Amendment to the CTF Investment Plan for Indonesia: Reallocation of resources

Presented to the CTF Trust Fund Committee by

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Background

1. On March 16 2010, the CTF Trust Fund Committee (TFC) endorsed Indonesia *Country Investment Plan* (CIP), submitted by the Government of Indonesia (GOI) in collaboration with the Asian Development Bank (ADB), International Finance Corporation (IFC), and the World Bank, with an envelope of USD 400 million in CTF co-financing for public and private investment in renewable energy (RE) and energy efficiency (EE). The CIP was designed in line with the GOI strategy to diversify the energy mix and promote greater sustainability, quality, and quantity of energy supply, while advancing low carbon growth and social development. The CIP was subsequently updated and revised in April 2013 and May 2015 to respond to the evolution of market needs and sharpen the focus on private sector investment and upstream geothermal development.

2. The private sector component under the latest revised CIP (2015 *CTF Revised Investment Plan for Indonesia*) consists of USD 150 million allocated to ADB (private sector operations) to advance private sector geothermal development, and USD 75 million allocated to IFC. IFC's allocation covers two components: (i) private sector projects in the geothermal sector; and (2) *Private Sector EE and RE Investment Program* that provides broader support to RE/EE sector. In 2013, an amount of USD 50 million under IFC's allocation was approved for *IFC's Geothermal Electricity Finance* (IGEF) program to support large-scale geothermal development. In August 2016, the investment period for the *IGEF* program was extended to accommodate sector complexity and long lead times for pipeline project development.

3. At this stage (and concurrently with this amendment), IFC is submitting a private sector *Renewable Energy Program* (REP), which requests CTF funds to support the pipeline of projects that IFC has developed under the second component of the IFC's allocation under the *CTF Revised Investment Plan for Indonesia* – broad RE/EE sector investments. Geothermal development still requires substantial donor support to both relieve the pipeline bottleneck between exploration and long term project financing, as well as rebalance overall risk-reward mismatch stemming from utility returns and "oil & gas sector" risks. However, due to inherent modularity and flexibility in size and configuration as well as falling technology costs, the GOI is increasingly exploring the potential for cost-competitive solar, mini-hydro and wind to play a significant role in improving the efficiency and sustainability of the power sector across the 17,500 islands.

4. To improve the alignment of the sizes of the two CTF programs with IFC pipeline and to respond to the dynamically changing market conditions, IFC is presenting a reallocation of USD 30 million from the approved *IGEF* program to the *REP* program that is being submitted now. This amendment, therefore, presents an update to the May 2015 *CTF Revised Investment Plan for Indonesia* and reflects this reallocation. This amendment is submitted concurrently with the REP program proposal as well as the request to the CTF Trustee to release the USD 30 million portion under the IFC IGEF program.

Rationale for Requested Amendment: Status and Barriers

5. Indonesia boasts several RE opportunities including hydropower (75,000 MW), micro/mini hydropower (1,013 MW), solar (4.80 kWh/m2/day), biomass (32,654 MW), and wind (3-6 m/s), and 40 percent of the world's geothermal reserves (28,000 MW).[1] Fortunately, recent global policy dialogue and technological advances have helped the GOI make significant progress in recognizing and establishing a path to leverage the broad range of indigenous RE resources, as identified below. The proposed CIP re-

[1] PLN Medium Term Plan, RUPTL 2016-2025, Table 4.1, Indonesia Energy Outlook 2013 (PUSDATIN KESDM).

allocation ensures sufficient responsiveness and available support for a more comprehensive RE acceleration approach in Indonesia.

6. **Established sponsors pursuing the development of intermittent renewables.** As part of its growing prioritization of balancing sustainability and affordability in power generation, the Ministry of Energy and Mineral Resources (MEMR) of the GOI has engaged in significant stakeholder consultation with private sector developers, equipment manufacturers, financiers and local manufacturers between 2014-2017. The engagement has produced sufficient momentum to launch initial development of several solar and wind projects by reputable international developers despite the commercial constraint of tariffs being capped by local grid cost of generation.[2] Given the iterative nature of sector development, CTF support to lower the higher upfront costs for the first generation of demonstration projects will help inform solar or wind-specific regulatory initiatives and future financings, and identify any critical stumbling blocks to be re-assessed prior to any upcoming solar auctions.

