0	0.35
Volume of direct finance leveraged	Leverage factor	n/a	1:8
Increased supply of RE	MW	0	80*
Annual energy savings	GWh/year	0	0.25*

Source: MDB staff estimates

* As the program focuses on a mix of investments with a proportion between EE and RE not defined at the moment, specific targets for additional RE installed capacity and energy savings are indicative and subject to adjustments once the sub-projects pipeline is finalized.

Financing Plan

10. The indicative financing plan is presented in Table AXXX.2.

Table AII-3: Financing Plan for EE and RE Sector (US$ Million)

Program (IFC)	Total	CTF	MDB	Other Co-financing
Energy Efficiency and Renewable Energy (IFC)	*225*	25	75	125

Source: MDB Staff Estimate