7. **Increased need for support in distributed generation and hybrid-storage solutions.** While some of more developed RE resources like hydro and geothermal are located on bigger islands with major population centers, RE resource potential has also been identified in more remote locations. As such, distributed RE generation also offers an opportunity for poverty alleviation through the displacement of current expensive diesel–fueled generation solutions and development of more sustainable rural electrification. With national electrification targets nearing 100 percent by the end of Indonesia's Medium Term Power Development Plan (2016-2025), CTF intervention is poised to support high-impact development outcomes by demonstrating the building blocks of successful aggregated financing for smaller sub-projects and the value of proven, innovative RE technologies coming down the cost curve.

8. **Renewed momentum in geothermal segment**. Overall, the regulatory framework illustrates a marked improvement for private sector participation and developers are now adjusting to the new opportunities and available procedures. The ADB and the World Bank (IBRD) have made significant strides in deploying CTF to bring the most advanced projects in Indonesia's geothermal to financial close. IFC will focus on deploying the remaining CTF allocation to support the other pipeline projects on a targeted basis, aiming to break the grid-lock limiting the next generation of 5-6 geothermal projects that remain in early stage exploration.

IFC project pipeline

9. IFC has developed a pipeline of mini-hydro, solar, wind and other energy projects that can support further market transformation and contribute to the achievement of the GOI objectives to have RE grow from 6 percent of the national fuel mix in 2014 to 23 percent by 2025 and cut its GHG emission growth by 29 percent by 2030.

10. IFC is now engaged in the preparation of aggregated mini-hydro and solar financings. Given the limited financing options available for project developers in Indonesia, IFC has the opportunity to use its structuring knowledge and financing capabilities to jumpstart sector development despite ongoing regulatory challenges. Many power projects servicing smaller grids outside of Java and Sumatra are too small for IFC or many other banks to finance on a standalone basis given the high basic transaction costs. IFC's additionality is managing transaction costs by identifying a suitable bundle of projects, which can be aggregated and providing longer tenor non-recourse debt, with the support of donor concessional finance to help mitigate risk of cost overruns and delays during construction.

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[2] Devine L., *Indonesian Government Puts the Squeeze on Renewable Energy Tariff*, Baker McKenzie, 2017. Accessed in May 2017 at http://www.bakermckenzie.com/en/insight/publications/2017/02/indonesia-govt-renewable-energy-tariffs/

11. In addition, IFC has been supporting innovative uses and business models utilizing renewable energy technology, particularly to rebalance risk-reward profiles for first movers and improve the cost of electricity supply from renewable energy sources. To that goal, the CTF funds will be applied to support private sector renewable power generation projects that: (i) incur higher development costs stemming from the development and negotiation of first generation documentation (i.e. PPA, facility agreements etc.); (ii) apply further technological innovation in dispatchable RE generation technologies; and (iii) demonstrate commercial viability of distributed generation business models.

12. Until the value of renewable energy is fully recognized, the cost remains high relative to the alternatives. CTF concessional financing can help support Indonesia's effort to continue scaling up renewable energy, while bringing the technology closer to competitiveness. CTF funds can be used to help the first mover projects, highlighting their commercial viability and value. Given the complexity and novelty of the technologies and business models utilized by the pipeline projects, concessional finance is required to absorb the higher technology costs and to protect against residual risks.

13. The proposed Program will aim to address the barriers mentioned earlier and catalyze further scale-up of RE projects, cultivating a network of experienced developers, suppliers, contractors, operators and financiers that can eventually propel organic growth. Given the challenges in developing an RE market ecosystem in Indonesia without sufficient critical mass and momentum, the primary goal of the *Program* will be to demonstrate a variety of replicable models across resource segments and develop a track record across a broader suite of RE financing products.

Amendment to the CTF Investment Plan for Indonesia

14. In light of the project pipeline discussed above, IFC presents an amendment to the 2015 *CTF Revised Investment Plan for Indonesia* to reallocate CTF funds from IFC's *IGEF* program to the *REP* program to improve applicability of CTF allocation across all RE segments, as indicated in Table 1 below. A Summary of the 2010 CTF CIP financing plan, 2013 and 2015 updates, and current reallocation is presented in the Table 3 below.

Table 1: Proposed Reallocation of CTF Resources, in USD million

Program	Current Funding	Reallocation	Funding after reallocation
IFC Geothermal Electricity Finance Program (IGEF)	50	(- 30)	20
IFC Renewable Energy Program (REP)	25	(+ 30)	55
Subtotal	**75**	**-**	**75**

15. The proposed reallocation and the potential structure of the pipeline of sub-projects under the both components (*IGEF* and *REP*) has been discussed with the Government of Indonesia, with the understanding that this reallocation will help accelerated the use of the CTF funds and enable CTF to support the momentum of innovation across a broader array of RE technologies in Indonesia;

16. Further, the reallocation of the CTF funds from the *IGEF* component to the *REP* component of the *CTF Indonesia CIP*:

- shifts only 7.5 percent of the USD 400 million *CTF Indonesia CIP* – less than 15 percent of the funding envelope;
- does not exceed the USD 30 million threshold;

- does not shift resources between the private and the public sectors;
- does not shift the funds between the Multilateral Development Banks; and
- will allow the reallocated funds to be used towards the objectives outlined in the REP component of the *CTF Indonesia CIP*; IFC's pipeline fully meets the intended scope and objectives of this component.

17. As such, according to the CTF *Guidelines for Management of Pipeline and Revisions to Investment Plans* (December 2011, paragraphs 11-13), the proposed *Amendment* to the CIP only requires notification to (rather than endorsement by) the TFC and does not trigger the need for the CIP revision.

18. Concurrently with this *Amendment*, IFC is submitting a USD 55 million *REP* program proposal.

19. Expected results framework numbers are indicated in the Table 2 below.

Table 2: Results framework indicators for the reallocation of USD 30 million

Core Indicators	**Before reallocation**			**After reallocation**		
	IGEF	*RE/EE*	***Total***	*IGEF*[3]	*RE/EE*	***Total***
CTF funding amount, USD million	50	25	**75**	20	55	**75**
GHG emission reduced total, tCO_2e	110,700,000	4,000,000	**114,700,000**	40,000,000	10,100,000	**50,100,000**
GHG emission reduced, tCO_2e/year	3,700,000	200,000	**3,900,000**	1,400,000	380,000	**1,780,000**
Volume of direct finance leveraged, million USD	2,270	175	**2,445**	850	290	**1,140**
Installed capacity, MW	660	100	**760**	250	200	**450**

[3] The results framework numbers for the *IGEF* Program after the funds reallocation reflect the proportional reduction of the investment portion of the program by 61% (from USD 49.3 million to USD 19.3 million)

Table 3: Summary of the CTF allocations in the Country Investment Plan for Indonesia

CIP, 2010	**IBRD**	**ADB**		**IFC**	**Subtotal by Component**
		Public	**Private**		
Geothermal	125	125	25	25	**300**
RE/EE		50		50	**100**
Allocations by MDB	**125**	**200**		**75**	**400**

CIP Update, 2013	**IBRD**	**ADB**		**IFC**	**Subtotal by Component**
		Public	**Private**		
Geothermal	125	125 (-125)[4]	25 (+125)	25 (+25)	**325**
RE/EE		50		50 (-25)	**75**
Allocations by MDB	**125**	**200**		**75**	**400**

CIP Update, 2015	**IBRD**	**ADB**		**IFC**	**Subtotal by Component**
		Public	**Private**		
Geothermal	125 (+50)		150	50	**375**
RE/EE		50 (-50)		25	**25**
Allocations by MDB	**175**	**150**		**75**	**400**

Current CIP Amendment, 2017	**IBRD**	**ADB**		**IFC**	**Subtotal by Component**
		Public	**Private**		
Geothermal	125 (+50)		150	50	**375**
RE/EE		50 (-50)		25	**25**
Allocations by MDB	**175**	**150**		**75**	**400**

[4] Numbers in red are the reallocated amounts.